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UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Agricultural Economics

THE AGRICULTURAL OUTLOOK

1940

Prepared by
The Bureau of Agricultural Economics
Assisted by Representatives of
The Agricultural Marketing Service,
The Agricultural Adjustment Administration,
The Extension Service, the Bureau of Home Economics,
And the State Agricultural Colleges and Extension Services.

Washington, D. C.
November 1939

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THE OUTLOOK FOR DEMAND AND PRICES IN 1940*

Summary

Demand for farm products is expected to be stronger in 1940 as a whole than in 1939, largely because of prospective increases in domestic business activity and consumer incomes. Export demand for a few farm products will be increased.

The war has been partly responsible for the sharp increase in industrial production in the last part of 1939, and has improved business prospects for 1940 as a whole. Exports of some industrial commodities to the belligerent nations will be increased, and a part of the neutral nations' purchases of manufactured goods will be diverted to this country because their usual sources of supply will be cut off. These effects may be rather slow in developing, since time is required for reorganization of purchasing activities and shipping facilities. Despite such uncertainties, the net effect of these war influences is expected to be favorable to domestic business.

General conditions in domestic industry also are fairly favorable. It is probable that even had there been no war, business activity and consumer incomes would have experienced some improvement in 1940. No definitely unfavorable situation is noted in any important industry. A considerable increase in the output of automobiles and other durable consumers' goods is probable. Some increases in capital expenditures, and less cautious buying policies on the part of business men generally, are indicated by the improved price situation and other conditions. Taking into account both domestic and foreign factors, a moderate increase in industrial activity appears to be in prospect for 1940 as a whole compared with 1939.

Sharp fluctuations of industrial activity in 1940 are likely to result, however, from uncertainties arising out of the war and from adjustments that will be necessary as a result of the accumulation of inventories which followed the wave of buying stimulated by the outbreak of war. This has caused production to run ahead of actual consumption and exports by a considerable margin. Sometime in 1940 a period of readjustment will be necessary, and is expected to result in a considerable decline from the peak reached in the present upswing. Although it is possible that such a recession might develop sufficient force to offset other favorable factors and prevent a resumption of the improvement begun in 1939, such a result is not probable on the basis of present indications.

Consumer incomes do not fluctuate so much as industrial production and, because of the carry-over effects of business conditions, changes in incomes

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* This outlook is based upon the assumption that the European War will continue for at least a year.

tend to lag behind changes in industry. Thus, consumer incomes in 1940 will be affected not only by the expected further business recovery in that year, but also by the improvement that occurred in 1939. For these reasons, the gain in consumer incomes should be considerably greater in 1940, relative to the extent of business improvement, than it was in 1939.

Export demand for some farm products that will be needed to supply the belligerent nations will be increased, but some other commodities may be adversely affected by the war. The loss of the German market will be much less important than it was during the World War. Great Britain and France apparently have funds adequate to finance any possible increase in imports during the first year or two of a war, although they will attempt to conserve these resources by careful buying and the use of governmental controls over imports and prices. Decreased production of and greater wartime requirements for some products in the belligerent countries will cause these nations to have less regard than in peace times for the effects of increased imports on their financial resources or domestic economic programs. The increased cost and risk of ocean shipping will give the United States some advantage over more distant competing exporting nations, although probably not so much as during the World War. On the other hand, stocks of some commodities held or controlled by the warring nations apparently are considerably larger now than in 1914: these countries now are less dependent upon other countries for supplies of farm products, and South America and Canada are now more important exporters of several major agricultural commodities.

Partly offsetting the effects on prices of the expected improvement in demand will be large supplies of several important farm products. The fact that speculative markets already have reflected anticipated increases in demand also will tend to minimize further price advances in 1940. Nevertheless, prices of farm products should experience some increase over the average for 1939, and probably will be higher relative to prices paid by farmers than during the last 2 years. The general level of wholesale prices in the United States also is expected to be higher in 1940 than the average for 1939.

Cash income from the sale of farm products should be materially higher in 1940 than in 1939, but may not reach the 1937 level. A slightly larger total volume of marketings will be disposed of at higher prices. Government payments may be about as high as in 1939.

War Influences

The outbreak of the war in Europe has brought to the forefront certain conditions that will affect the domestic business situation and demand for farm products as well as export demand for agricultural commodities. These conditions may be reviewed before separate consideration is given to domestic and export demand.

General effects of war on United States exports

Total exports of the United States increased markedly during the World War, from about 2 billion in the calendar year 1914 to 3.5 billion in 1915 and 6 billion in 1917. The increase was greater for industrial products than for farm products. Some of the leading industrial products experiencing the largest

increases in exports were iron and steel, nonferrous metals, explosives, and petroleum products. Among the agricultural products, those experiencing the greatest increases were grains and meats. Exports of some commodities were adversely affected, including cotton, tobacco, fresh fruits, and nonessential industrial products. In 1914, Germany was a much more important market for United States farm products than in 1939, so that the adverse effects on exports of the loss of this market in 1940 will be less than in the World War.

The present war will increase the import requirements of the belligerent nations, as did the World War. A considerable part of the manufacturing facilities and industrial manpower in the belligerent nations will be diverted to the production of munitions and other war supplies, leaving these countries more dependent upon others for many industrial materials and finished products. The war also will interfere with agricultural production in some parts of the affected countries, although this will be offset in part by expanded production in other areas.

On the other hand, the European belligerent nations now are in a better position to meet the requirements of war without resorting to imports as much as they did in 1914. The long period of uncertainty has resulted in more extensive advance preparations, and stocks on hand apparently are larger. These countries have developed since the World War important new sources of raw materials, such as copper in South Africa. South America and Canada now are more important suppliers of farm products than at the beginning of the World War. Shipping facilities are much greater, making the shorter ocean route from the United States less of an advantage for this country compared with other sources of materials. Experience gained during the World War will facilitate the early and more effective introduction of all kinds of governmental controls which will tend to minimize the effects of wartime requirements upon the demand for exports from the United States and other neutral nations.

The war also will affect exports from the United States by changing the sources of supplies of neutral nations. South America and other parts of the world, which have been buying a large part of their finished products from Germany and other European countries, will find these sources wholly or partially cut off, and will turn to the United States for imports. The increased demand for our products arising from these circumstances, however, will be limited by the amount of dollar exchange and credit which these countries can obtain for making purchases in the United States. Some of their purchases in recent years were made possible through barter arrangements with European countries, and they have been in a better position to buy in Europe because they have been selling their raw materials there, giving them sterling or other European exchange. The United States will not be in a position to take raw materials in exchange for finished products in the same way that Europe has been doing. But the neutral countries may be able to obtain dollar exchange in payment for some of the raw materials furnished to the belligerent nations, and this would tend to increase the means of payment for such neutral countries in making purchases from the United States.

Ocean transport

The adequacy of ocean transportation facilities and the cost of ocean shipping are important considerations in any analysis of the prospects for

increased foreign trade as a result of the European War. War increases both the demand for and the cost of operating ocean transport and at the same time it reduces the available shipping facilities.

According to Lloyds Register of Shipping, the gross tonnage of the world merchant marine, exclusive of sail boats, amounts in 1939 to 68,509,000 gross tons as compared with 45,404,000 in 1914 - an increase of 50 percent. Add to this an allowance for higher average speeds of perhaps 20 percent, and the water-transport facilities appear to be about 80 percent greater now than in 1914.

Before the outbreak of war international trade was not greatly different in volume than 25 years ago, so that ocean-transport facilities were more than ample. Most nations, the United States in particular, encouraged the building of greater merchant fleets after the World War. As a consequence there is an idle world merchant tonnage in excess of 4 million, divided about evenly between the United States and the remainder of the world. The American merchant fleet is old and slow, but it has nonetheless been carrying about one-fourth of the water-borne exports of the United States during recent years, compared with about 10 percent in 1914. Any diversion of American vessels from their regular trans-oceanic routes by war dangers will permit the release of foreign vessels from other routes for carrying goods to Europe.

The tonnage of British vessels sunk during the first month of the World War was not so great as the tonnage sunk in September of 1939. But before the British fleet gained mastery over the submarine in 1917, largely by means of the convoy system, losses had reached a considerably higher rate than so far in the present war. With the early introduction of the convoy system in the present war, losses were greatly reduced soon after war was declared. Ships sunk during the World War had a total capacity of slightly in excess of 15 million gross tons. Losses would have to be considerably greater than this to reduce available ocean-shipping tonnage to that of 1914. Furthermore, ship building now is very active both here and abroad.

Ocean-freight rates and war-risk insurance rates have risen greatly since the outbreak of the present European conflict, as they did following the outbreak of the World War. Some idea of the rise in shipping costs is afforded by the changes in insurance and freight rates on cotton. The total cost of insuring a shipment of cotton in an American ship from Gulf ports to the United Kingdom rose from 6.75 cents per 100 pounds on August 23 to 37.84 cents on September 13. There has been some decline in war-risk insurance rates from the extreme rise which followed the outbreak of war in Europe, especially for goods transported in non-belligerent ships. Freight rates on cotton rose from 45 cents per 100 pounds in August to $1 in October. The total cost of shipping cotton was 157 percent greater on October 11 than on August 23. In the case of wheat, freight rates rose 33-1/3 percent almost immediately after the outbreak of the war in Europe, and insurance rates rose even more, bringing the total cost of shipping wheat from Gulf ports to Liverpool on October 11 to 143 percent of the cost on September 23.

The cost of operating convoys is an important part of the cost to the belligerents of furnishing shipping facilities for their imports. In fact, the cost of convoys may be even greater than the cost of operating the bottoms actually used in movement of the goods.

It is evident, therefore, that even though shipping facilities appear to be much more adequate now than in 1914 to meet wartime demands, the costs of shipping will be greatly increased over those recently prevailing. This means that Canada and the United States will again have a relative advantage in supplying the requirements of the belligerent nations, as compared with more distant exporting nations. This advantage, of course, may be offset by other considerations in connection with specific commodities.

Ability of belligerents to finance imports

The belligerent countries apparently have adequate resources to finance any prospective purchases of farm and industrial products during the first year or two of a war, at least. Great Britain and France have more than 5 billions of gold. In the United States alone they have nearly 3 billion dollars of short-and long-term investments, of which perhaps 2 billion could be made quickly available. Thus, these countries have at least 7 billion dollars of liquid assets already in the form of or easily convertible into dollar exchange for possible use in making purchases from the United States. British and French investments in the dominions and in foreign countries other than the United States may amount to as much as 16 billions, although only a relatively small proportion of such assets could be easily converted into foreign exchange. These resources, together with credits available to them, probably would be ample to finance purchases outside of the United States. In addition, of course, Great Britain and France will continue to export considerable quantities of finished products, which will give them foreign exchange to be used for current purchases, and the dollar value of the annual gold production of the British and French empires amounts to about 700 millions.

No doubt the belligerent nations will make every effort to conserve their gold and foreign assets for possible future needs should the war be prolonged, and the fact that purchasing power is available does not mean necessarily that any large portion of it will be used during the first year or two of the war.

Wartime restrictions on international trade

The war has resulted in the intensification of governmental controls over domestic and foreign trade in all European countries, and in many other parts of the world. The belligerent nations have inaugurated new licensing systems for imports. These are intended primarily to give control over the character of imports, in order to reduce the purchases of nonessential goods and to enable the Governments to influence their balance of payments so as to conserve their foreign exchange and gold. Price fixing has been applied to many commodities by these Governments, partly to minimize internal profiteering and wartime inflation psychology, and partly in an attempt to hold down the prices of imported materials and thereby conserve foreign exchange. Centralized buying under control of the Governments will be adopted for all important staples. Production and trade within the belligerent nations is to be closely regulated by the Governments.

During the World War, exchange strictures on trade were gradually developed, but with this experience behind them the belligerent nations have been able to institute such controls much more quickly in 1939. These controls probably will be developed to an even greater extent than in the World War, and will

place these nations in a much stronger position in bargaining for supplies with exporting countries. They may be used in an attempt to hold down prices of many goods which the warring nations will have to import.

Decline in the pound sterling

As a result of the war crisis the British Equalization Fund in the latter part of August 1939 withdrew its support of the pound sterling, the dollar price of which fell irregularly from $4.68 to around $3.75; but later the price reacted to around $4.02, the official rate.

Effects of these and any possible further declines in the pound upon the quantities or prices of American exports will be modified by the fact that Great Britain and France may use gold and dollar exchange obtained from liquidated foreign investments for part of their purchases of war materials in this country, and by other circumstances. The amount of gold and such dollar exchange available is not affected by changes in the sterling rate. In addition, the Governments of the belligerent nations have control over imports of the essential commodities and over prices in their own countries, which may be manipulated to modify the effects of changes in exchange rates. Moreover, many other countries, including Canada, whose currency in peace times has been tied to the pound, have tended at least partly to divorce their currencies from sterling, with a consequently smaller decline in such currencies in terms of the dollar. Thus, the effects of a decline in the pound sterling upon the quantities and prices of products exported from the United States will be less than in peace times.

Domestic Demand

Domestic consumer demand for farm products is expected to be considerably stronger in 1940 than in 1939. Both industrial production and consumers' income will be considerably higher at the start of the year than they were at the beginning of 1939. There may be a temporary letdown early in 1940 while production is being adjusted to the actual volume of domestic consumer demand and exports, but recovery from such a recession should be sufficiently early and vigorous to bring the averages for the year at least moderately above those for 1939.

This outlook is based upon prospective conditions in a number of important industries, as well as upon the general economic situation as influenced by the wartime conditions previously noted.

Automobiles

The automobile industry in 1939 recovered substantially from the low production of 1938. However, the estimated United States output of around 3,600,000 vehicles in 1939, compared with approximately 2,500,000 in 1938, still left production lower than in any of the 3 years 1935-37. No past period of recovery in automobile production has ended in one year.

That replacement needs continue large is evidenced by the fact that at least one out of every four cars registered in 1939 was 8 years old or over. Higher incomes for the drivers of antiquated models are all that is needed to

bring them back into the market for more up-to-date machines. Drivers of the newer model cars also tend to trade them in on current models more often when economic conditions are improving and the outlook is considered reassuring.

Exports of automobiles and motortrucks in 1940 are not expected to decline as a result of the European war, and may even increase somewhat. Import demand of belligerents for passenger cars may fall sharply as costs to individuals are increased by exchange depreciation and fuel scarcity, but imports of motortrucks by these nations may increase because of war requirements. Demand for United States passenger and commercial vehicles by neutral nations probably will expand as a result of the cutting off of former sources of supply.

In summary, these factors favor a substantial increase in automobile output in 1940: (1) relatively low production in 1938 and 1939, (2) usual behavior of the industry which suggests a longer period of improvement than has yet occurred, (3) the existence of a large number of antiquated models 8 years of age or older, and (4) expected improvement in general domestic economic conditions.

Steel

Steel and iron are widely used in the manufacture of numerous durable products -- both consumers' and producers' goods. Thus, the outlook for steel is influenced by and affects prospects in many other industries, and is a very important part of the general industrial outlook.

In recent years the automobile, construction, railroad, and container industries together have used about half of the steel produced in the United States. Exports are next in importance among the individual steel consuming groups. The 1940 outlook is for improvement in all of these important steel-consuming lines with the possible exception of construction. Although the total volume of building may be somewhat greater, a smaller proportion of it may represent types of structures using much steel.

Exports of iron and steel products exclusive of scrap amounted to 1,513,000 gross tons in 1914, 3,451,000 tons in 1915, and 5,886,000 tons in 1916. The gain from 1914 to 1916 totaled nearly 300 percent. Exports amounted to 2,149,000 gross tons in 1938 and for the first 8 months of 1939 were slightly below exports for the corresponding period of 1938. Exports of scrap recently have been much greater than at the time of the outbreak of the World War.

Steel ingot production in 1939 may reach 46 million tons, compared with slightly less than 28 million tons in 1938 -- a gain of about 65 percent. This would still leave output somewhat lower than in 1937 and about 15 percent less than the peak output of 1929. Considering the great number of increased uses that have been found for steel in recent years and its widespread substitution for other products, it is apparent that the 1939 output, though well above 1938, was far from a possible maximum. A further substantial gain in 1940 over 1939 is in prospect, particularly if there is an increase in export demand similar to that which occurred during the World War.

Building construction

Construction contracts awarded in 1939 apparently were moderately above those of 1938, but the amount of materials used and the employment furnished increased substantially because of the completion during 1939 of a large amount of public works started late in 1938.

The 1940 prospects are for little further gain in construction. A moderate increase in contracts in 1940 over 1939 might be accompanied by no increase at all in actual construction, since the volume of uncompleted work under way at the start of 1940 will be considerably smaller than it was a year earlier.

Residential building in 1940 probably will be maintained somewhere near the improved level of the last 18 months if the expected recovery in general business and in national income materializes and if building costs do not increase greatly.

Utility construction, which has lagged behind the general recovery, should expand. The demand for electricity continues to grow, having reached new all-time peaks in recent months.

Industrial and commercial building may increase a little along with general economic recovery, but no general shortage either of plant capacity or of office space is in prospect. Therefore, any 1940 gains in these types of construction may be of little general significance.

Total public construction, both local and Federal, is expected to be lower in 1940 than in either 1939 or 1938. Already expenditures on WPA projects under programs authorized before 1939 have passed the peak.

Railway equipment

The railroads announced in September that the largest program for improvement of rolling stock since the 1920's was to be started immediately. Equipment that is in bad order is to be repaired extensively, and perhaps 35,000 new freight cars are to be put into service as fast as they can be turned out of the shops. Large orders for steel rails are being placed.

This action on the part of the railroads no doubt is due largely to three considerations: (1) costs of material, especially steel, are expected to advance, (2) traffic is expected to continue the improvement recently in evidence, and (3) replacement of rolling stock and track equipment, deferred during recent years, is becoming necessary. Although the class I roads reported deficits in each of the first 6 months of 1939, conditions recently have shown a distinct improvement which, if continued, will make it easier for the roads to obtain the necessary funds for new equipment.

Return of the railroads to the equipment market is especially important to the steel industry. In recent years the railroads have taken an average of less than 10 percent of the steel produced, whereas in the 1920's their takings were about twice as great.

Textiles

Should the general level of business and of consumer income increase as much in 1940 as is now anticipated, the output of textiles as a whole may hold at about the high level of 1939, but probably will not contribute much toward further recovery as it did in 1936 and again in 1938-39.

Activity in cotton-textile mills in 1940 is not expected to increase much, if any, over the average 1939 rate, which was about the same as that for the all-time peak years of 1927 and 1937, in which consumption totaled 7-1/2 million bales. Cotton consumption by domestic mills during the first 9 months of 1939, totaling over 5,400,000 bales, was 25 percent higher than during the corresponding period of 1938. For September 1939, mill consumption after allowing for seasonal factors was 68 percent above the April 1938 low point and almost as high as in any previous month. Heavy sales of cotton goods in the late months of 1939 must have resulted in a considerable increase in dealer inventories. This will tend to hold down output in 1940. Because of the war, some textile business may be diverted from foreign to domestic mills, and exports of finished textiles to neutral countries may experience sizeable increases similar to those that occurred during the World War.

Activity in American woolen mills will be helped by lessened competition from abroad incident to increased military demands. Activity in the field of synthetic fibers may be increased by war conditions, but these changes in output will not greatly affect the total.

Minerals

Demand for minerals in 1940 will be stimulated both by increased domestic industrial activity and by larger exports. Already some coal mines that have not been worked for years are being brought back into production, in part to meet increased Canadian demands following the reduction in shipments from Wales. Similarly, petroleum output has been increased, also in part as a result of increased demand from warring nations. Because of rigid price controls by belligerents and larger developed reserves outside the United States, exports of nonferrous metals may not be increased as much as they were after 1914; but war demands will no doubt bring some added business to domestic producers.

Exports of petroleum products increased by about 150 percent in value during the World War and, though foreign production has increased greatly since that time, motorization has also grown and the needs of the belligerents are greater. Coal exports doubled in value from 1914 to 1918. The value of nonferrous metal exports increased by 360 percent between 1914 and 1917. The general effect of the present war also will be to increase exports of these products, despite greater production outside the United States.

Miscellaneous lines will be more active

Improvement should be rather general in the many miscellaneous industries that produce goods for consumption, although all will not share equally. Those in which costs and prices can be held down should be able to realize sizeable increases in volume as consumer incomes rise. Some of the household-

equipment industries have already begun to reflect the increase in consumer income which started in the middle of last year. Sales of miscellaneous goods to neutral countries will be stimulated by the cutting off of their usual source of supply by the war. Modernization of industrial plants is likely to call for expanded installations of new machinery and equipment.

Capital expenditures

In periods of price and business recovery such as that now under way, business men become increasingly willing to take risks and to spend money in modernization of their plants and in attempts to expand the market for their products. This is the element needed to stimulate the durable-goods industries in which activity has remained relatively low during the last 2 years. For instance, in August 1938 the production of durable goods, according to the Federal Reserve index, was 8 percent below the 1923-25 average whereas the production of the non-durable group was 13 percent above.

Government expenditures

The contribution of the Federal Government to consumer purchasing power, according to present estimates, will tend rather definitely downward in 1940. Evidences of this expected curtailment in expenditures will appear in reduced Works Progress Administration employment, which at the start of 1940 may total about 2,300,000 persons as compared with 2,900,000 a year earlier, and reduced expenditures on all Public Works Administration programs, which for the first half of 1940 have been estimated at 293 million dollars as compared with 724 million spent during the corresponding 6 months of 1939. Partly offsetting these reductions will be increased expenditures for military and naval defense.

Period of readjustment in 1940

Such evidence as is available indicates that there was no large accumulation of inventories in 1939 up to September 1. The memory of losses sustained on unwieldy inventories after the downturn of business in 1937, and a persistent downward trend in commodity prices, had tended to minimize forward buying despite the general improvement in business.

At the outbreak of war in Europe the cautious buying policies in effect during the preceding year were replaced by very aggressive forward buying in many lines. Although the initial buying hysteria which followed the outbreak of the war has subsided, there is every reason to expect a considerable increase in inventories during the last quarter of 1939 at least. This inventory accumulation may be carried to excess, thus necessitating a period of readjustment while production is brought into line with domestic consumption and exports under the new conditions created by the war. The timing, duration, and intensity of any recession of this nature during 1940 will depend largely upon the amount of excess inventory accumulation, the extent to which actual consumption and exports increase in 1940, the movement of commodity prices in 1940, and the extent to which the periods of readjustment in the several lines of production coincide.

In any event, it seems certain that the rate of improvement prevailing in the last half of 1939 will not be maintained throughout 1940. It is pos-

sible, but not probable, that a recession growing out of these conditions might accumulate sufficient force to offset other favorable factors in the situation, and prevent further improvement in the general level of industrial activity and consumer incomes during 1940. Conditions in that year, however, will be different in several important respects from those prevailing at other times, such as the fall of 1937, when inventory adjustments precipitated prolonged and severe recessions. Both domestic conditions and war influences are more favorable to a relatively quick and less severe readjustment. Thus, although the average level of industrial activity in 1940 may not be so high as that prevailing in the last quarter of 1939, it should be above the 1939 average.

Foreign Demand

Export demand for the products of farms of the United States is expected to be somewhat greater, on the whole, in 1940 than in 1939, although conditions will be very uneven and several products probably will encounter severely curtailed foreign markets. The principal factor in the situation will be the present war in Europe. Since some countries for a number of years have been administering their economies on a quasi-war footing, the United States farm exports already have experienced some of the effects of wartime conditions. The large German market, for example, has been practically closed to some of them. Another important factor will be the abnormally low level of foreign stocks of American cotton.

Government controls in European importing countries

The Governments of the European belligerents are prepared to subject the economic life of their entire populations to immediate direct control. Although every effort will be made to permit essential consumption of basic foodstuffs, the consumption of commodities considered as luxuries will be greatly decreased. The fullest possible use will be made of agricultural resources within the belligerent countries, and producers will be encouraged to concentrate on products that give the quickest and most efficient food yield, in order to keep dependence on imports as small as possible. The United Kingdom, for example, has announced plans to increase land under cultivation by 2,000,000 acres, primarily for grain production. Animal numbers, however, probably will be permitted to decline because of: (1) the greater dietary efficiency of bread grains, (2) the difficulty of obtaining adequate feed supplies, and (3) the relatively large amount of labor involved in the production of livestock. Especially large imports of some slaughter products will therefore be required.

Belligerent countries, as well as most neutral countries in the area of hostilities, will employ exchange control (or other effective methods of limiting imports) to restrict their foreign purchases of agricultural products to wartime necessities. They may also attempt to use this control as a sort of buyers' monopoly to keep down world prices of those commodities for which there is a large war demand. It is possible that the belligerent countries will institute regular governmental trading in important commodities: (1) to assure essential supplies, (2) to conserve foreign exchange resources, and (3) to employ their economic power in the most strategic way. The two latter objectives militate against purchases from the United States. Foreign exchange or gold will be required for a greater portion of purchases from the

United States than of those from several other agricultural countries. It is partly for this reason that the British Government instructed British tobacco companies to cease buying American tobacco. Furthermore, strategic considerations will make it desirable for the United Kingdom and France to buy so far as possible from countries that might otherwise directly or indirectly sell the commodities in question to Germany or that threaten, because of a large favorable balance of trade with Germany, to fall under German domination. An additional disadvantage may appear because of efforts by the United Kingdom and France to dispose of agricultural purchases exceeding their own needs through barter or compensation arrangements in exchange for other needed imports. For example, the United Kingdom has already taken over the entire Australian wool clip which will probably exceed their needs for fine wools. But in spite of these controls, urgent wartime needs for certain commodities will lead to purchases from the United States.

Effects of ocean shipping

The chief uncertainty in the export demand situation is the extent to which normal shipping operations and routes will be disrupted by the blockades of the belligerent nations. If Great Britain and France are able to continue buying wheat, beef, butter, cotton, and other farm products from their dominions and other countries in the Southern Hemisphere, the possible beneficial effects of the war upon the export demand for United States agricultural commodities will be greatly reduced, whereas most of the adverse effects will remain. On the other hand, if the efforts of Germany to interfere with the commerce of its opponents are as successful as some observers have predicted, the United States as well as Canada will be given a distinct advantage. Even though actual shipping losses are held to a minimum, if Great Britain and France find it necessary to give protection to shipping lanes by the convoy system, the shortage of naval vessels for this purpose and the great expense incident to such convoys will give a considerable relative advantage to North American countries in supplying foodstuffs to these warring nations. Developments in these respects still are highly uncertain, particularly since the use of airplanes in raids on commercial shipping has not yet been fully tested.

Supplies in competing exporting nations

A number of agricultural countries (including Canada, Australia, South Africa, New Zealand, India, and, in a sense, Egypt) are not only belligerents and therefore presumably ready to ship on credit to their European allies, but also they are partially linked to the economy of the United Kingdom because of related currency standards and extensive British investment in their enterprises. They may decide whether to ship their various exportable farm surpluses to their European allies or to neutral markets more on the basis of military-economic strategy (including foreign exchange requirements) than on the basis of price. As a result, United States farm exports (particularly tobacco, raisins, and wheat) may suffer. On the other hand, many countries that remain outside of the area of hostilities may experience an improvement in general economic activity as a result of war, thus increasing their demand for agricultural products. This is particularly true of Canada.

Effects on leading commodities

The chief United States farm commodities for which effective export demand is expected to be greater in 1940 than in 1939 are lard, pork, certain canned and dried fruits, and cotton. Those for which it probably will be less are fresh fruits, tobacco, feeds, and possibly wheat. In general, importing countries in the area of hostilities will prefer products in their most "concentrated" forms, in order both to save on shipping costs and to conserve manpower. Thus, they will favor imports of slaughter products over feedstuffs, dried fruit over fresh fruit, and possibly textiles over textile fibers.

These differences in the trends of export demand by commodities will be accentuated by the foreign situations that confront our leading export products in the matter of supplies and competitive conditions. Thus, foreign stocks of wheat are extremely high. The United Kingdom has enough tobacco on hand for 2 years' consumption requirements and is much less interested in maintaining these stocks than it is during peace time. Foreign production of most fruits has been large during the current season and our fruit exports to the Scandinavian countries will suffer from the British blockade. Argentina will furnish vigorous competition in a European feedstuffs market that will be greatly reduced both by the British blockade and by lower foreign livestock numbers. On the side of the commodities for which there is a war-time preference, Baltic competition with our pork in the United Kingdom market has been completely shut off. Furthermore, lard imports may be preferred not only over feed imports but also over imports of oilseeds and vegetable oils.

The situation for cotton is mixed. Belligerent industrial countries in the area of hostilities will doubtless consume less United States cotton than if there had been no war, although they may consume more than in 1939. Furthermore, foreign stocks of United States cotton are extremely low, so that foreign consumption will be reflected in export demand more directly than normally. Japanese purchases of United States cotton probably will be above the low level of last year. Chinese and British Indian crops are small and some increase is probable in Japanese textile exports to markets usually supplied by European countries. On the other hand, both supplies of cotton textiles in Japan and stocks of raw cotton in Shanghai are large and there may be some reduction in the demand for Japanese textiles by China and India.

Prices

Wholesale commodity prices probably will average at least slightly higher in 1940 than in 1939. Gains will be largest in prices of raw materials, but prices of processed goods also will rise. The expected rise will be based largely on improved demand, since supplies of agricultural commodities are ample and industrial capacity generally is sufficient for a considerable increase in output. The expected increase in demand for most farm products will be domestic rather than foreign, while for many industrial and mineral products increased export as well as domestic demand will be important. The demand for some products will be adversely affected by the war.

Domestic influences

Wholesale prices of nearly all the principal groups of commodities were lower in August than during the low month of industrial production in May 1938. Ordinarily, prices of raw materials advance early in periods of industrial recovery, and prices of processed goods respond later. Thus, the continued decline in wholesale prices during the period of rising business activity from May 1938 to August 1939 was not according to the usual tendencies.

This largely explains the cautious buying policies which had been rather generally maintained until the outbreak of war in Europe. Inducements to buy ahead were lacking while prices were persistently drifting downward. Thus, when war was declared and prices turned about, there was more room for improvement than if previous buying policies had been less conservative. The better domestic business prospects probably would have resulted in improvement in the commodity price level in the near future even if there had been no war.

War demand

Greatest price advances will occur in those raw materials that are needed for products used in war and that cannot be produced in sufficient quantities in belligerent nations or their possessions, and in others for which there is danger of interruption to usual supplies because of the war. Prices of export products the consumption of which can be postponed or eliminated will not be helped by war unless the stimulation to domestic demand is sufficient to offset reduced export demand.

Every major war has been accompanied by rising prices, but important differences in supply and demand conditions have greatly influenced the pattern of price changes in these events. The greater preparation of belligerents before war broke out in 1939 compared with 1914, increased foreign production of many commodities, the heavier existing world supplies of some farm and industrial products, and the more rigid price controls being exercised by the warring nations, will reduce the effects on prices of the present European war.

When war started in 1914 industrial activity in the United States was declining and uncertainties incident to war acted as added depressants. But in 1939 the trend of industrial activity was upward. This together with memory of the eventual price advances of the World War period, resulted in immediate price stimulation as domestic buyers came into the market in an attempt to stock up ahead of the major advance. The later effects, however, may contrast in an opposite way with those of the World War.

Prices received and paid by farmers

Export demand for some foods will increase as the European war continues. This, together with the expected improvement in domestic demand, should result in strengthening the general level of prices to be received by farmers in 1940 compared with the average for 1939. But price advances will be held in check by the existing adequate supplies and by expected increases in production of some food products.

Government price-stabilizing programs, by preventing prices from falling as far as they otherwise would have during the 1937-38 depression, prevented the subsequent improvement in business activity and consumers' income from being reflected in farm prices. Since the outbreak of war prices of several important commodities have risen above the support levels established by Government programs. Thus, during 1940 prices may reflect changes in demand more clearly than at any time since 1937. Prices

of some important farm products will remain under the influence of burdensome world supplies and possible lower consumption in warring nations.

Prices paid by farmers for goods used in living and production will be higher in 1940 than in 1939. The increase in such prices, however, probably will be less than in prices of products that farmers sell. As a consequence, the ratio of prices received to prices paid by farmers will increase. This ratio in 1939 was the lowest in 5 years.

Farm Income

Income from farm marketings in 1940 is expected to be materially higher than in 1939, mainly as a result of the improvement in industrial activity and consumers' income. Government payments to farmers in 1940 may be about the same as in 1939, and considerably larger than in any previous year.

During the first 8 months of 1939, farm income failed to improve along with the improvement in consumers' income, and averaged about 5 percent below the same months of 1938. However, the recent advance in farm prices has greatly improved income prospects for the last 4 months of the year, and income from marketings for the year may be slightly larger than for a year earlier. Government payments in 1939 will be about 300 million dollars more than in 1938 and the largest for any year since Government payments began in 1933.

The improvement in farm income in 1940 may be more pronounced for meat animals, dairy products, poultry, and fruits and vegetables than for cotton and wheat. Some commodities may also benefit from increased foreign demand, particularly hog and dairy products.

Agricultural production for market in 1940 may be slightly larger than in 1939, with increased output of meat animals and vegetables more than offsetting a possible decline in output of tobacco. The production of grains and cotton will depend partly on unpredictable growing conditions. The output of dairy and poultry products will be affected by the relation of feed prices to livestock-product prices. If there is average weather the total output of these commodities is not expected to be greatly different in 1940 than in 1939.

Although prices of hogs will be affected by increased supplies in 1940, farm income from meat animals and wool is likely to increase considerably and may be the highest for any year since 1930. Unless conditions are unusually favorable for production, the total output of dairy products may not be any larger than the record output of 1939, and supplies in storage at the beginning of 1940 will probably be somewhat smaller than a year earlier. Thus, with slightly smaller total supplies in prospect, the improvement in demand is likely to be accompanied by a substantial increase in prices, and income from dairy products will be larger.

Marketing of poultry and eggs will probably be somewhat above average in the last quarter of 1939, and storage stocks of poultry carried into the new year will be relatively large. The output of eggs during 1940 is expected to be slightly larger than in 1939, but poultry marketings may be slightly smaller. With higher incomes of consumers in prospect, farm income from poultry and eggs in 1940 is likely to improve over that of 1939.

Stocks of most staple crops on January 1, 1940 are expected to be above average, a situation which will tend to limit the improvement in farmers' income from the sale of these crops in 1940. Prospects are favorable for a considerable increase in the production of canned vegetables in 1940. This will contribute toward increased farm income from vegetables.

The probable supply and demand conditions for farm products in general indicate a material improvement in income from farm marketings, with practically all groups of commodities sharing the increase. Income from livestock and livestock products may be nearly as large as in 1937. Although the increase in income from crops may be relatively as large as for livestock, the larger domestic and world supplies of some important crops may hold the income from them below 1937 levels. The lower income from crops than in 1937 will be partially offset by larger Government payments, but total farm income including Government payments may not equal that for 1937, when income was the highest for any year since 1929.

Release Date
November 6, P. M.

THE AGRICULTURAL CREDIT OUTLOOK FOR 1940

Summary

The volume of short-term credit used by farmers during 1939-40 for production and living costs, for livestock and machinery, and for farm improvements is expected to be 5 or 10 percent greater than that used in 1938-39. Commodity Credit Corporation loans on the 1939-40 corn and cotton crops, if offered, will increase the aggregate volume of short-term credits used by farmers by even greater percentages.

Ample short-term credit will be available for meeting all anticipated demands for credit by farmers of good credit standing. Commercial banks, production credit associations, and other agencies can easily expand their loans. Funds available for making rehabilitation and emergency loans, however, are slightly smaller than last year. Applications for rural electrification loans are exceeding available funds, but credit for other cooperative purposes appears to be ample.

The volume of farm-mortgage financing is expected to be somewhat higher in 1940 than in 1939. The volume of refinancing is not expected to decrease appreciably, and additional new financing is expected in connection with land transfers, farm-equipment purchases, and farm improvements. No great change is expected in the volume of outstanding farm-mortgage debt. Additions to mortgage debt through new financing are likely to be offset by principal repayments, foreclosures of mortgaged farms, and scale-downs resulting from debt adjustments.

Ample mortgage credit will continue to be available in 1940 on favorable terms. Funds available for such loans from both Federal and private agencies are abundant, and increased amounts will be available in 1939-40 in designated counties for tenant-purchase loans to be made by the Farm Security Administration under the Bankhead-Jones Farm Tenant Act. Debt-adjustment activities will continue in 1939-40.

The Volume of Short-Term Credit Used by Farmers During 1939-40 is Expected to Increase

The volume of short-term credit, used by farmers during 1939-40, exclusive of loans made or guaranteed by the Commodity Credit Corporation is expected to increase to levels 5 or 10 percent above those of 1938-39. Commodity Credit Corporation loans on the 1939-40 corn and cotton crops, if offered, will increase the aggregate volume of short-term credits used by farmers by even greater percentages.

During 1938-39 loans to farmers for production costs, living expenses, capital equipment, and farm improvements, increased about 2 or 3 percent, but are expected to increase more rapidly in 1939-40. Numbers of livestock are increasing, there is increasing use of machinery on farms, and increasing

expenditures for farm improvements are being made. These changes are requiring increased use of short-term credit by farmers. The current rate of increase will probably be augmented during 1939-40 by rising costs of farm supplies and equipment, by higher livestock prices, and by prospects for increased farm income during the next year.

The principal increase in the short-term credit used by farmers during the last several years has been in the stabilization loans of the Commodity Credit Corporation. This program has permitted farmers to hold large portions of crops which otherwise would have been sold. It has not yet been announced whether the Commodity Credit Corporation will lend on the 1939-40 cotton and corn crops. If such loans are offered, there probably will be a substantial increase in the credits used by farmers to hold stored products, even though the loans on 1939-40 cotton and corn crops may be smaller than those on the preceding year's crops. The loans on 1938-39 cotton and those on 1937-38 and 1938-39 corn have been extended and many of them will remain outstanding if conditions call for loans on the 1939-40 crops.

New loans to low-income farmers for rehabilitation and emergencies probably will be of slightly smaller volume in 1939-40 than in 1938-39. The Farm Security Administration's current appropriation for these purposes is about $20,000,000 smaller than in the preceding year, which more than off sets the $10,000,000 increase in funds available to the emergency crop and feed loan section of the Farm Credit Administration. The total amount of such advances outstanding, however, will probably increase, for emergency and rehabilitation loans are liquidated very slowly.

Short-Term Credit Increased During 1938-39

Outstanding personal and collateral loans to farmers held by commercial banks and loans of similar character held by units of the Farm Credit Administration increased during the year ended June 30, 1939 from $1,166,492,000 to $1,430,440,000, or about 23 percent (table 1). This was approximately the same rate of increase as occurred during the preceding year. As during 1937-38, most of the increases during 1938-39 occurred in the loans of commercial banks, which increased $267,761,000, or 29 percent. Loans of production credit associations increased $3,650,000, or 2 percent (table 2). There were decreases in the loans of regional agricultural credit corporations, which are in liquidation, and of private credit corporations that rediscount with the Federal intermediate credit banks.

The large increase of short-term commercial bank loans to farmers during 1938-39 was due mainly to increased holdings of loans on stored farm products guaranteed by the Commodity Credit Corporation. Between June 30, 1938 and June 30, 1939 the commodity loans held by commercial banks and other lenders (mainly, however, by commercial banks) under purchase agreements with the Commodity Credit Corporation increased $248,780,000, while the total of commodity loans and other personal and collateral loans of commercial banks to farmers

Table 1.- Outstanding short-term loans to farmers

Month and year	Commercial banks 1/	Farm Credit Administration 2/	Total
	1,000 dollars	1,000 dollars	1,000 dollars
December 31, 1920	3,869,891	---	3,869,891
December 31, 1923	2,943,818	9,105	2,952,923
June 30, 1931	1,936,360	79,206	2,015,566
December 31, 1934	807,613	202,629	1,010,242
June 30, 1936	661,606	229,041	890,647
December 31, 1936	593,614	170,271	763,885
June 30, 1937	726,400	228,965	955,365
December 31, 1937	788,351	192,480	980,831
June 30, 1938	925,705	240,787	1,166,492
December 31, 1938	1,064,667	190,518	1,255,185
June 30, 1939	1,193,466	236,974	1,430,440

1/ This series includes only personal and collateral loans to farmers and excludes loans on farm real estate. Loans held by banks in United States possessions are excluded.

2/ This series includes short-term loans similar in character to the personal and collateral loans made by commercial banks. It excludes emergency crop and feed loans and drought relief loans. Types of loans included are regional agricultural credit corporation loans, and production-credit association loans and Federal intermediate credit bank loans to, and discounts for "other financing institutions." Loans in Puerto Rico are excluded.

Table 2.- Changes in outstanding personal and collateral loans of commercial banks and production credit associations June 30, 1938 to June 30, 1939

Geographic divisions	Commercial banks		Production credit associations		Commercial banks and production credit associations	
	Amount	Percent	Amount	Percent	Amount	Percent
New England	+ 322	+ 3.9	- 223	- 4.3	+ 99	+ 0.7
Middle Atlantic	+ 5,102	+ 10.8	+ 336	+ 3.1	+ 5,438	+ 9.3
East North Central	+59,251	+ 46.2	+ 3,790	+ 14.2	+ 63,041	+40.7
West North Central	+98,379	+ 38.5	+ 2,399	+ 11.0	+ 100,778	+36.3
South Atlantic	+12,732	+ 19.4	- 159	- 0.6	+ 12,573	+13.9
East South Central	+22,993	+ 24.2	+ 1,208	+ 8.0	+ 24,201	+22.0
West South Central	+56,147	+ 38.3	+ 1,299	+ 5.4	+ 57,446	+33.7
Mountain	+ 4,823	+ 6.3	- 853	- 2.9	+ 3,970	+ 3.7
Pacific	+ 8,012	+ 7.8	- 4,147	- 16.5	+ 3,865	+ 3.0
United States	+267,761	+ 28.9	+ 3,650	+ 2.0	+ 271,411	+24.7

increased $267,761,000 (table 3). The principal increases in commodity loans held by commercial banks and other lenders were in corn loans and cotton loans. This appears to explain why bank loans to farmers increased mainly in the East and West North Central States, where the corn loans were made, and in the South Atlantic and East and West South Central States, where most of the cotton loans were made.

Table 3.- Loans on stored farm commodities held by commercial banks and other lenders under purchase contracts with Commodity Credit Corporation on June 30, 1938 and June 30, 1939

Commodity	June 30, 1938	June 30, 1939	Change
	1,000 dollars	1,000 dollars	1,000 dollars
Cotton	129,277	270,457	+ 141,180
Corn	14,060	119,395	+ 105,335
Wheat	---	2,655	+ 2,655
Wool and mohair	805	415	- 390
All	144,142	392,922	+ 248,780

Loans guaranteed by the Commodity Credit Corporation have been an important element of short-time commercial bank loans to farmers ever since the stabilization loan program assumed large proportions. From the latter part of 1936 to June 30, 1939, the personal and collateral loans to farmers held by commercial banks increased $600,000,000, doubling the amount held at the earlier date. During the same period there was an increase of more than $350,000,000 in the loans held by commercial banks on stored farm products under purchase agreements with the Commodity Credit Corporation. The loan program of the Commodity Credit Corporation will continue to be influential - at least in the near future - in determining the volume of commercial bank loans to farmers.

The short-term loans to farmers held by commercial banks, other than those on stored commodities, and loans held by the production credit associations, changed very little in amount during 1938-39. The principal causes of change appear to have been increases in livestock numbers, particularly increased numbers of cattle and hogs on feed in the Corn Belt, and increases in outlays for machinery, equipment, and improvements. Loan expansion was held to small volume by the relatively low prices of farm products and by the substantially increased benefit payments received by farmers for compliance with the 1938 conservation and adjustment programs.

The volume of loans to low-income farmers for rehabilitation or meeting emergencies, held by the Farm Security Administration and by the emergency crop and feed loan section of the Farm Credit Administration, increased during 1938-39 from $343,531,000 to $415,882,000. New rehabilitation loans made during the year by the Farm Security Administration were slightly more

than $113,000,000, as compared with about $67,000,000 in each of the years 1936-37 and 1937-38. Such loans were supplemented by emergency subsistence grants to distressed farm families totaling about $21,500,000 during 1938-39, $22,500,000 in 1937-38, and $34,500,000 in 1936-37. New crop and feed loans made by the emergency crop and feed loan section of the Farm Credit Administration amounted to only $15,100,000 during 1938-39, as compared with $21,600,000 during 1937-38 and $33,000,000 during 1936-37.

Ample Short-Term Credit Will Be Available During 1939-40

Ample facilities are available for meeting all anticipated needs for short-term credit on the part of acceptable credit risks during 1939-40 at interest rates little, if any, above those prevailing during the last year. The deposits of country banks rose substantially during 1938-39 (table 4); and the banks hold large unutilized reserves and large portfolios of securities that can be sold or collected to provide additional funds if such are needed. Production credit associations, livestock loan companies, and agricultural credit corporations, likewise are in position to furnish a plentiful supply of credit, as Federal intermediate credit bank debentures, the principal source of funds for these institutions, continue to have a ready market at low rates of interest.

Table 4.- Demand deposits of country banks 1/
(1924-29 monthly average = 100)

Year	20 leading agricultural States	Cotton growing States	Corn Belt States	Range States
	Percent	Percent	Percent	Percent
Monthly average 1929	99.0	93.0	97.2	103.6
" " 1932	57.3	41.8	59.6	54.7
" " 1933	48.6	41.4	48.8	46.8
" " 1934	66.0	59.1	70.7	63.9
" " 1935 2/	77.5	71.2	85.3	77.1
" " 1936	97.6	94.7	106.9	101.3
" " 1937	105.7	105.0	115.4	110.4
" " 1938	102.7	93.3	112.4	106.4
July 1938	100.1	94.0	111.1	102.9
July 1939	108.5	102.7	120.6	110.4

1/ Deposits of member banks of the Federal Reserve System located in places of less than 15,000 population.
2/ Average of first 7 months.

Commodity Credit Corporation loans are available on the 1939 wheat crop, the 1939 wool and mohair clip, and 1939 production of naval stores. The 1939 wheat loans average 61 cents per bushel with loans to individual farmers varying according to location, freight and handling charges, and the grade of wheat. Wool and mohair loans are being offered on the basis of 54 cents per

pound for Average French Combing, clean wool delivered at Boston. Naval stores loans are being offered on the basis of $46.50 per unit. Loans on the 1939 cotton crop will be required under the terms of the Agricultural Adjustment Act of 1938 if the average price for Middling 7/8 inch cotton on the designated spot markets falls below 52 percent of parity during the marketing year. If the November crop estimate for corn is in excess of a normal year's domestic consumption and exports or if the farm price on November 15 or at any time thereafter during the marketing year is below 75 percent of the parity price, loans on the 1939 corn crop will be required under the terms of the Agricultural Adjustment Act of 1938.

For the Farm Security Administration's program of loans to low-income farmers for rehabilitation, for temporary emergencies, and to facilitate farmers' community and cooperative enterprises, $91,200,000 will be available in 1939-40. This is about $20,000, 000 less than the amount available for these purposes in 1938-39, but it is about $20,000,000 more than the amounts available in 1937-38 and in 1936-37. The major part of the Farm Security Administration's loans in 1939-40 will be standard rehabilitation loans. These loans are at 5 percent interest and are repayable within 1 to 10 years. They are made to farm-owner operators, tenants, and sharecroppers. Farm laborers who have arranged to operate farms are also eligible. Applicants must be unable to obtain credit from any other source and must agree to follow approved farming practices.

Under various authorizations from Congress the Emergency Crop and Feed Loan Section of the Farm Credit Administration as of July 1, 1939, had funds approximating $26,000,000 plus future collections on 1937, 1938, and 1939 loans, available for making crop and feed loans during the 1939-40 fiscal year.

Under the Water Facilities Program of the Department of Agriculture, loans are made to farmers in arid and semiarid States for the purpose of supplying small water facilities such as wells, pumps, windmills, stock ponds, and minor irrigation facilities. Loans for these purposes are made at 3 percent interest with a maximum repayment period of 20 years. The majority, however, run for 3 to 10 years. For the year 1939-40 Congress has appropriated the sum of $500,000 for carrying out the Water Facilities Act. In addition to the regular appropriation, $3,000,000 has been made available by the Farm Security Administration.

Conservation and Price-Adjustment Payments Will be Continued in 1939-40

Many farmers who are participating in the Agricultural Adjustment Administration Farm Program will again be able to use conservation and price-adjustment payments in lieu of funds that otherwise would have to be provided by borrowing.

Under the 1939 Agricultural Conservation Program, payments to farmers are expected to approximate $470,000,000, as compared with approximately $445,000,000 under the 1938 program and $330,000,000 under the 1937 program. The making of payments under the 1939 program began in September 1939 and it is expected that payments will be made in large volume during October, November, December, and January. Some farmers will obtain funds for financing the 1940

crop on the strength of payments to be received for 1940. It is estimated that payments will be made to about 6,000,000 farmers (including landlords, tenants, and sharecroppers) as compared with about 5,250,000 farmers in 1938 and about 4,000,000 farmers under the 1937 program.

Under the Price Adjustment Act of 1938, price-adjustment payments amounting to $212,000,000 on cotton, corn (in the commercial corn area), wheat, and rice, are being made to farmers during 1939 in addition to conservation payments. This amount compares with payments of $130,000,000 made to cotton producers under the 1937 Cotton Price Adjustment Payment Plan. About $84,500,000 of the 1939 payment have gone to cotton producers, $61,500,000 to producers in the commercial corn area, $64,000,000 to wheat producers, and $1,500,000 to producers of rice. Payments to winter wheat producers were made during the winter and early spring, while payments to spring wheat producers and producers of cotton, corn, and rice were made in the summer and early fall of 1939 following the checking of compliance with 1939 acreage allotments.

The sum of $225,000,000 was made available by Congress for price-adjustment payments to farmers who plant within their 1940 acreage allotments. These payments will be made to producers of cotton, corn (in the commercial corn area), wheat, rice, and tobacco. No payment will be made in the case of a commodity for which the average price for the 1939 crop is above 75 percent of parity.

Under the Sugar Act of 1937 payments will also be made to producers of sugar beets and sugarcane on their 1939 crop. Payments to sugar-beet producers probably will total about $20,000,000 and will be made largely during January, February, and March of 1940. Sugarcane producers in Louisiana and Florida probably will receive a total of about $6,000,000, largely during May, June, and July of 1940.

Loans are Available for Variety of Cooperative Purposes

Through the Central Bank for Cooperatives and 12 district banks for cooperatives the Farm Credit Administration makes available to cooperative associations the following types of loans: Commodity loans now being made on the security of staple farm products and farm supplies bear an interest rate of 1½ percent; operating capital loans to supplement the working capital of cooperative associations, an interest rate of 2½ percent; and facility loans for financing or refinancing the acquisition of land, buildings, and equipment, an interest rate of 4 percent. During 1938-39 the outstanding loans of the banks for cooperatives decreased from $81,200,000 to $59,576,000. Of the loans outstanding on June 30, 1939, commodity loans amounted to $10,239,000, operating loans $25,872,000, and facility loans $23,465,000.

Community and cooperative service loans are made by the Farm Security Administration to provide low-income farm families with group services for improvements and production where such farmers are unable to obtain these services on an individual basis. The outstanding loans made to the community and cooperative associations by the Farm Security Administration increased from $4,283,000 on June 30, 1938, to $10,729,000 on June 30, 1939. Besides these loans to associations, rural rehabilitation loans to individuals by the Farm Security

Administration are often used in part for cooperative enterprises such as the purchase or use of pure bred sires or heavy farm machinery. Loans for cooperative purposes are at an interest rate of 3 percent, except where the proceeds of the loans are for the payment of rent or fees for materials of a nonrecoverable nature, or for services. In this case the rate is 5 percent.

Loans for rural-electrification projects are available through the Rural Electrification Administration. Since its establishment (and including the current fiscal year), $274,475,000 in appropriations have been available to this agency. The distribution of these funds has been governed principally by the provisions of the Rural Electrification Act of 1936, which sets forth a 10-year program of lending activity and authorizes annual appropriations of $40,000,000 for this period. In addition to the regular appropriations, about $115,000,000 have been made available from Works Relief Appropriations.

Of the $274,475,000 available for loans $253,909,000 had already been allotted as of September 28, 1939, $242,861,000 for line construction and working capital, $6,414,000 for generating stations, and $4,634,000 for the installation of wiring and plumbing facilities. Cooperatives comprise 89 percent of the borrowers; the remainder is made up of such agencies as municipalities, power districts, and utility companies. The Rural Electrification Administration is instructed by law to give preference to cooperatives and public bodies in making loans.

A construction loan may be made for the entire cost of the project and is to be secured in the case of a cooperative by a mortgage or deed of trust. The maximum term or period is 25 years from the date of the note to complete liquidation. The rate of interest is 2.69 percent for loans made during the current fiscal year. This rate varies from year to year with changes in the rate paid by the Government on long-term bonds. Although 95 percent of Rural Electrification loans are made for the purpose of line construction, funds are also available for loans for farmstead wiring and plumbing installations. These loans are usually made for a 5-year term.

The Rural Electrification Act requires that half the annual appropriation be allotted among the States "in the proportion which the number of their farms not then receiving central-station electric service bears to the total number of farms of the United States not then receiving such service." It is further provided that not more than 10 percent of the remaining half shall be allotted to any one State. Reserved funds for which there is no demand are carried forward into the next year and are available for allotment to other States, with the restriction that not more than 10 percent may go to any single State.

Applications for funds this year (1939-40) have continued at about the same rate as last year, although the funds now available are $40,000,000, against $140,000,000 last year. This has created a situation in which, 2 months after the opening of the fiscal year, four States (Illinois, Indiana, Iowa, and Minnesota) had virtually reached the quota under the Act. Except for a small amount of funds carried forward from last year no more funds will be available to these States until a new appropriation is made. As of September 28, 1939, $52,023,000 in applications were under consideration, with only $16,554,000 remaining for allotment through June 30, 1940.

Mortgage Financing Expected to Increase

Some increase in the volume of new mortgage financing is expected in 1940, largely in connection with farm real estate activity, farm improvements, and purchases of equipment. The extensive refinancing of distress mortgages has greatly subsided, and mortgage activity now represents a more normal demand for credit to refinance maturing mortgages and to finance real estate transfers and additions to the farm plant. The estimated volume of farm mortgages recorded in the first half of 1939 is $389,000,000, only slightly less than the total of $392,000,000 for the first half of 1938 (table 5). For the second quarter of 1939 total recordings are estimated at $181,000,000, which is 2.3 percent larger than for the second quarter of 1938. This is the first time (since these estimates were first prepared for 1934) that any 3-month period showed an increase over the corresponding period for a preceding year. With the rate of decline in total farm mortgages recorded by all lenders becoming progressively smaller each year from 1934 to 1938, the upturn in the second quarter of 1939 suggests that mortgage activity was approaching a level of comparative stability at the beginning of 1939.

Table 5.- Estimated amount of farm mortgages recorded in the United States during the first 6 months, 1934 to 1939, by type of lender 1/

First 6 months of	Federal land banks 2/	Land Bank Commissioner 2/	Private lenders 3/					Total all lenders
			Total	Individuals	Commercial banks	Insurance companies	Others	
	(Thousands of dollars)							
1934	432,950	309,997	238,278	115,857	56,591	20,732	45,098	981,225
1935	151,795	124,959	300,676	141,300	85,004	37,668	36,704	577,430
1936	67,928	48,133	321,657	134,672	94,003	56,619	36,163	437,718
1937	36,275	23,390	358,532	145,285	116,676	69,492	27,079	418,197
1938	28,897	16,795	346,060	131,745	108,928	74,502	30,385	391,752
1939	28,553	15,371	344,981	122,082	112,534	74,557	35,808	388,905
	(Percent of total)							
1934	44.1	31.6	24.3	11.8	5.8	2.1	4.6	100.0
1935	26.3	21.6	52.1	24.5	14.7	6.5	6.4	100.0
1936	15.5	11.0	73.5	30.8	21.5	12.9	8.3	100.0
1937	8.7	5.6	85.7	34.7	27.9	16.6	6.5	100.0
1938	7.4	4.3	88.3	33.6	27.8	19.0	7.9	100.0
1939	7.3	4.0	88.7	31.4	28.9	19.2	9.2	100.0

1/ Source: Farm Credit Administration.
2/ Actual amount of loans closed exclusive of Puerto Rico.
3/ Based on reports from counties including from 31 to 49 percent of the farms in the United States.

The prospects for farm real estate activity and land values are important factors in the outlook for farm-mortgage activity. The number of voluntary sales during the 12 months ended in March 1939 was somewhat under that of the previous 12 months, and no material change in the frequency of sales appears to have occurred thus far this year. However, farm real estate values are expected to strengthen somewhat during the coming year from the level reported March 1, 1939, and the frequency of voluntary sales is expected to increase, giving rise to additional borrowing on mortgages to finance these farm transfers. To the extent that prospective owner operators believe that the present outlook for somewhat higher income and price levels for next year marks the beginning of a continued rise, this attitude will tend to stimulate purchases and to strengthen land values. An increase in farm real estate purchases by others, primarily as investments, may also be expected to strengthen the real estate market. Current low interest rates and favorable purchase terms continue to be conducive to farm purchases involving the use of mortgage credit.

As offsetting factors, the large holdings of farm real estate acquired through foreclosure may severely limit price increases in many areas. However, the policies adopted by lending agencies with regard to offering their acquired farms for sale will have an important bearing on the supply of farms on the market in some areas. Some owners of foreclosed properties and other farm owners may withhold their farms from the market until a more accurate appraisal of future developments can be made.

The volume of foreclosures also will affect the supply of farms in the hands of lending agencies. During the 12 months ended in March 1939, foreclosure rates were slightly under those of the previous year. Little change from this level is expected during the coming year. The number of distressed loans is probably somewhat greater than a year ago, but collection policies may offset to some extent the normal effects of this situation on the number of foreclosures.

Some increase in mortgage activity may result from additional purchases of equipment and other farm improvements which previous income expectations did not seem to justify.

Little change is expected in outstanding farm-mortgage debt. Total farm-mortgage debt continued in 1938 the gradual decline which followed the sharp reductions of 1932 and 1933. The decline amounted to 2 percent in 1938 as compared with 2.4 percent in 1937 and 3.3 percent in 1936. Some of the expected increase in mortgage-credit activity will result merely in the shifting of debt to other borrowers, and it is possible that voluntary transfers of heavily indebted farms will result in a reduction of outstanding debt on such farms. About 40 percent of the mortgage debt is now held by the federally sponsored agencies, which require periodic curtailment of principal. A substantial volume of privately held loans also carry provisions for periodic principal payments. To these forms of debt reduction will be added a substantial amount of debt liquidation through foreclosures and other distress transfers of mortgaged farms. Moreover, many farm owners will find it prudent to utilize any increase in their incomes to retire debts rather than to expand their scale of operations. Such debt reductions will mainly offset the new debt arising from the financing of voluntary farm sales and additions to the farm plant.

Farm-Mortgage Loans of Federally Sponsored Agencies Continue to Decline

The farm-mortgage loans held by the Federal land banks and the Land Bank Commissioner declined $76,867,000, or about 2.8 percent during the first half of 1939 (table 6) as compared with a decline of about 1.5 percent during the same period in 1938. During the first half of 1939 these agencies closed $43,924,000 of new loans as compared with $45,692,000 for the same period in 1938. Principal payments to these agencies amounted to $76,316,000 during the first half of 1939, which is almost $20,000,000 greater than for the first half of 1938. Other forms of debt reduction, principally foreclosures, accounted for a reduction of about $44,500,000 in mortgage holdings during the first half of 1939 as compared with about $34,300,000 in the first half of 1938.

Table 6.- Outstanding farm-mortgage loans of leading lending agencies, 1929-39

Year	Federal land banks and Land Bank Commissioner	Life insurance companies	Commercial banks	Joint-stock land banks 1/	Three State credit agencies
	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars
January 1, 1929	1,194,821	2,138,080	2/	656,516	95,906
January 1, 1930	1,198,514	2,105,477	2/	626,980	93,274
January 1, 1931	1,189,604	2,059,221	3/ 945,172	590,811	92,698
January 1, 1932	1,167,898	2,007,361	2/	536,644	93,014
January 1, 1933	1,128,564	1,869,160	2/	459,183	84,075
January 1, 1934	1,303,445	1,661,046	3/ 555,885	392,438	79,574
January 1, 1935	2,532,617	1,258,900	498,842	255,931	62,286
January 1, 1936	2,866,651	1,054,770	487,505	175,677	48,091
January 1, 1937	2,900,936	936,454	487,534	133,499	32,657
January 1, 1938	2,848,056	895,470	501,450	104,163	24,657
January 1, 1939	2,735,075	887,336	513,276	87,362	17,281
June 30, 1939	2,658,208	4/ 831,000	530,628	78,511	

1/ Including banks in receivership.
2/ Data unavailable.
3/ June 30.
4/ Estimated.

The rise in principal payments in 1939 resulted in part from the fact that such payments were required on certain loans for which none were required in the first half of 1938. Borrowers who had taken advantage of the moratorium until July 11, 1938, on principal payments on Federal land bank loans in good standing on June 3, 1935, were required to make such payments on installments falling due after July 11, 1938. Many Land Bank Commissioner borrowers, from whom no principal payments were required during the first 3 years of their loans, were required to begin principal payments in 1939. Moreover, private

lenders have refinanced some loans held by the federally sponsored agencies. The number of foreclosures by the Federal land banks and the Land Bank Commissioner was about one-third greater in the first half of 1939 than for the first half of 1938. Federal land banks are now making a thorough study of conditions surrounding foreclosures and, until conclusion of this study, foreclosure action on Federal land bank and Land Bank Commissioner loans will be confined to cases of an emergency nature, such as those involving abandonment, bad faith, or actions to quiet title.

As of June 30, 1939 matured installments had been paid in full on 78 percent of all outstanding Federal land bank loans, as compared with 78.5 percent a year earlier, and 75 percent on June 30, 1935 (table 7).

Table 7.- Condition of Federal land bank loans outstanding, June 30, 1937, 1938, and 1939 by geographic division 1/

Geographic division	Percent of loans with all matured installments paid by borrowers			Percent of loans delinquent, including loans with delinquent installments and/or delinquent extensions			Percent of loans with all matured installments extended, but with no delinquency in such extensions		
	1937	1938	1939	1937	1938	1939	1937	1938	1939
North Atlantic	90.0	88.8	81.8	9.4	10.8	18.1	0.6	0.4	0.1
East North Central	88.2	87.9	85.8	8.1	9.7	13.1	3.7	2.4	1.1
West North Central	65.4	66.7	67.1	12.6	16.2	20.5	22.0	17.1	12.4
South Atlantic	81.1	83.3	80.8	8.2	7.8	10.0	10.7	8.9	9.2
South Central	79.1	80.3	82.8	11.1	12.2	12.9	9.8	7.5	4.3
Western	77.9	77.3	75.1	16.0	18.8	20.9	6.1	3.9	4.0
United States	77.8	78.5	78.0	11.2	13.1	16.0	11.0	8.4	6.0

1/ Source: Farm Credit Administration.

Little Change in Farm-Mortgage Holdings and New Loans of Life Insurance Companies

Farm mortgages held by life insurance companies are estimated at $881,000,000 on June 30, 1939, the decline during the first half of 1939 being less than 1 percent (table 6). During 1935 life insurance company holdings declined more than 16 percent, during 1936 more than 11 percent, during 1937 about 4.6 percent, and during 1938 less than 1 percent. The tapering off in recent years of the rate of decline in farm mortgages held by these agencies reflects both the decreasing volume of their foreclosures and the increasing volume of new loans. For the year ended June 30, 1939, the estimated number of foreclosure sales by these companies was more than 11 percent below the number for the year ended June 30, 1938, and less than one-half of the number for the year ended June 30, 1936.

The estimated volume of mortgages recorded by life insurance companies amounted to $74,557,000 for the first half of 1939 as compared with $74,502,000 for the first half of 1938 (table 5). For the entire year ended June 30, 1939, these agencies recorded $137,500,000 of farm mortgages as compared with $133,300,000 for the year ended June 30, 1938, and $115,100,000 for the calendar year 1936.

Commercial Bank Holdings of Farm Mortgages Increase

Farm mortgages held by commercial banks on June 30, 1939, amounted to $530,628,000, an increase of 3.5 percent from the same date in 1938, and an increase of 2.2 percent from the total at the beginning of 1939 (table 6). The upward trend of farm-mortgage holdings of commercial banks has been in progress since 1936. The volume of new mortgages recorded by commercial banks for the first half of 1939 is estimated at $112,534,000, an increase of 3.3 percent over the total for the first half of 1938, but a reduction of 3.6 percent from the total for the first half of 1937 (table 5). For the year ended June 30, 1939 the total was $213,600,000, an amount greater than for any comparable period since the data were first compiled for 1934. The total of $112,534,000 for the first half of 1939 is double the total for the first half of 1934.

The rise of farm-mortgage loans held by commercial banks from the low point reached in 1936 reflects not only the increased volume of their new loans, but also a great decrease in the volume of mortgages refinanced with the federally sponsored agencies, and a substantial reduction in the volume of their mortgage foreclosures. The estimated number of foreclosure sales by commercial banks for the first half of 1939 was only about 74 percent of the total for the first half of 1937, and only about 64 percent for the first half of 1935.

Additional Funds are Available for Tenant-Purchase Loans

For tenant-purchase loans under the Bankhead-Jones Farm Tenant Act, $38,000,000 will be available in the fiscal year 1939-40, as compared with $24,000,000 in 1938-39, and $9,000,000 in 1937-38, the first years of the tenant-purchase program. In 1939-40, about 7,000 loans will be made in 1,300 counties. In 1938-39, over 3,500 loans were made in 732 counties; and in 1937-38, over 1,500 loans were made in 332 counties.

Tenant-purchase loans, made for a 40-year period at 3 percent interest, are for the purchase of family-sized farms. The amortization and interest payments required of borrowers amount to 4.3 percent of the principal annually. First mortgages or deeds of trust on farm property are taken to secure the loan. Farm tenants, sharecroppers, farm laborers, or others with recent farming experience who live in counties selected for tenant-purchase loans may apply for these funds if they cannot obtain adequate credit from any other source. Farm owners are not eligible for these loans.

Debt-Adjustment Activities to be Continued

Many farmers continue to require assistance in obtaining adjustment of their debts and conciliation of creditors' claims. In addition to the informal agreements reached between borrowers and lenders, the Farm Security Administration, working in conjunction with county committees appointed by State governors, provides a more or less formal mean of mediation.

There were increases during 1938-39 over 1937-38 in both the number of adjustments made and the aggregate amount of debt reduction. Data on debt adjustment for the last 3 years are shown in table 8.

Table 8.- Debt-adjustment activity for years ended June 30, 1937, 1938, and 1939

Item	1939	1938	1937
Individual cases:			
Number adjusted	24,776	16,663	27,011
Indebtedness prior to adjustment	$77,300,000	$56,500,000	$96,200,000
Amount of debt reduction	$16,500,000	$13,700,000	$25,400,000
Group cases:			
Number adjusted	30	33	16
Number of individual farmers benefited	3,736	4,421	2,395
Indebtedness prior to adjustment	$ 8,200,000	$ 5,100,000	$ 3,300,000
Amount of debt reduction	$ 6,200,000	$ 3,200,000	$ 2,000,000

Source: Farm Security Administration.

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THE OUTLOOK FOR PRODUCTION COSTS IN 1940

The per-unit cost of commodities and services used in production of farm products in 1940 probably will average a little higher than in 1939. Some rise in wage rates is expected and prices of most commodities used in farm production probably will average a little higher. Most increases are likely to be small, but war requirements may cause sharply higher prices for a few commodities. Prices of commodities and services may not increase as much in 1940 as they did from 1914 to 1915 when the combined index number of prices paid by farmers for commodities used in production and of farm wage rates advanced 4 points.

Total farm employment probably will decline further next year but greater use of mechanized equipment will enable farmers to maintain production at current levels. Higher prices for farm machinery and building materials are expected. Prices of most fertilizer materials probably will rise a little. No substantial increase in prices of potash salts is expected as only a small proportion of the needs for these are supplied by nations now at war. Prices paid by farmers may be slightly higher for most seeds, and the relatively small crop of red clover indicates that seed bought for spring plantings in 1940 may be priced considerably higher than in the spring of 1939. Little change in feed prices from current levels is expected in view of ample supplies. Prices of motor fuel and oil, binder twine, tires, spray materials, and harness may also be higher if the recent advances in wholesale prices of raw materials are maintained.

Index numbers of prices received and paid by farmers,
September 1938 and 1939
(1910-14 = 100)

Prices received by farmers for all farm products	Sept. 1938	Sept. 1939	Prices paid by farmers for commodities and services used in production	Sept. 1938	Sept. 1939
All farm products	95	98	All commodities and wages	124	4/ 124
Grain	63	83	Farm wage rates 1/	126	126
Cotton and cottonseed	69	76	Feed	87	100
Fruits	75	73	Seed	133	130
Truck crops	107	114	Fertilizer	99	99
Meat animals	117	117	Farm machinery 2/	158	4/ 154
Dairy products	104	107	Equipment and supplies 3/	115	109
Chickens and eggs	118	102	Building materials 3/	147	147

1/As of July 1.
2/Not including tractors.
3/As of June 15.
4/Preliminary.

Farm Labor and Wage Rates

Farm wage rates in 1940 will average higher than in 1939, but increases probably will be small. Higher farm income in 1940 is expected to result in a greater demand for farm labor. The strengthening effect of increased cash income on the demand for hired workers probably will be offset in part by continued farm mechanization and fuller utilization of family workers. The supply of workers available for farm work is likely to be smaller in 1940 as employment opportunities in industry improve. Large increases in farm wage rates might result if industrial employment rises to near-capacity levels and materially reduces the number of persons in rural areas available for hire. It is not probable that an actual shortage of workers will occur, however, because of the large numbers of workers who are still unemployed or are employed on Government projects.

Relative to demand, the supply of farm workers was somewhat smaller in 1939 than a year earlier. The supply-demand ratio of 108 percent on October 1 of this year, however, was still above the pre-depression (1924-29) level of 100. At the same time a substantial increase in industrial employment took place. During the first 8 months of 1939, factory employment at 94 percent of the 1923-25 average was 6 points higher than the corresponding figure for 1938. Sharp increases in industrial employment took place after the outbreak of the war in Europe, making further reductions in the number of workers available for farm work.

Wage rates paid to farm workers during 1939 averaged 122 percent of prewar or slightly lower than a year earlier. During the first 8 months of 1939 less cash farm income was available to pay wages. Less than the usual seasonal decline is in prospect during the last quarter of 1939.

An upturn in the ratio of farm wage rates to rural living costs indicates that the real wages of farm laborers increased somewhat during the first half of 1939. Prices of articles purchased for family maintenance, at 119 percent of the 1910-14 average in March and June 1939, were about 3 points below the previous year. Prices of commodities purchased by wage workers rose faster than farm wage rates in the third quarter of 1939. A further decline in the real wages of hired farm workers is expected in 1940.

Farm employment probably will decline further in 1940, continuing the trend in evidence since 1929, but the decline is not expected to be large. Increased mechanization of the farm business, particularly as shown by the upturn in sales of equipment designed for small farms, is expected to reduce further the need for labor during 1940 unless the volume of production is raised materially above 1939 levels. Farm employment for the first three-quarters of 1939 averaged about 1 percent under the corresponding period a year earlier. Possibly reflecting the increased mechanization of small farms, the decline in hired workers was relatively greater than for family workers. The former were down 1.2 percent compared with 0.4 percent for family workers.

Farm labor statistics and related data, 1938 and 1939

	1938	1939 1/
Farm wage rates, 1910-14 = 100	124	122
Labor supply as percent of demand	113.3	111.6
Total farm employment, 1924-29 = 100	95	94
Family workers	98	97
Hired workers	86	84
Cash farm income, 1924-29 = 100 2/	74.5	77.0
Industrial wage rates, January 1914 = 100	207	213
Industrial employment, 1923-25 = 100	89.7	93.8
Rural living costs, 1910-14 = 100	122	119

1/Preliminary. 2/Including benefit payments.

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Many farmers have mechanized their farms for the purpose of reducing their hired-labor requirements to a minimum. With modern machinery a farmer and his family often are able to do all of their work without hired help. In other cases the need for hired labor is reduced to relatively short periods during the planting and harvesting season. The decline in the number of hired workers employed probably will continue in view of the introduction of new lines of small tractors.

Increased mechanization in many cases will result in less stability of employment among farm workers, since fewer hired men are necessary and then only during the peak season. Moreover the worker who is employed by the month generally enjoys certain perquisites, such as board or a house, that materially increase his real income. The change from employment by the month to piecework or seasonal employment also makes for lower cash income. Seasonal work is short and uncertain, besides requiring considerable outlays for travel in order to keep abreast of the harvest, or of other seasonal occupation.

Farm Machinery

Wholesale and retail prices of farm machinery will be somewhat higher in 1940 if labor and material costs advance.

Prices paid by farmers for machinery other than tractors averaged 155 percent of 1910-14 during the first 9 months of 1939, or slightly less than a year earlier. Prices announced for some of the new models of small wheel-type tractors introduced this fall are lower than for similar 1939 models, but machinery manufacturers are quoting prices only on deliveries during the remainder of 1939. Should any increase in prices of steel and other materials or in wage rates occur after January 1, an upward adjustment of machinery prices is probable. Sharp advances are not anticipated.

Several outstanding developments in farm machinery have occurred in recent years. The introduction of small 1-plow tractors has placed power units at the disposal of small farmers. Five or six manufacturers have already entered this field. At the same time, 1- and 2-way plows and middle breakers adapted to mounting on these tractors have been introduced. This equipment facilitates tractor operation in small fields and terraced slopes. The new 40-inch combine has proved popular and it is probable that more than one make soon will appear on the market.

The use of pneumatic tires on wheel tractors has continued to increase but their widespread use on other farm machinery evidently awaits the introduction of interchangeable wheels to prevent undue losses to the farmer through deterioration of tires on stored implements required only for seasonal use. In 1938, 68 percent of the wheel-type tractors sold by manufacturers for use in the United States were equipped with rubber tires, an increase of 6 percent over 1937. For 1939, it is estimated that 75 percent are so equipped. Although basic list prices of tractors were reduced slightly, the larger proportion of rubber-tired tractors sold has meant a higher average per unit delivered cost of machines of a given size bought by farmers this year compared with previous years.

Implement manufacturers have not neglected eye-appeal, comfort, and ease of operation in their drive for increased tractor sales in recent years. Streamlining, air-conditioned cabs, and radios are among the optional offerings.

The dollar volume of manufacturers' sales of some kinds of farm machinery is estimated to be fully 15 percent less than the value of sales in 1938. Sales of other kinds are expected to equal those of a year ago, and sales of 1-plow tractors have been considerable higher than in 1938. Purchases of machinery by farmers in 1940 may surpass those of 1939, if increases in agricultural income now anticipated are realized, and if sharp upturns in the cost of materials and labor to manufacturers do not occur.

Automobiles and Motor Trucks

Automobile prices in 1940 are expected to be higher on the average than in 1939. In the lower price range prices announced for next year range from unchanged to around 15 dollars higher than in 1939, on comparable models. Lower prices were announced for some of the more expensive models. Higher prices for steel or rubber are not likely to be fully reflected by manufacturers because a large part of the 1940 requirements have already been stocked.

Motor truck prices probably will average higher next year. Prices so far announced for 1940 models are mostly unchanged to slightly higher than for 1939 models. Some dealers are restricting quotations to a 30-day basis, pending clarification of the export business while some manufacturers have not issued any price schedules.

Building Materials

A minor rise in the general level of wholesale prices of all building materials indicates that retail prices to farmers are likely to remain steady or to advance only slightly during the coming year. Costs of labor for farm building in 1940 may be slightly higher than in 1939.

Prices paid by farmers for building materials remained practically unchanged from the middle of 1938 to the middle of 1939. However, the marked increase in urban construction during 1939 has been accompanied by small increases in the wholesale prices of some of the more important building materials and in mid-October they averaged slightly higher than a year earlier. Wholesale prices of common brick, cement, and paint materials were 1 to 3 percent higher than in September 1938, and prices of the more common types of lumber ranged from unchanged to 8 percent higher. On the other hand, prices of wire and other steel products, and windows, doors and other finished lumber materials were slightly lower than a year earlier.

Changes in retail prices of building materials usually occur some time after changes in wholesale quotations. As wholesale prices are now only slightly higher than a year ago, no marked rise in prices paid by farmers for building materials is in prospect during the coming year.

Fertilizer

Retail prices of fertilizer during the 1940 fertilizer season are likely to be somewhat higher than they were in 1939 but no substantial rise is in prospect, since the United States is much less dependent upon foreign supplies than in the 1914-18 war period.

Wholesale prices of mixed fertilizer in October were slightly lower than a year earlier. Prices of fertilizing materials were 5 percent higher than in October 1938. As a large part of the fertilizing materials to be used in mixed fertilizers sold to farmers during 1940 have already been bought by manufacturers, any rise in prices of fertilizer from present levels is likely to be confined largely to prices of fertilizer materials.

During the 1914-18 war period the United States was almost entirely dependent on foreign supplies of potash and, to a large extent, of mineral ammoniates. Early in 1915, prices of many of the materials used in fertilizers advanced sharply. By July 1915, potash prices had advanced a point more than four times as high as a year earlier. As Germany was then almost the sole source of potash supplies, it was difficult to obtain potash even at these high prices.

During recent years the production of potash in the United States has increased very rapidly. In 1938 over 50 percent of the potash used in this country was supplied from domestic sources. Large domestic resources of potash are available and any material rise in prices for potash undoubtedly will stimulate domestic production considerably. Also, in recent years foreign supplies of potash have been obtained from France and Spain and these supplies may not be entirely cut off by the war.

Available sources of nitrogen are now much more numerous than in 1914. A large proportion of the nitrogen used in fertilizer is now obtained through synthetic processes so that the use of nitrate of soda for war purposes is not likely to be so large as in 1914-18.

If shipping should be seriously curtailed during 1940, exports of phosphates might be reduced. Temporarily, at least, this would increase supplies in the United States and could be a price-depressing factor.

In view of the many comparatively new sources of supply of fertilizer materials no shortage of fertilizer is in prospect for 1940, such as occurred during the last war. Following the outbreak of the World War in 1914, fertilizer consumption declined sharply from 7,000,000 tons in 1914 to 5,125,000 tons in 1916, and then increased to 6,466,000 tons in 1918. During that period the plant-food content of fertilizers also declined sharply chiefly as the result of the decline in potash content. With the continuance of the Agricultural Conservation program and with the prospects of an increase in farm income, a dedecline in the consumption of fertilizer in 1940 is not probable.

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THE OUTLOOK FOR FARM FAMILY LIVING IN 1940

Summary

Farm families probably will have higher net incomes (money and "in kind") in 1940 than they have had in 1939. Total receipts from marketings of farm products the country over are expected to increase, reflecting the improvement in industrial activity and in consumer incomes. Farm production expenses will rise too, but less rapidly than gross receipts; hence net returns from farming bid fair to increase more, relative to 1939, than gross income. Income from government payments probably will be about the same as in 1939, but nonfarm earnings of family members may increase with greater opportunities for employment.

National gross farm income for 1939 is expected to be about 3 percent above that for 1938. However, despite this improvement, approximately one-fifth of the farm families will have net incomes (money and "in kind") of less than $500 in 1939. A general betterment in economic conditions in 1940 may lessen somewhat the number of low-income families; nevertheless, a sizeable proportion will remain who will be faced with the problem of stretching incomes of less than $500, money and "in kind," to provide for all their household needs.

Most farm families will be able to buy a somewhat better living in 1940 than they bought in 1939 if national income from agriculture increases as anticipated. Business conditions that would bring about a rise in farm income would also tend to sustain a higher general retail price level; but the increased cost of living due to such higher retail prices probably would not be sufficiently great to offset the increase in income. Some increase in purchasing power would result.

It must be remembered, too, that not all of the farm family's net income is spent for living. Even at low income levels many families spend some of their funds for amortizing loans, building up the farm business, and otherwise increasing net worth. The proportion of income thus devoted to getting ahead financially is appreciably greater at high than at low income levels.

If costs of living rise, farm families as a group may feel the pinch less than city families. Costs of producing food for household use increase less than do retail food prices; hence most farm families can offset a rise in the general retail price level, in part, by planning to produce a larger-than-usual share of their total food supplies. Such plans, if made with nutritional as well as financial goals in mind, may also yield high returns in the form of improved family diets. Farm families need not fear any shortages of the commonly purchased foods in the 1939-40 season. Per capita supplies of most foods available for domestic consumption are well in line with those of recent years.

Prices of ready-made clothing and of shoes may be higher in the first part of 1940 than the average for 1939 as a whole. However, such an increase would mean less adjustment of farm family budgets than of those of city families at comparable income levels, since the former group spends less than the latter for clothing.

Electricity from power lines has been made available to an increasing number of farm homes during 1939. It is anticipated that by the close of 1940 more than one-fourth of the farms in the nation will be supplied with electric current. Improvements of farm housing--such as provision of electric lights and of pumps to supply running water--have accompanied the extension of power lines; but more than half of the farm families in many sections still are without running water.

Expenditures for transportation and communication probably will take a greater share of the 1940 increase in farm family income than will expenditures for modernizing homes. More families will have radios and automobiles; more miles will be traveled for family errands, social contacts, and vacations. Prices of radios, which have been declining since 1935, may remain at about the 1939 level. Prices of 1940 automobiles are the same as or a little higher than those for similar models offered the previous year, but are subject to change without notice.

Whether incomes of farm families improve in 1940 or remain about the same as in 1939, a planned course for using resources will yield a better living than will hit-or-miss spending of money, time and strength. Long-time goals as well as short-time needs and desires should be the basis of a family's plans; future security, through land ownership and building up the farm business, should be balanced against present well-being. Returns in health as well as in nonmoney income should affect decisions as to use of land for the home food supply. But planning should not be limited to the individual household. Groups of farm families planning together can enrich living through bettered community provisions for health, education, and social contacts, and can work toward safeguarding their incomes and their land through developing sound county, State, and national agricultural policies.

FARM FAMILY INCOME

Farm families may look forward to higher incomes in 1940 than in 1939 as a whole, if the favorable business conditions of the autumn are maintained. Receipts from marketings of farm products are expected to increase with the anticipated increase in industrial activity and consumer incomes. Although production expenses will advance with a general betterment of business, they probably will rise less than gross income; hence the increase in net returns from farming probably will be greater, relatively, than the increase in gross income. In addition, any widespread improvement in industrial wage rates and in opportunities for employment will tend to be reflected in increased income for farm families from earnings off the farm.

Gross Cash Income from Farming in 1939 and Outlook for 1940

Income from farm marketings of both crops and livestock was about 5 percent lower in the first 8 months of 1939 than in 1938. The recent advance in farm prices has greatly improved income prospects for the last 4 months of the year; hence the total 1939 income from marketings may be slightly higher than in 1938. Government payments to farmers in 1939 will be at least one-third greater than in 1938, primarily because of the increased allotment for price-adjustment payments and to the earlier distribution of soil-conservation payments on the 1939 program. Accordingly, total income from both sales and government payments in 1939 is expected to total about $8,300,000,000, as compared with $8,020,000,000 in 1938.

The probable supply and demand conditions for farm products indicate a substantial improvement in income from farm marketings in 1940, with all groups of commodities sharing the increase. The improvement may be greatest for those products that enter rather directly into consumption, such as meat animals, dairy products, poultry, and fruits and vegetables. Some commodities--particularly pork, lard, and dairy products--may benefit from increased foreign demand.

Nonmoney Income from Farming in 1939 and Outlook for 1940

The value of farm products--chiefly food and fuel--retained on farms in 1939 for home consumption is expected to total about the same as in 1938. The total quantities of food retained for farm family use are expected to be similar to those used in 1938; increases in some products will offset decreases in others. With the anticipated higher general level of farm prices in 1940, the money value of products retained for family use will increase also, provided quantities are not appreciably reduced.

Receipts in 1939 by Commodity Groups and by Regions

Income from fruits and vegetables is expected to be greater in 1939 than in 1938; income from grains, about the same; and from cotton and tobacco, less, because of smaller marketings of cotton and cottonseed and lower prices of tobacco.

The quantities of livestock and livestock products to be sold in 1939 are larger than in 1938 and are about equal to the record marketings of 1934. Smaller marketings of meat animals are about offset by increased sales of dairy and poultry products. Quantity increases of 1939 have been accompanied by some decline from the 1938 prices, particularly those for hogs, and dairy and poultry products, and income from these commodities is expected to be about the same in 1939 as in 1938.

North Atlantic States

The combined income from farm marketings and government payments during the first 9 months of 1939 was nearly 3 percent smaller than for the same months of 1938 for the region as a whole. However, in Maine and Rhode Island receipts from marketings were larger, because of greater returns from sales of potatoes. Small decreases were reported for all other States in the region; Connecticut, where income from tobacco was much lower than in 1938, fared worst. Prices of potatoes in this region in October were considerably higher than a year earlier and prices of milk slightly higher, so that income during the latter part of 1939 and early 1940 may be as large or slightly larger than a year earlier.

East North Central States

Farm income from marketings in each of the States of this region was smaller in the first 8 months of 1939 than for the same months the year before, and for the region as a whole the decline amounted to 8 percent. Government payments in the first 8 months of 1939 were somewhat larger than a year earlier, and income including government payments was 6 percent lower. The greatest decline was in Wisconsin, where income from dairy products has been considerably lower than in 1938. The recent marked advance in prices of farm products will be an important factor in increasing income in this area during the latter part of 1939, during which period seasonal declines in receipts are likely to be much less than usual and income may exceed that of the latter part of 1938.

West North Central States

Income from farm marketings in January-August 1939 was 2 percent larger than a year ago. During the first part of 1939, income was increased considerably by returns from corn placed under loan; but from May to August it was somewhat below the same months of 1938. With the recent advance in prices of grain, livestock, and dairy products, income in September increased sharply and it is likely to continue higher during the last 3 months of the year than in 1938. Larger income during the early part of the year, together with the improvement in prospect in the last 4 months, will probably raise total 1939 income in this region above the 1938 level. Government payments in this region have also been substantially larger in 1939 than in 1938.

South Atlantic States

Cash farm income in the first 9 months of 1939 was substantially below that of the same period of 1938, largely because of the marked decline in the sales of cotton as compared with a year earlier. However, the higher cotton prices for the 1939 crop marketed so far this year, together with a larger crop, indicate that farm income during the last 3 months of the year will be somewhat larger than in 1938. In the first 8 months of the 1939 marketing season, the larger sales of tobacco in this region have about offset the lower prices received by farmers. Cotton price-adjustment payments together with larger soil-conservation payments have also helped to maintain income so that total income for the year is likely to be larger than for 1938.

South Central States

The marked reduction in cotton sales depressed income in this region during the first 7 months of 1939; but in August and September farm income was considerably higher than in 1938. During the remainder of 1939 income probably will continue to exceed that of 1938, and total income for all of 1939 may not be much below that of the year before. Government payments in this region during the first 9 months of 1939 were considerably larger than a year earlier.

Western States

Income from farm marketings in the far Western States from January through September of 1939 was 1 percent less than in the same period a year earlier. Including the government payments received, total farm income averaged 2 percent above the same period of 1938. The greatest increases in income were in Washington, Idaho, Montana, and Wyoming. Farm income in Arizona and California was somewhat lower than a year earlier because of the smaller receipts from cotton and fruits.

Income in the Northwestern States and in California during the latter part of 1939 probably will be somewhat larger than a year earlier, because of the more favorable outlook for returns from potatoes, wheat, and fruits. Income in the Range States will be affected to some extent by the recent drought; it may be increased because of heavy sales of livestock, but this increase may be offset by the necessity of increased expenditures for feed.

Income from Nonfarm Sources

Money receipts from nonfarm sources, including earnings, rents, pensions, and interest, add considerably to the net cash income of farm families. Somewhat more than 3 farm operators in every 10 supplement their income by earnings from employment off the farm, according to figures from the census of 1930, 1935, and the preliminary survey of 1938.

Increases in nonfarm income occur chiefly through increased earnings due to changes in wage rates and in opportunities to work for other farmers or in nearby villages or cities, in competition with nonfarm labor. In July 1939 about 1,200,000 more workers were employed in nonagricultural occupations than in the same month in 1938; the index of employment in manufacturing was 11 percent higher, and of pay rolls, 19 percent higher. In some communities, though not in all, members of farm households doubtless shared in these increases in earnings. With the outlook for greater industrial activity in 1940, some improvement in opportunities for work off the farm seems probable.

Fewer farm families received supplementary income through employment by the Work Projects Administration during the early months of 1939 than during the same period in 1938. It is estimated that in January 1939 more than a million rural households were receiving assistance through the Work Projects Administration, through Farm Security Administration grants for subsistence,

or through local relief agencies. Some 175,000 households, chiefly in the South, were enabled to secure assistance between seasons of farm work, in accordance with a special arrangement made by the Work Projects Administration permitting employment, without prior certification for relief, of members of farm households whose incomes were below a specified minimum.

Since the beginning of the program of the Farm Security Administration (July 1, 1935) more than 1,262,500 farm families have been helped to become self-sustaining by this agency. Grants for subsistence during the first half of 1939 were about the same in amount as in the corresponding period of the previous year. Loans for buying livestock and equipment for operating farms increased in amounts by about 60 percent over the total of 1938.

The number of rural families assisted through Federal, State, or local aid to dependent children, old age assistance, and aid to the blind has tended to increase during 1939, and this trend seems likely to continue for some time.

Nonmoney income, chiefly in the form of food, has been received by needy farm families to whom surplus commodities have been distributed under the purchase program of the Federal Surplus Commodities Corporation. It is estimated that 1 out of every 4 families receiving these products lives on a farm. During the year ending June 30, 1939 the value of all commodities distributed through the Corporation's program was nearly $150,000,000--more than twice as much as during the preceding year. Families receiving such products were given an average of about 54 pounds per month. Appropriations permit the further expansion of this program during 1939-40.

Trends in Population and Land Tenure

Population

Aggregate farm income has had to maintain an increasing number of persons on farms since 1927. A decrease in farm population, which began during the 1914-18 war period, continued until 1927. Subsequent increases have nearly balanced the earlier decreases so that the number of persons now living on farms is estimated to be about the same as in 1910. In 1938 the net increase was about 240,000 persons; the surplus of births over deaths exceeded the net migration to villages and cities. The movement to and from farms for the year 1939 probably will not differ much from that in 1938. The number of people living on farms in 1940 may be about the same as in 1939 or lower if there is a considerable rise in nonagricultural employment.

Each year, more than 700,000 young people on farms are reaching their majority and must decide where to go and what to do in order to make a living. Fewer than half of them are needed to replace older farm men and women who die or reach retirement age. The proportion remaining on the farms depends in part upon the general economic situation. So long as there are large numbers of unemployed workers in cities, opportunities for young people from farms to find jobs are limited.

Of every 5 persons who were between 10 and 19 years of age and lived on a farm in 1920, 2 had moved from the farm by 1930. Since 1930, however, this proportion has been sharply reduced. Especially in the poorer land areas many of the young people have remained on farms, trying to establish themselves with little capital and equipment. This tendency may serve to increase the number of small farms and continue the use of poor land, thus raising such questions as those of adequacy of incomes from such farms for family maintenance and likelihood of exploitation of land during a brief period of tenancy.

Land tenure

During the period from 1880 to 1935, the proportion of tenants among farm operators rose from 26 percent to 42 percent. The trend toward increasing tenancy probably will not change significantly in 1940. The number of owners falling to tenant status probably will overbalance the number of tenants who become owners; the shift from tenant to sharecropper or farm laborer, and in some sections from sharecropper to laborer, bids fair to continue.

The Bankhead-Jones law, enacted 2 years ago in an effort to slow down the rapid increase in farm tenancy in the United States, provides for loans to assist a limited number of tenants, croppers, and farm laborers to buy farms. In the first 2 years of the program (that is, to June 30, 1939), 6,180 loans were made. The Farm Security Administration estimates that more than 7,000 loans will be made in the fiscal year 1939-40. But financial aid from this source can play only a minor part in offsetting the present trend toward increased tenancy; funds are sufficient to help only a small proportion of the would-be purchasers.

Ability of owners to pay mortgages on farms they have bought will depend largely upon levels of farm income during the next few years. But the terms of purchase and the family's skill in managing its farm and home finances will be factors, too. Plans for use of a family's gross farm income should provide not only for amortization of the loan and operation of the farm, but also for the maintenance of an adequate level of living, comparable with that of other farm operators in the community. Failure to safeguard the family's well-being is likely to result in lapses of loan payments and finally in loss of the land. The two major governmental agencies providing credit to farm families--the Farm Credit Administration and the Farm Security Administration--both emphasize consideration of family needs in planning for loan amortization. The latter organization helps families work out farm and home management plans as aids to success in the undertaking of land purchase.

Expenditures for land purchase and for building up the farm business compete with expenditures for family living for a share of the family income. What the balance between the two competitors should be must be decided by each family upon the basis of its particular situation and what the members consider most worth while in life. No outsider can lay down rules of action. The tendency of farm families to restrict expenditures for living in order to get ahead financially seems to be greater than that of city families, according to findings from the Consumer Purchases Study.

FARM FAMILY LIVING

Translated into terms of farm family living, the foregoing figures for gross farm income indicate that the 1939 net family income (money and "in kind") of half or more of the farm families will be below $1,000; of approximately one-fifth, below $500. Only about one-fourth will have an income of $1,500 or more. (These estimates are based upon gross farm income figures and the general pattern of income distribution indicated by the report of the National Resources Planning Board, "Consumer Incomes in the United States.") If the anticipated improvement in national farm income materializes in 1940, the proportion of farm families with net incomes below $500 will be somewhat lower than in 1939. Some of these low-income families will have resources permitting them to incur debts for family living or for capital outlays for farm business. Others, however, will have only their net incomes (money and farm-furnished products) from which to provide for family maintenance during the year.

Prices of many of the goods and services that families purchase are likely to be a little higher during the first half of 1940 than in the corresponding months of 1939. Although some families may have income increases that will more than offset the increase in their cost of living, others whose incomes are about the same as or lower than in 1939 will be obliged to re-evaluate their plans for money expenditures and for production for home use, if they are to maintain their living levels as nearly as possible at 1939 levels.

Outlook for the Farm Family's Food, 1939-40

The food budget

Production of food for household use increases the farm family's income "in kind" and thus helps to solve budget problems, except in highly specialized areas where land can be used more profitably for commercial production. The proportion of the family food supply that is farm-furnished differs from one part of the country to another. In the North Central region, the value of food home-produced in 1935-36 by families in one of three farming sections was 49 percent of the value of their entire food supply; in another, 64 percent, according to the Consumer Purchases Study of nonrelief white operators. In sections of California, Vermont, and New Jersey the proportions were lower--21, 43, and 44 percent of the whole; and in the Southeast as high as 83 percent in one group of counties.

Programs of food production for household use have been followed successfully by clients of the Farm Security Administration in all regions. Average quantities of food home-produced by 232,000 such families in the year ending December 31, 1938 are shown in a table that follows. The families estimated that these quantities were approximately three times as great as those they produced for home use before their acceptance into the Administration's program. Farm-furnished quantities of milk and vegetables of these families were greater, and of meats and eggs smaller, than the quantities reported by the families of nonrelief white operators included in the Consumer Purchases Study.

Average quantities of specified foods home-produced for family use during 1938

232,000 clients of the Farm Security Administration

Region	Average per family				
	Milk	Eggs	Meat	Fruits and vegetables canned	Fruit, roots and tubers stored
	Gallons	Dozen	Pounds	Quarts	Bushels
All regions	465	120	376	221	27
I. Conn., Del., Maine, Md., Mass., N. H., N. J., N. Y., Pa., R. I., Vt.	479	113	357	197	37
II. Mich., Minn., Wis.	330	89	352	190	45
III. Ill., Ind., Iowa, Mo., Ohio	469	118	387	248	18
IV. Ky., N. C., Tenn., Va., W. Va.	494	110	456	251	24
V. Ala., Fla., Ga., S. C.	413	100	448	167	36
VI. Ark., La., Miss.	480	132	284	298	40
VII. Kans., Nebr., N. Dak., S. Dak.	448	128	359	91	13
VIII. Okla., Tex.	604	149	368	270	21
IX. Ariz., Calif., Nev., Utah	422	132	271	229	16
X. Colo., Mont., Wyo.	433	126	383	179	19
XI. Idaho, Oreg., Wash.	447	141	422	317	55
XII. N. Mex. and parts of Colo., Kans., Okla., Tex.	462	126	317	153	19

Source of data: Summary of Rural Rehabilitation Supervisor's Progress Reports, crop year ending December 31, 1938 (unpublished data).

Not only does production of food for household use help the family financially, it also tends to improve the family diet and thus to promote increased vitality and general health. Farm families as a group are better fed than are families in cities or villages, largely because of their greater consumption of the "protective" foods which they produce. Diets of farm families include about 60 percent more milk, 16 percent more butter, and 20 percent more leafy, green, and yellow vegetables than those of small-city families; hence they are richer in protein of high quality, in vitamin A, in iron, and in calcium.

Increasing ownership of pressure cookers, improved facilities for home storage, and wider distribution of refrigerating plants with freezer lockers for family use are contributing to greater variety in year-round diets of farm families. The number of freezer locker plants for food storage is estimated to have increased by a total of 550--from 1,300 to 1,850--during the year ended in July, 1939. These plants are operating in 38 States. Ten percent were reported as cooperatives.

While the quantity and kind of food purchased depends on what is needed to supplement the farm-furnished products, farm families, as compared with city, tend to spend relatively more of each food dollar for grain products, sugar, and miscellaneous items such as coffee and tea, and relatively less for milk, meats, and eggs which they produce. Generally, however, farm families buy some of almost every major food group in the course of a year. Their expenditures for food tend to be larger than for any other budget category. Hence, as consumers, they are concerned with food supplies and prices.

Supplies of food for domestic consumption

Food supplies for the remainder of 1939 and for the first half of 1940 appear to be ample for the ordinary needs of the families of the Nation. Exports are not expected to reduce supplies below the domestic requirements in most recent years.

Per capita supplies of meat, poultry, and poultry products available for domestic consumption during the 1939-40 season probably will be somewhat above those of recent years, although slightly below the 1925-29 average. Meat supplies during the remainder of 1939 and through 1940 will be larger than in any year since 1934, with pork providing most of the increase. Supplies of poultry are expected to be about 8 percent larger in 1939-40 than in 1938-39; and eggs, 2 percent larger.

There is little likelihood of any shortage of dairy products. Butter production will be close to the level of recent years though it may fall somewhat below the high level of 1938-39. Supplies of milk and cheese, although somewhat below the 1925-29 average for domestic consumption, are expected to be adequate.

Prospective supplies of sugar are above domestic requirements in recent years. By direction of the President on September 11, 1939, limitations were removed on the quantity of sugar that could be marketed annually in this country, and relatively large supplies are reported in all of the areas shipping into the United States.

Wheat supplies will be somewhat smaller than in 1938, but otherwise will be the largest since 1932. They are large enough to provide for domestic needs, export probabilities, and a substantial carry-over on July 1, 1940.

Fresh fruit supplies for the 1939-40 season are expected to be well above average--perhaps the largest on record. Orange and grapefruit crops will be ample. Crops of apples, late peaches, and cranberries are expected to be larger in 1939 than in 1938; pear and grape crops, slightly smaller. Consumption of fruit juices, particularly of grapefruit and pineapple juice, has been higher in recent years than in 1925-29. Supplies of dried fruits--prunes, raisins, apricots, peaches, and apples--are unusually large.

The 1939 crop of fresh vegetables may be slightly below the unusually high level of the 1938 season, but will be large as compared with other recent years. Per capita supplies of potatoes are expected to be slightly less than normal. The sweetpotato crop, however, is expected to be the third largest on record. Supplies of canned vegetables will be well in line with those of recent years and about one-fifth greater than the average for the period 1925-29.

In general, therefore, supplies of most foods for domestic consumption in the 1939-40 season are well in line with those of recent years. Wholesale prices of food in the first 7 months of 1939 were below those of 1938 but increased appreciably during the latter part of August and in September. If the anticipated increases in industrial activity and in consumer incomes materialize, prices paid by farmers for food in late 1939 and in the early part of 1940 will average somewhat above the relatively low levels that prevailed in the first 7 months of 1939.

Outlook for Farm Housing for Availability of Electricity and Other Home Comforts

Farm housing

The houses of many farm families were improved in 1939 through provision of better lights and running water, with accompanying kitchen sinks and stationary bathtubs. The extension of electric power lines to farms, promoted by the Rural Electrification Administration, has meant an increase in the number of well-lighted homes and the number having water supplied by an electric pump. There has been no government program for construction of housing for low-income farm families comparable to that for urban families.

The outlook for 1940 is for a continuation of improvements of the type mentioned above. The Farm Security Administration has budgeted funds to aid needy farm families in special experimental areas in safeguarding their water supplies and in providing more adequate sanitary facilities. Other Federal and State agencies will continue their educational programs designed to help farm families repair and modernize their homes. But modernization requires money. The provision of running water and a sewage system is far more expensive for the farm than for the city family. It has been estimated that it would cost about $650,000,000 to

provide the sewage systems, water supplies, and plumbing that farm houses need; $250,000,000 to provide refrigeration, laundry and cooking facilities, if materials were bought and labor hired. (Estimates based upon findings of the survey of farm homes made by the Bureau of Home Economics and the Bureau of Agricultural Engineering.) There is need, too, for improved facilities for heating and lighting, as well as for repairs and additions to farm homes. It seems safe to assume, therefore, that even with an appreciable increase in farm income, there will be an unsolved farm housing problem at the close of 1940.

Many farm families spend something each year for house repairs; but such outlays are relatively small in the majority of cases. Average expenditures of all families (those with and without expenditures) ranged from $6 to $43 in the 12 farming sections where nonrelief, native-born white families of farm operators were surveyed by the Consumer Purchases Study in 1935-36. In view of these comparatively low average figures, it is clear that prices of building materials affect total living expenditures of farm families only a little except when remodeling or building is under way. Prices of building materials for farm houses have been about the same in 1939 as in 1938. No marked change is expected in 1940.

Availability of electricity

Electricity has been brought to an increasing number of farm families during 1939. It is anticipated that more than one-fourth of the farms of the Nation will have electricity from power lines at the close of 1940, as compared with approximately 19 percent at the close of 1937. Regional differences in the proportion of occupied farms having electricity are marked. Estimates for 1938 indicate that nearly three-fourths of those on the Pacific coast had service from power lines, contrasted with 6 percent in the West South Central and 7 percent in the East South Central States.

The Rural Electrification Administration estimates that it will have extended electric service to approximately 600,000 consumers by the end of 1940. Its program will be concentrated for the most part in the Central and Southern regions in 1940, in conformity with the stipulation that half the annual appropriation be allotted among States in proportion to the number of farms without electricity and in relation to the density of farms.

Expenditures for electricity and
other items of household operation

With the spread of rural electrification many farm families are considering both the initial costs of installation and rates for current. Economies, recently effected in the costs of rural power lines constructed under the Rural Electrification program, have substantially lowered the costs of installation in many sections. Electric rates per kilowatt hour in rural areas are expected to average about the same in 1940 as in 1939. There is no evidence of an immediate continuance of the downward trend in rates shown in the period from 1914 to 1939.

The amounts that farm families spend for household operation--fuel, light, refrigeration, telephone, and the other goods and services in this category--differ considerably from one area to another largely because of differences in climate and in the quantities of fuel customarily provided by the farm. For example, in 1935-36 the money value of these household operation items averaged $124 for a group of Vermont families with incomes of $750 to $1,000; of this amount, $48 was for purchases and $76 was for farm-furnished goods such as fuel and ice. A group of farm families in Kansas and North Dakota at the same income level had practically the same figure for average value of such items--$125; but $109 was for purchases and only $16 for farm-furnished products.

Coal accounts for a sizeable share of the money spent for household operation by farm families in many sections, despite the use of farm-furnished fuels of various kinds. Thus, in Pennsylvania and Ohio, expenditures of a group of farm families for coal averaged $33, or 35 percent of their total money outlay for household operation. Movements of coal prices, therefore, concern the farm as well as the city budget-maker. Coal prices in 1940 may be slightly higher than in 1939 if a minimum price agreement recently proposed is made effective during the coming year.

Expenditures for electrical appliances and other furnishings and equipment

With the installation of electricity the farm family probably will buy lighting fixtures, since the provision of better lights usually precedes other household uses of current. Prices of lighting fixtures are not expected to be much different in 1940 from those in 1939. The average cost of lighting fixtures may be lowered if "package sales" find wider acceptance. Sales of packages of assorted lighting fixtures for residences with a specified number of rooms have been made in some areas and probably will be extended to others in 1940. The unit cost of articles included in the packages is lower than when those articles are bought separately. There seems to be some question, however, as to whether this method of sale can be relied upon to provide the fixtures best suited to family needs.

An electric washing machine is the first of the more expensive articles of household equipment bought by the majority of farm families that have electricity except in the Southeast. For example, motor-driven washing machines were owned by 88 percent of the farm families having electricity in a North Central farming area, radios by 71 percent, and mechanical refrigerators by only 20 percent, according to findings from the Consumer Purchases Study. Price levels of refrigerators and other electrical equipment for household use have been about the same in 1939 as they were in 1938. They may rise somewhat in 1940 if an increase in production costs results from the anticipated increase in industrial activity.

Total expenditures made by farm families for furnishings and equipment--replacements such as of dishes and of bedding and other household linens, as well as additions to supplies--are relatively small compared with other budget items. Such outlays ranged from an average of $14 to an average of $56 in the 12 farming sections where nonrelief families of native-born white operators were surveyed by the Consumer Purchases Study in 1935-36. For the majority of farm families, therefore, purchases of the more expensive articles of electrical equipment or of furniture mean economizing on other

parts of the budget, or incurring debts to be paid over a period of time. Families who buy furniture in 1940 probably will find prices near the 1939 levels; no major price changes are indicated at this time since prices tended to be unchanged in the first part of 1939 when the general cost of living was declining.

Outlook for Improved Communication and Transportation

The telephone, the radio, the rural mail service bringing daily papers, the automobile, the rural bus line, hard-surfaced roads--all have shared in changing the patterns of farm family living through closer contacts with neighborhood as well as world events. But there remain many farm families who cannot avail themselves of those advantages of our technological progress that they can have only through purchase. Any increase in income, therefore, doubtless will be reflected in a higher proportion of families having radios, telephones, newspapers, and automobiles. Extension of electricity to farm areas also will serve to increase the number of radio listeners since there seems to be a relationship between availability of electric current and ownership of radio sets. Government programs of road building and improvement will increase the use of the family car.

Telephones

Fewer than half of the farm families have telephones. Only 34 percent reported them at the time of the 1930 census and later surveys indicate that this proportion has not markedly changed. Farm families tend to lag behind city families in the use of telephones--a difference due in part to differences in the availability of this service. Thus, of families included in the Consumer Purchases Study in the North Central region, 52 percent of those in a farming section and 60 percent of those in the small cities had telephones. Regional differences in proportion of farm families having telephones are seen, too. In the Southeast, only 5 percent of the native-white families of farm operators had this convenience--or about one-tenth the proportion in the North Central region.

Rural telephone rates have changed little in the last 15 years, and no general change is expected in the near future.

Radios

Radios were owned by 4,261,000 farm families (approximately three-fifths of all farm families) on January 1, 1938, according to the estimates of the Joint Committee on Radio Research. During 1938 this number increased by about 139,000 (estimate of the same committee). Regional differences in radio ownership are considerable. The proportion of nonrelief, native-white families of farm operators who owned radios ranged from 31 percent in a farming section of the Southeast to 94 percent in California fruit-growing counties, according to the findings of the Consumer Purchases Study of 1935-36. The larger proportion of the farm families in the latter section that had electricity (95 percent as compared with 8 percent in the former section) doubtless was a factor in this difference. But it may not be the sole cause; the more urbanized group in California may have placed the radio higher in their scale of wants.

Sales of wind chargers to farmers for operating radios have been gradually increasing and probably will continue to increase in the areas where winds are dependable and there is little likelihood of immediate provision of electric power lines.

Prices paid by farmers for radios have declined each year since 1935. At the same time, improvements in design and performance have increased the value obtained by the farmer for his dollar radio expenditure. Indications are that efficient small sets will continue to be sold in 1940 at about the levels of 1939. Cost of operation of battery-operated sets for farm families who do not have electric current probably will decrease, because of the wider use of low voltage tubes.

Automobiles

Any marked improvement in the buying power of farm families will be reflected in their purchases and their use of automobiles. Relatively more families will buy cars; the proportion of buyers purchasing now rather than used cars will rise; the car-owning families will travel more miles. Evidence of these trends with increasing income is provided by a group of families of farm operators in the Central region. Of families with incomes of $250 to $500, 9 percent bought cars in 1935-36, as compared with 24 percent of those with incomes of $3,000 to $4,000. Of the cars bought by the families with incomes under $1,000, only one of every six was new; of those bought by families with incomes of $3,000 or more, half were new and half used. Average mileage for family use of the automobile during the year was twice as high at the upper end of the income scale as at the lower--5,319 miles for families with incomes of $3,000 or over as compared with 2,491 miles for those below $1,000.

Automobile prices tend to remain steady or to rise after a period of increased sales, and to decline after a drop in sales volume. Prices paid by farmers were reported to be slightly lower in 1939 following the sales slump of 1938. Prices for the models of the 1940 season are quoted as about the same as or a little higher than those of the preceding year. These prices are subject to change without notice.

Wholesale prices for rubber and petroleum products have recently advanced sharply. Should these advances be maintained, they probably will be reflected in higher transportation costs for farm families.

Outlook for Expenditures for Clothing

Changes in the general price level of clothing affect farm families somewhat less than they do families in cities, since the former tend to spend less than the latter for this budget category. For example, in the North Central region, farm families who had incomes of $1,000 to $1,250 and who had two children under 16 years of age spent an average of $80 for their year's clothing; city families of similar income and composition, $105.

Prices of spring lines of ready-to-wear clothing may be somewhat higher in 1940 than in 1939 owing to the anticipated increase in consumer incomes and in manufacturing costs. Retail prices of cotton yard goods may not change appreciably. Supplies of raw cotton are ample and prices have remained fairly stable at a relatively low level during the past year. However, wholesale prices of woolen and worsted goods increased sharply between the middle of August and the latter part of October, and the rise may be maintained, effecting retail prices in 1940. The high price of silk and the possible use of cellulose and wood pulp as war materials may bring about some increase in 1940 prices of rayon goods.

Advances in prices of hides and skins in autumn 1939 may be reflected in higher prices for shoes in 1940. Prices of work shoes, which constitute a considerable proportion of the shoe purchases of farm men and boys, usually respond to change in prices of hides more slowly than the lines of highly styled footwear.

Use of Credit for Farm Family Living

No detailed figures are available to indicate the extent to which farm families use credit to purchase goods and services for family living. Many living in 1-crop farming areas find it necessary to use short-term credit to finance not only the current production but the purchase of basic necessities for family living as well. Dealer credit is the prevailing kind but cash loans also are made for this purpose. Frequently the budgets set up for borrowers from the production-credit associations and other cash-lending agencies show that a portion of the loan is for the purpose of paying current living expenses.

Information from a number of sources indicates that many farm families are using installment credit to finance the installation of electricity and the purchase of electrical equipment. During the first 8 months of 1939 the Electric Home and Farm Authority made twice as many loan contracts for financing the purchase of electric appliances as for a similar period in 1937 (53,523 as compared with 26,008). The number of appliances sold in the first 8 months of 1939 is estimated to be 50 percent above that for a similar period in 1938 according to a report covering 33 of the 48 States. Any family that obtains its electricity from a cooperating line (i.e., any utility--private, municipal, or cooperative--that has a contract with the Electric Home and Farm Authority) may finance the purchase of an appliance through the Electric Home and Farm Authority. Farm, village, and city families have availed themselves of these facilities. Such loans may be expected to increase in 1940 in areas where new power lines are built.

Trends in credit for buying electric appliances probably are not indicative of the general trend of credit for other goods, since special programs fostering electrification in rural areas have given extraordinary impetus to purchases of the former type. In general, farm families have tended to lag behind city families in their use of installment credit for household goods.

Outlook for Consumer Education

Farm families in growing numbers are studying their roles as consumers. Educational, governmental, and business groups are giving more assistance than heretofore to consumers who wish to become more effective buyers.

In the educational field, in 1938-39 the Extension Service increased its program of helping farm families to solve their buying problems. The number of consumer-education courses in the high schools has increased during the last few years. Seven new college and five high-school textbooks devoted exclusively to consumer problems were published during the past year. More than 500 educators, business men, and government officials attended the first National Conference on Consumer Education at Columbia, Missouri, sponsored by the newly organized Institute for Consumer Education.

Farm and city families have had an opportunity to appraise the operation of the Wheeler-Lea Amendment to the Federal Trade Commission Act, and the Federal Food, Drug, and Cosmetic Act of 1938 during the past year. They have noted that both laws give them increased protection over a much enlarged field. Revised food and drug measures were introduced into 16 State legislatures during last year, but only half of them became laws.

Events indicative of the growing interest of various groups in consumers' problems are numerous. Consumers testified before the Temporary National Economic Committee in the spring of 1939, presenting evidence showing the difficulties encountered by household purchasers and the need for additional buying guides. A bill to standardize sizes of cans and the Boren Bills which would give the Federal Government the authority to establish standards of quality and performance for certain consumers' goods were introduced into Congress. Radio programs inaugurated in Texas and New York in 1938-39 under the sponsorship of departments for weights and measures enforcement have reflected consumer interest. A more general consumer program presented by the General Federation of Women's Clubs in cooperation with the Consumers' Counsel Division of the Department of Agriculture has been continued over a national hookup. Other consumer programs, sponsored by local educational and consumer groups, have been continued and new ones have been inaugurated.

Symptomatic of the increased interest of business were two publications of 1939, one a 12-page special section of a leading retail magazine which for the third successive year summarized consumer activities; and the other, a special supplement of a business weekly periodical which analyzed the consumer movement for the benefit of business men interested in consumer relations. The National Association of Better Business Bureaus held a national conference on consumer-business relations, attended by representatives of consumers, business, government, and educational institutions. The same topic was discussed at an entire session of the American Retail Federation's National Forum. The National Consumer-Retailer Council plans to report soon on its survey of the type of information that consumers, retailers, and manufacturers think should appear on the labels of 12 widely used commodities.

Cooperative buying by farm families is increasing. Sales made by all retail cooperative associations in the United States--both farm and urban--to their members and others are expected to total about $400,000,000 in 1939, an increase of approximately one-third above the estimated volume in 1937. Associations composed chiefly of farm families transacted about two-thirds of this total dollar volume of business and enrolled about two-thirds of the total members, or about 1,000,000 of the estimated 1,500,000 membership of 1939. Sales of feed for livestock and poultry account for the major part of the business of these farm cooperatives but sales of gasoline and oil are a close second. Stocks of household goods handled usually are somewhat limited.

Cooperative organizations that provide medical care, credit, electricity, and other services to farm families have increased in number in 1939.

Summarized, the year's events indicate the likelihood of continued progress in consumer education and protection in 1940 with an increased number of families attempting to improve their status as consumers by study, by use of available buying guides, and by group action designed to improve merchandising practices.

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THE COTTON OUTLOOK FOR 1940

Reasonably accurate predictions as to future developments are always difficult. This year the situation is complicated by a major European war with the resulting uncertainties as to its duration and its effects on international trade, and on cotton consumption. In this report it is assumed that the war will continue. In the event of an early peace the outlook would be changed materially.

Summary

Cotton supplies may decline somewhat in 1940-41 from present near-record level.

The world supply of all growths of cotton in 1940-41 is expected to be somewhat less than the record or near-record supplies of roughly 50,000,000 bales in each of the 3 seasons, 1937-38 to 1939-40. This would be about a fifth larger than the average for the 10 years ended with 1937-38. World mill consumption in 1939-40 is expected to about equal the 1939-40 crop, now estimated at approximately 28,000,000 bales. This indicates a carry-over of all growths of cotton on August 1, 1940, not materially different from the near-record stocks of 21,900,000 bales at the beginning of the current season. With the same harvested acreage as in 1939, and with yields equal to the 5-year, 1934-38, average the 1940 production of American cotton would be considerably less than that of 1939. The 1940-41 foreign crop is expected to show at least some decline.

The world carry-over of American cotton on August 1, 1939, was about 14,100,000 bales, a new high. Even with a below-average crop the indicated 1939-40 world supply of American cotton of 25,800,000 bales is only slightly below the peak supply of 1932-33. It is a little larger than the 1938-39 supply and 3,900,000 bales above the 10-year average. But at present (late October) about 10,100,000 bales of the indicated supply is either owned or held as collateral against loans by the United States Government, excluding cotton exchanged to Great Britain. Very little of this is likely to be available for consumption or merchandizing purposes during the current season unless the price for Middling 7/8 inch cotton in the 10 designated markets advances above 9-1/2 cents in the near future or higher later on as additional carrying charges accumulate.

Should loan stocks continue at about present levels the carry-over of "free" American cotton on August 1, 1940, might be a little larger than the small volume a year earlier. The total supply of American cotton might reasonably be expected to be smaller in 1940-41 than in the present season.

The estimated 1939-40 world supply of 24,000,000 bales of foreign grown commercial cotton is 1,000,000 bales below that for the 1938-39

season but 8,400,000 bales more than in 1932-33. It is nearly one-fourth larger than the 10-year, 1928-37, average. It now seems probable that the world carry-over of non-American cotton on August 1, 1940, may be about the same as a year earlier but that the 1940-41 foreign crop may be somewhat smaller.

World consumption prospects uncertain - No increase in total expected.

World mill consumption of all growths in 1938-39 was nearly 28,500,000 bales. This was second only to the peak consumption of almost 31,000,000 bales in 1936-37, and 10 percent above the 1928-37 average.

Prospective increases in consumption in the United States and in certain foreign countries in 1939-40 are expected to offset some of the decreases in prospect in belligerent European countries. But there appears to be little likelihood that total world consumption of all growths will exceed that of 1938-39 and it may be considerably smaller.

Any decrease in total world consumption in 1939-40 is expected to be in foreign growths. The consumption of American cotton is expected to exceed the comparatively small 1938-39 consumption of 11,265,000 bales because of a prospective substantial increase in the United States. Consumption of American cotton in foreign countries may only about equal the comparatively small quantity of 4,500,000 bales consumed in 1938-39. But exports of American cotton are expected to increase materially as compared with the unusually small volume of only 3,300,000 bales in 1938-39.

Cotton prices and incomes from cotton relatively low.

United States farm prices of cotton early in the 1939-40 season averaged 8.92 cents per pound or 9 percent higher than a year earlier but were about 2.2 cents below the average for the 10 years 1928-37. With export payments and indicated increases in supplies of American cotton, the price ratios of other growths to American in foreign markets have increased during recent months from the low levels reached in the 1938-39 season thereby improving the competitive position of American cotton. These ratios in early October, however, averaged only about the same as for the 10-year average.

With prices about unchanged from the previous year and a United States crop 37 percent below that of 1937, gross returns to farmers from cotton and cottonseed, excluding Government payments with respect to cotton, in the 1938-39 season were about 35 percent smaller than in the previous season and 30 percent less than the average for the 10 years 1928-37. Prices about equal to the average level for August and September, together with the October estimate of the 1939 crop, would result in some increase in gross returns from cotton and cottonseed in 1939-40. But Government payments with respect to cotton will be smaller in 1939-40 than in the previous season and total returns including such payments will be less than for any season since 1932-33.

Supply

Supply continues at record high levels.

A world supply (carry-over on August 1, 1939, plus production or ginnings in 1939-40) of all cotton for the current season of about 49,800,000 bales is indicated from prospects in late October. This is only slightly less than the record high supplies of each of the two previous seasons and 8,400,000 bales or about a fifth more than the average for the 10 years ended 1937-38. It is more than 5,000,000 bales larger than the peak reached before 1937-38. Present (late October) estimates indicate a decrease of about 1,000,000 bales in the supply of foreign cotton, but the supply of American is expected to be about half a million bales larger than in 1938-39. World supplies of foreign growths have decreased about 2,000,000 bales since the peak reached in 1937-38, whereas supplies of American cotton have increased to about 1,200,000 bales.

The 1939-40 supply of American cotton is now estimated at 25,800,000 running bales, or about 400,000 more than last season but slightly less than the record supplies of 26,200,000 bales in 1933-34. It is nearly 4,000,000 bales or 18 percent larger than the 10-year average.

On October 1, however, approximately 10,100,000 bales (excluding cotton traded to Great Britain) of the indicated 1939-40 world supply of American cotton were in the United States Government loan stocks. This figure compares with about 7,000,000 bales on the corresponding date last season. Of the total, current loan stocks, approximately 6,100,000 bales are owned by the Government and 4,000,000 bales held as collateral against loans to farmers. The deduction of present loan stocks would give an indicated world supply of free American cotton including mill stocks, of only about 4,000,000 bales more than the 1939-40 indicated world consumption of American cotton. Farmers may repossess cotton held as collateral by repaying their loan plus carrying charges and about 500,000 bales have been thus far repossessed from cotton placed in the loan during the 1938-39 season. As of the end of October the loan plus the carrying charges on this cotton was equivalent to about 9½ cents per pound basis Middling 7/8 inch. Carrying charges on loan stocks are about 0.05 cents per month. But as to the 6,100,000 bales of loan stocks owned by the Government, legislative restrictions prevent its sale in regular channels of trade during the current season except at prices substantially higher than present values, i.e. equal to loan values plus carrying charges which now (late October) range from 10.5 cents to more than 16.0 cents for Middling 7/8-inch.

The estimated 1939-40 world commercial supply of foreign-grown cotton, of approximately 24,000,000 bales of 478 pounds net, is about 1,000,000 bales less than that for last season, but 4,500,000 more than the 10-year average and 8,400,000 bales more than in 1932-33. It is, however, approximately 2,000,000 bales less than the peak reached in 1937-38.

Cotton, American, foreign and all growths:
Carry-over, production and supply.

Season beginning Aug. 1	American			Foreign			All growths		
	Carry-over	Production 1/	Supply	Carry-over	Production	Supply	Carry-over	Production	Supply
	1,000 bales	1,000 bales	1,000 bales	1,000 bales	1,000 bales	1,000 bales	1,000 bales	1,000 bales	1,000 bales
Average 1928-37	8,293	13,655	21,948	6,033	13,435	19,467	14,326	27,090	41,416
1932	13,263	12,961	26,224	5,073	10,500	15,573	18,336	23,461	41,797
1933	11,809	12,712	24,521	5,307	13,354	18,661	17,116	26,066	43,182
1934	10,701	9,576	20,277	6,839	13,504	20,343	17,540	23,080	40,620
1935	9,041	10,495	19,536	6,031	15,904	21,935	15,072	26,399	41,471
1936	6,998	12,375	19,373	6,651	18,701	25,352	13,649	31,076	44,725
1937	6,235	18,412	24,647	7,531	18,502	26,033	13,766	36,914	50,680
1938	13,712	11,676	25,388	8,927	16,063	24,990	22,639	27,739	50,378
1939 2/	14,123	11,700	25,823	7,790	16,200	23,990	21,913	27,900	49,813
	1939 as percentage of 10-year average and of 1938								
10-year average	170.3	85.7	117.7	129.1	120.6	123.2	153.0	103.0	120.3
1938	103.0	100.2	101.6	87.3	100.9	96.0	96.8	100.6	98.9

1/ Ginnings from August 1 to July 31 plus the "city crop", which consists of rebaled samples, sweepings, and pickings from cotton damaged by weather, fire, etc.
2/ Preliminary.
Compiled from reports of the New York Cotton Exchange Service. American cotton in running bales counting round bales as half bales and foreign in bales of 478 pounds net weight.

The indicated supplies of Indian and Egyptian cotton are about equal to the 1928-37 average, but the supply of other foreign growths is about 40 percent larger than average and almost double that of 1932-33. This marked increase in supplies of foreign cotton other than Indian and Egyptian has taken place despite drastic reduction in supplies of Chinese cotton since the beginning of hostilities with Japan in 1937 and mainly as a result of increased supplies of Brazilian, Russian, and miscellaneous growths.

With prospects for comparatively little change in the carry-over of American and foreign cottons on August 1, 1940, changes in world supplies next season will largely depend upon the size of the 1940-41 crop. Cotton-acreage allotments under the 1940 Agricultural Adjustment program will be about the same as those for 1939 but estimated yields per acre for 1939 are higher than average. Some indications point toward a reduction in foreign cotton production in 1940-41.

Carry-over at near-record high.

The total world carry-over of all growths on August 1, 1939, of 21,900,000 bales, was slightly (3 percent) less than the record high of the previous season and equal to about 80 percent of mill consumption last season. This total was 7,600,000 larger than the average for the 10 years ended with 1937-38, of which increase about three-fourths was in American. In 1939 the world carry-over of American cotton totaled approximately 14,100,000 bales or 400,000 bales more than on August 1, 1938, but the 7,800,000-bale carry-over of foreign cotton was 1,100,000 bales smaller than a year earlier.

The world carry-over of American cotton on August 1, 1940, is expected to be little different from the record high stocks for the beginning of the current season. The carry-over of foreign cotton also seems likely to show little change.

Production much below the peak, but about average.

The world production of commercial cotton for the 1939-40 season is expected (in late September) to total about 27,900,000 bales. This is slightly more than in the previous season and about 800,000 bales more than the 10-year average. Such a crop, however, is nearly one-fourth less than the record production of 36,900,000 bales in 1937-38. It is the third largest in history.

The United States crop of 11,928,000 bales of 478 pounds net, according to the October estimate, is equivalent to approximately 11,700,000 running bales. This is about the same as that for last season, but 36 percent smaller than the record 1937 crop. It is about 2,000,000 bales less than the 10-year average.

The 24,200,000 acres left for harvest in 1939 is about the same as that for last season, but about 30 percent below the 10-year average. The indicated yield for the current season is nearly 45 pounds larger than the 10-year average and, with the exception of the two preceding crops, the largest in history. The high indicated yield for the current season, like that of most other years since 1932-33, is largely accounted for by the selection of land better adapted to cotton production, soil improvement, better seed, improved cultural practices, and comparatively light boll-weevil damage.

The production of commercial cotton in foreign countries in 1939-40 is expected (in late October) to be about 16,200,000 bales of 478 pounds net. This is slightly more than in the previous season, the third largest in history, and 2,800,000 bales or 21 percent larger than the 10-year (1928-37) average, but 2,500,000 bales smaller than the record crop of 1936-37. In 1932-33 the production of foreign cotton was only 10,500,000 bales or about two-thirds.

as much as the indicated crop for the current season. The prospective small increase in the 1939-40 crop in comparison with 1938-39 production is accounted for by slight increases in Brazil, India, Russia, Egypt, and certain other countries more than offsetting small decreases in China, and various other countries.

Although production in several foreign countries has decreased somewhat from the peak levels reached a few years ago, the drop in the Chinese crop of commercial cotton from 3,200,000 in 1936-37 to only about 1,000,000 in 1939-40 explains a large part of this reduction. The current Chinese crop is only about half as large as the average for the 10-years 1927-38. The sharp upward trend in Brazilian cotton production has leveled off during the last few years, but the current crop of about 2,000,000 bales is approximately twice as large as the 10-year average. Russian production continues to increase gradually and in 1939-40 was approximately 4,000,000 bales, or almost double the 10-year average. In 1939-40 the comparatively high level of cotton production was maintained or increased in Peru, Turkey, Iran, Chosen, Sudan, Belgian Congo, Uganda, and in certain other small producing countries. These smaller cotton-growing countries, each producing less than 500,000 bales, in the aggregate, account for a substantial part of the total foreign crop.

The indicated 1939-40 Indian commercial crop of about 4,600,000 bales is not greatly different from either that of 1938-39 or of the 10-year average, (1928-37). It is nearly 1,000,000 bales less than the peak production in 1936-37. The indicated 1939-40 Egyptian crop of 1,800,000 bales, is also about the same as in the previous season. It is about 500,000 bales less than the peak production for 1937-38 and about equal to the average.

In the United States the 1940 national allotment will be about 27,500,000 acres. Allotments for 1939 totaled about 28,000,000 acres, but the area planted to cotton totaled only 24,900,000 acres. With yields per acre equal to the average for the 5 years 1934-38, an acreage equal to that planted last season would give a crop 1,100,000 bales less than in 1939.

Present conditions indicate that the crop in foreign countries during the 1940-41 season may be reduced somewhat below that for 1939 but it is likely to continue above the average for the 10 years 1928-37. Should the demand for food crops in relation to available supplies increase more than that for cotton, as now seems probable, particularly in belligerent countries, cotton production in India, Egypt, and in a number of other countries might decline to some extent. Chinese production in 1940 may increase over the unusually small crop of 1939, particularly if weather conditions are more nearly normal. In Brazil the sharp upward trend in production seems to have leveled off and with difficulty in making sales for export in that country's principal European markets and with some possibility of lower prices relative to competitive crops, acreage might be

reduced somewhat in 1940. Somewhat the same situation may prevail in certain other countries such as Peru, Argentina, Mexico, Turkey, and Iran. In Russia it is possible that cotton production might be stimulated by the European war and the Russo-German trade pact.

Consumption

World mill consumption increased - Second largest on record.

World mill consumption of all growths of cotton in 1938-39 totaled nearly 28,500,000 bales. This was about 600,000 bales more than in 1937-38 and was 2,600,000 bales larger than the average for the decade ended 1937-38. Although world consumption in 1938-39 was the second largest in history it was 2,400,000 bales less than the peak consumption of nearly 31,000,000 bales in 1936-37.

Mill consumption is expected to decrease in belligerent European countries during 1939-40 as was the case during the World War. This prospective decrease may be offset by the indicated increase in the United States and in certain other countries. But there appears to be little prospect for total world consumption in 1939-40 exceeding that for 1938-39 and it may be considerably smaller.

United States consumption expected to increase again.

Consumption of nearly 6,900,000 bales of all growths of cotton in the United States during 1938-39 was the largest with but one exception since 1928-29. It was about 1,100,000 bales more than that for 1937-38 and approximately 800,000 bales more than the 10-year (1928-37) average. Increased consumer buying coupled with small stocks of cotton textiles in channels of distribution at the beginning of the 1938-39 season stimulated domestic mill consumption during the past season.

Mill sales of unfinished cotton cloth and yarn were unusually large during August and September 1939 and stocks of cotton-textile materials are now reported to be comparatively small. Mill consumption for the first 2 months of the current season was well above the high level for a year earlier and with prospects for further expansion in industrial activity and pay rolls during the 1939-40 season the probabilities are that consumption in the United States will exceed that for last season and it may approximate the record consumption of nearly 8,000,000 bales in 1936-37.

Mill consumption in foreign countries expected to decrease

Mill consumption of all growths in foreign countries totaled about 21,600,000 bales in 1938-39. This was about half a million bales less than in the previous season but approximately 1,800,000 bales more than the 10-year average. Should there be material reductions in the 1939-40 consumption in belligerent European countries, as now seems probable, it is unlikely that increases in other foreign countries will be sufficient to counterbalance such decreases.

Consumption of American cotton in countries other than the

Cotton, American foreign and all growths: Mill consumption in the United States, foreign countries, and the world.

Season beginning Aug. 1	United States			Foreign Countries			World		
	American	Foreign	Total	American	Foreign	Total	American	Foreign	Total
	1,000 bales	1,000 bales	1,000 bales	1,000 bales	1,000 bales	1,000 bales	1,000 bales	1,000 bales	1,000 bales
Average 1928-37	5,881	176	6,057	6,886	12,889	19,775	12,767	13,065	25,832
1932	6,004	133	6,137	8,381	10,133	18,514	14,385	10,266	24,651
1933	5,553	147	5,700	8,227	11,675	19,902	13,780	11,822	25,602
1934	5,241	120	5,361	5,965	14,192	20,157	11,206	14,312	25,518
1935	6,221	130	6,351	6,282	15,154	21,436	12,503	15,284	27,787
1936	7,768	182	7,950	5,325	17,639	22,964	13,093	17,821	30,914
1937	5,616	132	5,748	5,254	16,874	22,128	10,870	17,006	27,876
1938 1/	6,737	123	6,860	4,528	17,077	21,605	11,265	17,200	28,465
	1938 as percentage of 10 year average and of 1937								
10-yr.av.	114.6	69.9	113.3	65.8	132.5	109.3	88.2	131.6	110.2
1937	120.0	93.2	119.3	86.2	101.2	97.6	103.6	101.1	102.1

1/ Preliminary.

Compiled from reports of the New York Cotton Exchange Service, except United States consumption which is from Bureau of the Census reports. American cotton in running bales and foreign in equivalent bales of 478 pounds net weight.

United States decreased sharply in 1938-39 amounting to only slightly more than 4,500,000 bales, the smallest since the end of the World War (1918-19) and nearly 2,400,000 bales less than the 10-year average. Consumption of American cotton in foreign countries totaled 8,400,000 bales in 1932-33.

With American cotton constituting a somewhat larger percentage of total world supplies in 1939-40 than in the previous season with export payments, and with the cotton rubber exchange between this country and the United Kingdom, the consumption of American cotton abroad is expected to constitute a larger proportion of total foreign consumption than in 1938-39. Exports of American cotton totaled only about 3,300,000 bales in 1938-39 - the smallest in almost 60 years. And stocks of this growth in foreign cotton-consuming countries are now comparatively small. Early season prospects indicate a substantial increase in exports from the United States during 1939-40. From August 1 to October 31 exports were about 50 percent larger than a year earlier.

If the British convoy system is successful, consumption of American cotton in the United Kingdom and France in 1939-40 may not be materially different from the 1,650,000 bales consumed in these countries last season, although the consumption of foreign growths may decrease with smaller exports of cloth and yarn and reduced consumption for non-military purposes. But consumption may decrease substantially in Germany and in German-controlled territory (Poland, Czechoslovakia, and Austria) where more than 700,000 bales of American cotton were consumed in 1938-39. The British blockade, coupled with a shortage of foreign exchange and increased substitution of rayon for cotton in territory under German control is expected to curtail cotton consumption. These anticipated decreases in American cotton consumption in belligerent European countries, however, may be about offset by increases in the consumption of American cotton in the neutral countries of Europe, particularly Italy and Spain, and in Japan where cotton-textile exports are expected to increase.

Cotton, American, Foreign, and all growths: Mill consumption in specified regions of Europe.

Season beginning Aug. 1	United Kingdom and France			Germany, etc. 1/			Other European countries, excluding Russia		
	American	Foreign	Total	American	Foreign	Total	American	Foreign	Total
	1,000 bales	1,000 bales	1,000 bales	1,000 bales	1,000 bales	1,000 bales	1,000 bales	1,000 bales	1,000 bales
Average 1928-37	1,988	1,802	3,790	1,259	765	2,004	1,454	1,000	2,454
1932	2,173	1,373	3,546	1,546	407	1,953	1,725	672	2,397
1933	2,184	1,657	3,841	1,639	683	2,322	1,730	818	2,548
1934	1,476	2,151	3,627	818	843	1,661	1,351	1,212	2,563
1935	1,955	2,093	4,048	938	1,106	2,044	1,276	1,147	2,423
1936	1,810	2,419	4,229	746	1,164	1,910	1,040	1,137	2,177
1937	1,782	1,991	3,773	758	1,135	1,893	1,098	1,333	2,431
1938 2/	1,650	2,000	3,650	720	1,230	1,950	1,038	1,670	2,728
	1938 as percentage of 10-year average and of 1937								
10-yr.av.	83.0	111.0	96.3	58.1	160.8	97.3	72.8	167.0	111.2
1937	92.6	100.5	96.7	95.0	105.6	101.4	96.4	125.3	112.2

1/ Germany, Poland, Czechoslovakia, and Austria - consumption in Austria partly estimated on the basis of imports.
2/ Preliminary estimates of the Department of Agriculture.
Compiled from reports of the New York Cotton Exchange. American in running bales and foreign in equivalent bales of 478 pounds net weight.

Consumption of non-American cotton in countries other than the United States totaled 17,200,000 bales in 1938-39 or slightly more than in the previous season and was nearly 4,150,000 bales larger than the 10-year average. This was the second largest consumption of foreign cotton on record. With a drastic reduction in the use of non-American cotton in belligerent European countries, total consumption of such cotton may be down considerably in 1939-40 from that of the previous season. Consumption of foreign cotton in the United Kingdom and France amounted to about 2,000,000 bales in 1937-38.

Even if the convoy system proves successful it seems probable that with increased competition from American cotton, the consumption of non-American cotton is likely to be smaller in England and France during 1939-40 than in the previous season. With prospects of increased difficulties in obtaining cotton in Germany, a substantial reduction in the consumption of growths other than American is expected in German territory where more than 1,200,000 bales of such cotton were consumed in 1938-39. These anticipated decreases in the consumption of foreign growths in European countries now at war probably will be offset to some extent by an increase in Japanese consumption of non-American cotton and by a continuation of the upward trend in mill consumption of native cotton in India, Russia, Brazil, and various other cotton-growing countries.

Cotton: Prices and farm returns, United States.

Season beginning Aug. 1	Cotton prices: Weighted average received by producers	Cotton prices: Average for 10 designated markets	Gross returns during marketing season: Cotton	Cotton-seed	Government payments 1/	Total, including Government payments: Actual	Total, including Government payments: Adjusted to the 1910-14 level of prices paid by farmers
	Cents per pound	Cents per pound	Million dollars	Million dollars	Million dollars	Million dollars	Million dollars
Average 1928-37	11.08	11.32	752.4	100.1	--	912.7	654.6
1932	6.52	7.15	424.1	40.4	--	464.4	403.9
1933	10.17	10.81	630.0	48.5	179.7	858.2	686.6
1934	12.36	12.36	629.1	105.9	115.2	850.1	649.0
1935	11.09	11.55	590.2	105.0	160.2	855.4	673.6
1936	12.33	12.70	764.4	141.3	82.4	988.1	737.4
1937	8.41	8.66	796.2	116.4	65.1	977.6	746.3
1938	8.60	8.70	513.1	30.6	266.0	859.7	682.3
1939 2/	8.85	8.90					
	1938 as percentage of 10-year average and of 1937						
10-yr.av.	77.6	76.9	68.2	80.5	--	94.2	104.2
1937	102.3	100.5	64.5	69.3	408.6	87.9	91.4

1/ Payments with respect to cotton.
2/ Prices for August, September, and October.

Prices and Income

Cotton prices up slightly in the United States

The United States farm prices of cotton averaged 8.6 cents in the 1938-39 season or slightly higher than a year earlier but about 2.5 cents below the 1928-37 average. The slight advance in cotton prices in 1938-39 occurred despite a decline in the general level of commodity prices and was attributed largely to an increase in demand and to a reduction in supplies of "free" cotton.

Prices of spot cotton continued high in relation to prices of futures contracts throughout most of the 1938-39 season. This high basis along with high prices of near-month futures in relation to those for the more distant months increased the hazards of accumulating and carrying stocks of cotton. But toward the end of the 1938-39 season, prices of spot cotton declined in relation to prices of futures contracts.

Liverpool price ratios of foreign growths to American increased

Prices of Indian, Egyptian, and Brazilian cottons declined in relation to prices of American in Liverpool during most of 1938-39 and averaged considerably lower than for any other recent year. Considerable increase in the ratios of prices of these growths to those of American has occurred since the latter part of the 1938-39 season. In October 1939 these price ratios were about the same as the 1928-37 average. The indicated increase in supplies of American in relation to the total supplies of other growths, along with export payments on American cotton, are favorable to maintaining or increasing the recent improvement in the competitive position of American cotton in foreign markets.

Farm returns from cotton decrease

Gross returns to farmers from cotton and cottonseed in the 1938-39 marketing season were almost 35 percent smaller than in the previous season and 30 percent smaller than the average for the 10 years 1928-37. The decrease in 1938-39 is accounted for largely by a decrease of about 37 percent in the size of the United States crop. The combined returns to growers from cotton and cottonseed, together with a large increase in Government payments with respect to cotton in 1938-39, were considerably less than in the previous season and somewhat smaller than the 10-year average but were almost twice as large as in 1932-33. When adjusted for changes in prices of things farmers buy, gross returns from cotton and cottonseed in 1938-39, including government payments, were about 8 percent smaller than in the previous season but were 4 percent larger than the 10-year average.

Should cotton prices continue through the rest of the 1939-40 season at about the average level for August, September and October such prices, with the October estimate of the 1939 crop, would result in gross farm incomes from cotton and cottonseed, excluding Government payments, in 1939-40 slightly larger than in the previous season. With Government payments with respect to

Cotton: Spot price per pound and price ratios for specified growths at Liverpool.

Season beginning Aug. 1	Average prices of spot cotton				Price ratios for specified growths to American Middling		
	American Middling 7/8 inch	Indian Oomra and No.1 Fine	Egyptian Uppers F.G.F.	Brazilian Sao Paulo fair	Indian	Egyptian	Brazilian
	Cents	Cents	Cents	Cents	Percent	Percent	Percent
Average 1928-37	13.26	10.12	15.46	12.93	76.3	116.6	97.5
1932	8.52	7.29	10.61	8.61	86.1	125.2	101.0
1933	12.47	9.35	13.77	12.28	75.3	110.8	98.8
1934	14.24	10.78	15.49	13.86	75.8	108.8	97.4
1935	13.50	10.78	15.49	13.45	80.0	114.8	99.8
1936	14.62	10.87	17.40	14.12	74.4	119.0	96.6
1937	10.31	7.96	13.10	10.18	77.1	126.7	98.7
1938	10.15	7.14	11.80	9.63	70.4	116.5	94.9
1939 1/	10.62	8.08	11.90	10.12	76.1	112.1	95.3
	1939 as percentage of 10-year average and of 1938						
10-yr. av.	80.1	79.8	77.0	78.3	99.7	96.1	97.7
1938	104.6	113.2	100.8	105.1	108.1	96.2	100.4

1/ Average prices for August, September, and October.
Computed from reports of the Liverpool Cotton Association.

cotton this season larger than average (1933-37) but much smaller than in 1938-39, gross incomes including Government payments in 1939-40 would be less than for any other crop since 1932-33

Domestic Staple Situation

The domestic supply of about 8,000,000 bales of the shorter staple lengths (shorter than 15/16-inch) will be somewhat larger in 1939-40 than the comparatively small volume in the previous season, according to present indications. The marked decrease in the proportion of the shorter lengths in the supply of upland cotton during recent seasons (from a 10-year average of 45 percent of the total to 33 percent during the last two seasons) reflects continued progress in the improvement of the staple length of the United States cotton crop. And despite the decreased proportion of upland cotton shorter than 7/8-inch, central-market discounts for Middling 13/16-inch from the price of Middling 7/8-inch in the early part of the 1939 season averaged nearly 90 points compared with the 10-year average (1928-37) of only slightly more than 60 points. Thus, discounts for the shorter staples of upland cotton continue comparatively wide although staple premiums for cotton longer than 7/8-inch have narrowed considerably during recent years.

The indicated domestic supply of staples ranging from 15/16-inch to 1-5/32 inches for the 1939-40 season of about 16,300,000 bales is the largest in history and about 6,000,000 bales larger than the 10-year average (1928-37). With the marked actual and relative increase in the supply of the medium and long staples of American upland cotton during recent years, staple premiums in central markets have narrowed substantially. For Middling 1-inch cotton the premium of only about 35 points in late October of the 1939-40 season compared with an average of approximately 55 points in 1938-39 and a 10-year average of about 80 points. For Middling 1-1/16 inches, premiums were about 55 points against 85 points in 1938-39 and a 10-year average of 135 points. For Middling 1-1/8 inches, premiums in October were about 150 points compared with 180 for the previous season and about 195 for the 10 years ended with 1937-38. Increased relative production and supplies of the longer staples together with the lower level of cotton prices, have resulted in lower staple premiums in recent years. Expressed as percentages of Middling 7/8-inch staple, however, premiums for the current season compare somewhat more favorably with average premiums over a period of years. A comparatively large proportion of the total supply of 7/8-inch cotton appears to be held in Government loan stocks and it may be that this has tended to hold up the price of 7/8-inch in relation to other staple lengths. Nevertheless, there still is ample incentive for the production of the longer lengths (longer than 7/8 inch) in those regions where production costs are about the same for the shorter as for the longer staple varieties. And for staples shorter than 7/8-inch, discounts are wider than the 10-year average.

The supply of upland cotton 1-3/16 inches and longer indicated for 1939-40 is expected to be considerably less than that for the previous season but about one-fifth more than average. The supply of this cotton is comparatively small, averaging less than 300,000 bales in recent years. The premium for 1-3/16-inches cotton was about 290 points over Middling 7/8-inch in late October of the 1939-40 season. This was about 6 percent lower than the average premium of approximately 310 points last season and during the 10-year period ended with 1937-38. The premiums for 1-1/4 inches in October were about 10 percent lower than the average for last season or the 10-year period.

The supply of extra-long staple American-Egyptian and Sea Island cotton is expected to be approximately 37,000 bales (5,000 Sea Island and 32,000 American-Egyptian) in 1939-40, or 10 percent more than in the previous season. New England mill prices for Pima No. 2, 1-9/16 inches (American-Egyptian) averaged about 22.1 cents during the 1938-39 season against 24.6 cents early this season. The consumption of American-Egyptian cotton last season amounted to about 18,600 bales and Sea Island to approximately 2,600 bales, whereas consumption of extra-long staple cotton imported from Egypt approximated 50,000 bales. Should there be difficulties in importing the extra-long staples of Egyptian cotton--this and the relatively small stocks of such cotton in the United States at the beginning of the current season, may result in some increase in

the demand for American-Egyptian and Sea Island cotton during the 1939-40 season. But during September and October American-Egyptian cotton sold at a premium over imported extra-long staple Egyptian cotton in domestic mill centers, whereas last season American-Egyptian prices were lower than prices for extra-long staple Egyptian cotton.

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Release Date
November 7, A.M.

THE WHEAT OUTLOOK FOR 1940

Summary

Available information indicates that the acreage seeded to wheat for harvest in 1940 will be about the same as seeded for harvest in 1939. Conditions for seeding and starting wheat have been unfavorable over practically the entire winter-wheat area. Even though higher wheat prices followed the declaration of war in Europe, it appeared that farmers generally had not planned extensive increases in seedings in the important winter wheat States.

If the total wheat seedings for harvest in 1940 are unchanged from the 64.6 million acres seeded last year, and average yields are obtained, production will total about 760 million bushels. This would be about 75 million bushels more than the average domestic disappearance of 685 million bushels during the last 10 years. If exports should approximate the 10-year average of 70 million bushels, the carry-over at the close of the 1940-41 season, accordingly, would be about the same as at the beginning. Unless unusually favorable growing conditions in the winter wheat States exist for the remainder of the growing season, however, and conditions for spring wheat are also favorable, yields per seeded acre for all wheat will be below average, and this would result in a reduction at the close of the season of the moderately large carry-over in the United States. Large carry-over stocks of milling wheat in prospect at the beginning of the 1940-41 year assure ample supplies by classes for the crop year beginning at that time.

No marked reduction in wheat acreage in Europe is expected for the 1940 crop. Probably decreases in the acreage seeded in the areas of military operations are likely to be at least partly offset by increases in neutral countries and in the United Kingdom. World acreage in 1940, therefore, is not likely to be greatly different from the acreage this year. Average yields on this acreage would again result in a crop almost equal to prospective world consumption, and which in turn would not substantially reduce the large world carry-over stocks.

Unless world wheat acreage is reduced or yields per acre are small, large world supplies, accordingly, will continue during the 1940-41 season and any improvement in world wheat prices will depend upon improvement in demand, or a rise in the world price level. Wheat prices in the United States are expected to continue to average relatively high compared with prices in other surplus-producing countries so long as the Government loan and export subsidy programs continue and world prices remain low. The large quantity of wheat being placed under Government loan is operating to support domestic prices.

In appraising the wheat situation for 1939-40 and 1940-41, many people think of the high prices and large exports during the World War. They are inclined to overlook the fact that conditions at the beginning of the present war are greatly different from those at the beginning of the World War. World wheat supplies are now abundant and the largest on record. Estimated at 5.4 billion bushels, they are 57 percent larger than in 1914. Consumption, on the other hand, totaling about 4.0 billion bushels, is only about 30 percent larger than in 1914. The United States now faces greatly increased competition compared with the World War period, particularly in the important United Kingdom market, which may be expected to favor Canada. If shipping losses do not prove heavy, the United Kingdom may also favor Australia and possibly Argentina. United States wheat exports at the beginning of the World War were large as a result of short crops in Canada and Australia and the lack of strong competition from Argentina. Prices did not advance materially until after the war had been in progress for 2 or 3 years and then only when world production was small and the general price level was rising.

Domestic Supply Prospects

United States wheat acreage may not be materially different from seedings for the 1939 crop

The acreage allotted for seeding the 1940 crop under the Agricultural Adjustment Act is 62 million acres. The allotment for the 1939 crop was 55 million acres, and actual seedings amounted to 64.6 million acres. The inducements offered by the 1939 A.A.A. Farm Program, the decline in wheat prices in the summer of 1938, and the generally unfavorable wheat outlook at planting time, combined to greatly reduce seedings for the 1939 crop from the near-record acreage of 80 million acres seeded for the 1938 crop.

All available information to date indicates that the acreage seeded this year will not be much different from that seeded last year. Weather conditions for seeding and starting wheat have been generally unfavorable over practically the entire winter-wheat area. Even before the winter wheat seeding season had drawn toward its close, reports to the Department of Agriculture indicated that most winter wheat growers, planned to keep within their 1940 acreage allotments. The movement of prices following the outbreak of war in Europe apparently had not generally affected seeding plans in the important winter wheat growing States. Precipitation has also been much below average in the important spring wheat States of the northern Great Plains. Many factors will, of course, have a bearing upon the acreage of spring wheat seeded. Included in these are early spring precipitation, the winter wheat prospects at spring wheat seeding time, wheat prices, and the somewhat larger wheat acreage allotments than in 1939.

If the total wheat seedings for harvest in 1940 are unchanged from the 64.6 million acres seeded last year, and the 20-year (1919-38) average yields per seeded acre of 11.74 bushels are obtained, production will total about 760 million bushels. This would be about 75 million bushels more than the 10-year (1929-38) average domestic disappearance of about 685 million bushels. If exports should approximate the 10-year (1928-37) average of 70

million bushels, the carry-over at the close of the 1940-41 season, accordingly, may be about the same as at the beginning. Large carry-over stocks of milling wheat in prospect on July 1, 1940 assure ample supplies by classes for the crop year beginning at that time.

The annual average yields per seeded acre in the United States usually vary between 10 and 14 bushels. A 10-bushel yield and an acreage the same as last year would result in a new crop of about 40 million bushels short of annual domestic disappearance and thereby reduce the moderately large carry-over. On the other hand, a yield of 14 bushels would result in a crop materially above domestic disappearance and export probabilities and would add to the carry-over stocks. In the latter event, the United States' carry-over at the close of the 1940-41 marketing season, even after allowing for exports of as much as 100 million bushels, might increase the carry-over by 100 million bushels.

In much of the Great Plains area, the available supply of soil moisture in the fall months is an important factor in determining yields of winter wheat the following year. Information available as of November 1 indicates that this area as a whole, soil moisture supplies are much below normal and conditions are less favorable than in any recent year. Prospects in the Great Plains States, accordingly, are for greater than average abandonment, and below average yields per seeded acre. Fall moisture has also been deficient in the soft winter wheat States to such an extent that yields in these States may also be reduced. Moisture in the fall is important in determining spring wheat yields unless offset by comparatively favorable precipitation in the spring. While the crop is faced with the handicap of the present deficiency of fall moisture, it is too early to appraise the prospect for yields of spring wheat.

No unusual grasshopper damage to the 1940 crop is to be expected east of the Mississippi River. Grasshoppers are still very abundant in north central and northeastern Montana and in the Plains States from North Dakota and Minnesota to the Texas Panhandle. A rather threatening prospect of Hessian-fly injury in much of the winter-wheat belt has probably been much reduced by the persistent drought. The chinch bug, however, is favored by dry weather and is known to be abundant in many localities from central Indiana to eastern Kansas and Nebraska.

Domestic wheat supplies in 1939 about
109 million bushels less than in 1938

Wheat supplies in the United States for the year beginning July 1,1939 are estimated at 993 million bushels, or 91 million bushels less than in 1938-39. Domestic disappearance for the year beginning July 1, 1939 is forecast at about 675 million bushels. Deducting this amount from the estimated supply leaves 318 million bushels for export or carry-over. Even if exports should be as large as the 10-year (1928-37) average of about 70 million bushels, the carry-over on July 1, 1940 would be approximately as large as on July 1, 1939, when it totaled 254 million bushels.

United States supplies in 1939 of 993 million bushels are about the same as in 1914 (table 1). While annual domestic consumption has increased about 65 million bushels since 1914, the decline in exports (table 4) has been much greater than the increase in domestic consumption.

Table 1.- Estimated United States wheat supply and distribution, selected years beginning July

A. - 5-year (1909-13) average and 1913-16 annual

Item	Average 1909-13	1913	1914	1915	1916
	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.
Supply					
Stocks of old wheat, July 1	95	110	100	52	210
Production	682	751	897	1,009	635
Total supplies	777	861	997	1,061	845
Distribution					
Domestic disappearance	562	612	607	609	596
Net exports and shipments	108	149	338	242	184
Stocks at end of year	107	100	52	210	65

B. - 5-year (1923-27) and 10-year (1928-37) averages, and 1937-39 annual

Item	Average 1923-27	Average 1928-37	1937	1938	1939 2/
	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.
Supply					
Stocks of old wheat, July 1	97	216	83	153	254
Production	795	753	876	931	739
Total supplies	892	969	959	1,084	993
Distribution					
Domestic disappearance	620	683	703	721	675
Net exports and shipments	178	1/ 64	103	109)	318
Stocks at end of year	94	222	153	254)	

1/ Average of 7 years, omitting net imports in 1934-36, is 97 million bushels.
2/ Preliminary.

World Supply Prospects

Present world acreage with average yields ample for probable world consumption

No marked reduction in wheat acreage in Europe is expected for the 1940 crop. Probable declines in areas of military operations are likely to be at least partly offset by increases in neutral countries and in the United Kingdom. It is too early to appraise the probabilities for the 1940 Canadian wheat crop or the 1940-41 wheat crops of Australia and Argentina, but there is no reason to anticipate a material reduction in acreage in those countries. World acreage in 1940, therefore, will not be greatly different from the acreage this year. Average yields on this acreage would again result in a crop ample to take care of probable world consumption without reducing the large carry-over stocks.

The present world acreage 1/ of approximately 275 million acres is 8 million acres, or about 3 percent above that necessary, with average yields, to produce a crop equal to the 10-year (1928-37) average annual disappearance of about 3.8 billion bushels. The 16-year average yields applied to 275 million acres would result in a crop of 3.9 billion bushels. This is larger than the disappearance in any year except 1938-39 the preliminary estimate for which is around 4.0 billion bushels.

If production in 1940 turns out to be large enough to about take care of world disappearance in 1940-41 it follows that the large world carry-over stocks at the end of the 1940-41 season will not be reduced materially from the size of the carry-over on July 1, 1940.

World yields per acre have fluctuated within a very narrow range, since wide variations in different regions have been largely compensating. In most years, yields have varied between 13.4 and 15.0 bushels per acre. During the 16 years, however, yields did go as low as 12.9 bushels in 1936 and as high as 15.9 bushels in 1938. The 16-year average is 14.2 bushels per acre.

World carry-over July 1, 1940 expected to be large

On the basis of present supply estimates and a moderately large world disappearance, the world wheat carry-over on July 1, 1940 is expected to be about 1.4 billion bushels compared with about 1.2 billion bushels on July 1, 1939. This would be the largest on record and more than twice annual international trade, which during the past 5 years averaged about 550 million bushels.

Total world supplies of wheat in 1939, estimated at about 5.4 billion bushels (table 2) are 57 percent larger than in 1914, while world consumption, totaling about 4.0 billion bushels, is only about 30 percent larger.

Table 2.- Estimated world supply and distribution, averages 1924-28, 1928-37, and annual 1914, 1937-39

Item	1914	Average 1924-28	Average 1928-37	1937	1938 1/	1939 1/
	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.
Supplies						
Stocks, July 1	575	662	920	519	600	1,165
Production	2,884	3,546	3,763	3,852	4,588	4,264
Total	3,459	4,208	4,683	4,371	5,188	5,429
Net exports from U.S.S.R.	90	16	31	39	37	12
Total supply	3,549	4,224	4,719	4,410	5,225	5,441
Distribution						
Disappearance	3,050	3,502	3,793	3,810	4,060	4,000
Stocks at end of year	499	722	926	600	1,165	1,441

1/ Preliminary.

1/ All references to world acreage, production, and stocks in this report exclude the U.S.S.R. and China, except where noted.

International Trade Prospects

World trade in 1939-40 expected to be smaller than in 1938-39

World wheat and flour shipments for the year beginning July 1, 1939 are expected to be smaller than in the year just past, when they totaled about 600 million bushels. Wheat consumption in belligerent countries declined during the World War, and some decline is likely to occur during the present war. Moreover, during the last few years European countries have been building up their supplies of wheat until at present they are large compared with average, and compared with 1914. Compared with 416 million bushels, the average shipments in 1934-38 and 451 million bushels in 1938-39 shipments to European countries in 1914-15 were 504 million bushels. With a large crop in surplus-producing countries (table 5) shipments in 1915-16 rose to only 516 million bushels; then with a small crop in the countries in 1916 they declined to 498 million bushels. Non-European shipments have been larger since the World War than before the war. In 1939-40 they are expected to be smaller than in 1938-39. Table 3 shows shipments to Europe for selected years together with shipments to non-European countries and the total.

Table 3.- World shipments and shipments to Europe and non-Europe, years beginning July, averages 1909-13 and 1930-34, annual 1914-16 and 1937-38

Item	Average 1909-13	1914	1915	1916	Average 1930-34	1937	1938
	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.
Europe	537	504	516	498	490	399	451
Non-Europe	81	52	59	28	161	98	147
World	618	556	575	526	651	497	598

Reported in Broomhall's Corn Trade News.

In 1914, exports from Russia were large and then declined sharply, whereas in recent years they have been small. In 1914-15 Russia had net exports of 90 million bushels, but in 1915-16 and 1916-17, net exports amounted to only 8 and 15 million bushels, respectively. During the last 5 years (1934-38) net exports from Russia have averaged 22 million bushels. Exports are expected to be small in 1939-40, since the crop in Russia appears to be only a moderate sized one and surplus supplies may be retained because of hostilities in Europe.

United States exports expected to be less than in 1914 and 1915

Unusually large exports from the United States were possible in 1914, and again in the first half of 1915, because of very small crops in Canada and Australia and a record crop in the United States. The situation is different for 1939-40. Canada and Argentina have very large supplies. On August 1, 1939, Argentina had 144 million bushels of wheat available for ex-

port and Canada 102 million bushels. The new harvest is expected to provide an additional surplus for export of approximately 345 million bushels by Canada and approximately 130 million by Argentina. In other words, surplus supplies in these two countries alone, totaling over 700 million bushels, could more than supply probable world import requirements in the year ahead. If world acreage is not significantly reduced and yields are about average, large surpluses in countries competing with the United States will continue in 1940-41.

European takings of United States wheat and flour have declined since about 1924, and in recent years they have averaged considerably below the 1910-14 average (table 4). The United States now faces greatly increased competition, compared with the World War period, particularly in the important United Kingdom market, which may be expected to favor Canada. If shipping losses do not prove heavy, the United Kingdom may also favor Australia and possibly Argentina. United Kingdom imports of United States wheat and flour in recent years have been small. Exports of as much as 28 million bushels in 1938-39 were the result of the United States Government wheat export subsidy. Increased production in Italy and France during recent years comes close to satisfying domestic needs. Supplies in Germany in 1939-40 are large enough to meet curtailed internal requirements, even though no imports are made. In Belgium and in the Netherlands, production is insufficient to meet their domestic needs and both countries will continue to be important takers of United States wheat.

Table 4.- United States exports of wheat, including flour 1/ to specified countries and total, calendar years, averages 1910-14 and 1930-34, annual 1914, 1915, 1916, 1937 and 1938

Country 2/	Average 1910-14	1914	1915	1916	Average 1930-34	1937	1938
	Million bushels	Million bushels	Million bushels	Million bushels	Million bushels	Million bushels	Million bushels
United Kingdom.	40	68	58	74	12	7	28
Italy	6	21	52	24	1	3/	1
Germany	7	6	3/	0	2	1	2
France	8	30	44	34	3	1	1
Belgium	7	7	6	4	5	6	12
Netherlands	15	25	33	23	6	9	17
Total (6)	83	157	193	159	29	24	61
U.S. total	130	234	280	222	84	56	111

1/ Includes flour milled in bond from foreign wheat.
2/ Most important European importers; in 1930-34 took about 3/4 of the total for Europe.
3/ Less than 500,000 bushels

Price Prospects

United States wheat prices above export parity

Unless world wheat acreage is adjusted downward or yields per acre are small, very large world supplies will probably continue during the 1940-41 season and any improvement in world wheat prices would depend upon improvement in demand, or a rise in the world price level. Wheat prices in the United States are expected to continue to average relatively high compared with prices in other surplus-producing countries as long as the Government loan and export subsidy programs continue and world prices remain low. The large quantity of wheat being placed under Government loan is operating to support domestic prices.

Wheat prices in 1915 average slightly lower than in 1914

Prices of wheat received by growers in the United States averaged 85 cents in August 1914, the month in which war was declared. In September they averaged 93 cents, 95 cents in October, 98 cents in November, and 103 cents in December. This advance was largely a reflection of the very small crop in Canada in that year (table 5); subsequently there was a crop failure in Australia (table 5) and prices advanced to $1.36 in April and May, after which they declined sharply. In 1915, the United States wheat crop at 1,009 million bushels, and the world wheat crop at 3,520 million bushels, were both the highest on record up to that time and prices averaged slightly lower than for the previous crop. The 1916 crop was the first one which sold for materially higher prices following the outbreak of the war in 1914. In 1916-17 world production dropped below average consumption levels, and there was a sharp rise in the general price level.

Table 5.- Average price received by United States growers, and production in selected countries, years beginning July, averages 1909-13 and 1928-37, annual 1913-16 and 1937-39

Year beginning July	Average price received by U. S. growers	World	United States	Canada	Australia	Argentina
	Cents	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.	Mil.bu.
1909-13	87.4	3,006	682	197	90	147
1913	79.4	3,129	751	232	103	105
1914	97.4	2,884	897	161	25	169
1915	96.1	3,520	1,009	394	179	169
1916	143.4	2,717	635	263	152	84
1928-37	78.9	3,768	753	330	170	231
1937	96.3	3,852	876	180	187	185
1938	54.7	4,588	931	350	155	336
1939 1/	---	4,264	736	449	160	230

1/ Preliminary.

Release Date
November 9, P.M.

THE TOBACCO OUTLOOK FOR 1940

Summary

Production in 1939 has been excessive in the flue-cured and Burley types, which usually comprise more than 75 percent of the total production of tobacco. Stocks of these types are high and the excess of 1939 production over prospective disappearance will result in burdensome stocks in 1940. However, growers have adopted a marketing quota program for 1940 which should go a long way toward correcting the unbalanced situation in flue-cured tobacco. For most other types the 1939 production is fairly well in line with the prospective disappearance in 1939-40 and stocks a year hence are not expected to be excessive in relation to consumption.

Because of the war in Europe exports in 1939-40 may be greatly reduced but foreign consumption of American tobaccos may be maintained at about 1938-39 levels by withdrawals from stocks of American leaf held abroad.

Domestic utilization likely to increase moderately

With improving business conditions and increasing employment the domestic consumption of cigarettes and cigars will probably continue to increase. Little change in the total consumption of other tobacco products is anticipated. The consumption of smoking tobacco and snuff has increased recently but the consumption of chewing tobacco continues to decline.

Foreign prospects less favorable

Although the foreign-demand prospects for the 1939-40 marketing season are subject to radical changes owing to the number of uncertainties involved, the outlook at present is for substantially reduced exports.

The European war is disrupting channels of trade and delaying the export movement, and it has already brought about restrictions in the use of foreign exchange and sharply increased freight and insurance rates. In addition, the trade with neutral European countries may also be adversely affected by the high cost of shipping and disruption of trade. During the last 2 years the countries that are now belligerent accounted for about three-fourths of our total tobacco exports to Europe.

Stocks of tobacco in the principal European importing countries are now at about normal levels and are sufficient to supply manufacturers' requirements for about 2 years. This permits such countries to defer further importations of tobacco and to give priority in foreign exchange and shipping facilities to the more urgently needed supplies. The war may be expected to delay the movement of United States tobacco rather than to result in any sharp change in the actual volume of consumption abroad.

Far-reaching shifts in the consumption of tobacco products have occurred in most countries since the World War, but it is probable that some of the developments in the exports of American leaf tobacco during the World War period may be repeated. During the World War, the imports of tobacco into Europe decreased, so that foreign stocks of American tobacco also decreased. This in turn led to greatly increased exports after the war to replenish stocks. A beginning of what may be a similar sequence of changes appears to have occurred as a result of the present war. Imports of American tobacco by Great Britain have been stopped for an indefinite period; this will have the effect of depleting British stocks of American tobacco and is likely to mean increased purchases at a later time.

Notable differences in the present situation compared with that at the time of the World War are the greatly increased production of tobacco, especially flue-cured, in the British Empire and other foreign countries, and the much higher level of cigarette consumption now prevailing. During the World War, the consumption of cigarettes was much smaller but was expanding rapidly. At this time it is increasing slowly.

In view of the restrictions imposed by the British Government on the use of foreign exchange, exports to the United Kingdom during 1939-40 are likely to be greatly below those of 1938-39. British stocks of American flue-cured leaf are at a normal level, while those of Empire flue-cured leaf are relatively high, particularly Indian and Canadian. Exports to China, our second ranking market for flue-cured leaf, are expected to be below the 1938-39 level. It is too early to know whether the Australian foreign-exchange control recently instituted will adversely affect our export of flue-cured leaf to that market.

Production of flue-cured leaf in the principal producing foreign countries in 1938-39 is estimated at around 384 million pounds, or about 16 percent greater than in 1937-38, and about 3 times that of 1930-31. This upward trend is expected to continue. The increase in foreign consumption has been sufficient to absorb the increased production and at the same time permit some increase in exports of United States flue-cured.

The export outlook for dark types of tobacco continues to be unfavorable because of the long-term decline in total consumption of these types and because of the present European situation. No great change in the foreign takings of Burley is expected in 1939-40, but exports of Maryland tobacco are likely to be adversely affected by the war.

Summary by Types

Flue-cured

Domestic consumption is expected to increase somewhat, but a sharp decrease in exports in 1939-40 may be expected. Total supplies reached a new high this year. The 1939 crop exceeds the annual disappearance of the last 2 years by more than 200 million pounds. Thus, even if there were no diminution of exports to the United Kingdom, stocks a year hence will be materially larger than the present large stocks. Growers have voted in favor of a marketing quota program which, with average yields, would result in a production of around 660 million pounds in 1940.

Fire-cured and dark air-cured

Production of fire-cured tobacco has been reduced during the last few years to a point below annual disappearance. However, present stocks are low but are adequate for the present declining rate of disappearance. Annual disappearance has continued to decline, notwithstanding the quantities of tobacco diverted to by-products uses under the Department's diversion program. Exports are at a low level and are likely to be further reduced by the European war.

Dark air-cured tobacco production during the last 2 years has been closely in line with disappearance, and stocks do not appear to be excessive. Some decrease in exports may result from war conditions, and the domestic consumption is not likely to change materially.

Burley

Supplies of Burley tobacco are abnormally large and are expected to result in further increased stocks by October 1, 1940. A moderate increase in domestic consumption may be expected during the next year because of expanding cigarette consumption. No significant change is anticipated in the foreign demand for Burley, exports of which are relatively unimportant. Because of the prospective large stocks a decrease in production is needed in 1940.

Maryland

The outlook is for some increase in the domestic consumption of Maryland tobacco in cigarettes and short-filler cigars, but some decrease in exports. The net result may be a slight decrease in total disappearance. Stocks are ample and production is fairly well in line with the disappearance that has occurred in recent years.

Cigar types

Cigar consumption is tending upward as a result of improving business conditions, and this trend is likely to continue at least into 1940. October stocks of cigar tobacco as a whole are likely to be about the same in 1940 as this year, but with some differences as to particular types. Stocks of Southern Wisconsin, Type 54, appear to be excessive in view of the quantities being held on farms, and a reduction in acreage is needed. On the other hand some increase in Type 55, Northern Wisconsin, and Pennsylvania Seedleaf, Type 41, seems to be justified.

Stocks of Connecticut shade wrapper tobacco, Type 61, are unusually low as a result of the storm damage in 1938, but total supplies are increased as a result of the large 1939 crop. The demand for wrapper may be stimulated if war conditions should impede importation of foreign wrapper tobacco.

Flue-Cured Tobacco, Types 11-14

The present supply of flue-cured tobacco is the largest in history. The 1939 crop of 1,012 million pounds greatly exceeds the prospective disappearance in 1939-40. As a result, stocks on July 1, 1940 are likely to show an increase of more than 200 million pounds. As a means of rectifying this condition of oversupply growers have voted for a marketing quota program for 1940 which, with average yields, would give a production of around 668 million pounds.

The 1939 crop is estimated at about 1,012 million pounds. This record crop is about 17 percent above the previous high of 1937 and about 44 percent above the 1928-37 average production. From 1934 to 1938 returns from flue-cured tobacco were relatively favorable as compared with returns from competing crops, especially cotton. But the production of flue-cured during this period was kept fairly well in line with disappearance by the various programs of the Agricultural Adjustment Administration. Growers did not adopt a marketing quota program for the 1939 crop.

As a result of the record 1939 supply of 1,958 million pounds, the sales to date have averaged around 15 cents per pounds with recent prices somewhat higher. This compares with an average price of 22.2 cents for the 1938 crop and an average of 22.9 cents for the five crops, 1934-38. The withdrawal of British buyers on September 8 tended to further demoralize an already bad marketing situation and as a result marketing operations for the 1939 crop were suspended from September 14 to October 9, inclusive. During the interim a program was developed for meeting the situation caused by cessation of buying for British account.

Disappearance of flue-cured in 1938-39 is estimated at about 794 million pounds, which is about the same as the disappearance of 1937-38 season. Disappearance in these years was at relatively high levels and about 18 percent above the 1928-37 average. Both domestic consumption and exports have been high in recent years. Actual domestic consumption of United States flue-cured in 1939-40 may be slightly higher than in 1938-39, but it is expected that exports will be lower and that foreign consumption will be maintained in part by withdrawals from stocks held abroad. Domestic stocks of flue-cured on July 1, 1940 under normal conditions probably would have been around 200 million pounds larger than stocks of the current season, but should foreign countries defer their purchases until needed to replenish depleted stocks, the increase in domestic stocks on July 1, 1940 may be materially in excess of this figure.

With increased consumer incomes in prospect, domestic consumption of flue-cured tobacco in 1940 is expected to continue upward owing chiefly to the expanding use of cigarettes which now accounts for about 80 percent of the total. The rate of increase in cigarette consumption from 1933-38 averaged about 3.9 percent annually but the increase was very small in 1938. During the first 9 months of 1939, tax-paid withdrawals of cigarettes were 4.4 percent above the same period of a year ago. This rate of increase during the remaining 3 months will give a total of 171 billion cigarettes for 1939 compared with the previous record high of 164 billions in 1938. The consumption of smoking tobacco is slightly larger than a year earlier but the consumption of chewing tobacco continues to decline.

The total exports of flue-cured tobacco during the marketing year ended June 30, 1939 were 362 million pounds (export weight) or about the same as in 1937-38. Exports were equivalent to about 50 percent of the 1937 and 1938 production. Approximately two-thirds of the quantity exported went to the United Kingdom. Prospects for exports from the 1939 crop are dominated by the European war and particularly by the decision of the British Government, in September 1939, to withhold, at least temporarily, foreign exchange for the purchase of United States leaf.

The immediate effect of the war is likely to be a slower movement of tobacco into export with corresponding reductions of stocks in the importing countries. This development took place during the World War.

Stocks of United States flue-cured leaf in Europe on July 1, 1939 were the largest recorded and were estimated at about 434 million pounds as compared with 403 million pounds for July 1, 1938 and 355 million pounds on July 1, 1937. The consumption of flue-cured tobacco in Europe continued to increase with the general shift toward lighter blends and toward the increased use of cigarettes; therefore present stocks are not excessive in relation to consumption. Stocks of the higher grades were relatively large and stocks of the lower grades, particularly on the continent, were relatively small. As a result of the increased production in other countries, stocks from competitive flue-cured sources were also at record levels, estimated for Europe at about 101 million pounds on July 1, 1939 as compared with 81 and 64 millions, 1 and 2 years earlier.

Total production of flue-cured tobacco in foreign countries in 1939 is estimated at about 384 million pounds as compared with 331 millions in 1938, 402 millions in 1937 and a 5-year average production of about 330 million pounds. Principal increases in 1939 were in China, Manchuria, and the Japanese Empire. Production in Canada and India was maintained approximately at the preceding year's high level.

Flue-cured tobacco production in principal producing foreign countries:1937-39

Country	1937	1938	1939 1/
The Orient:	Million pounds	Million pounds	Million pounds
China	210.0	81.5	110.0
Japanese Empire	74.2	79.9	98.5
Manchuria	7.7	12.5	20.0
Netherland India	3.3	4.0	6.5
Siam	0.8	1.0	1.0
Total	296.0	178.9	236.0
British Empire			
Canada	55.4	75.4	69.0
India 2/	19.5	40.0	45.0
S. Rhodesia 2/	20.3	25.3	22.0
Other 2/	10.5	11.7	11.9
Total	105.7	152.4	147.9
Total	401.7	331.3	383.9

1/ Preliminary estimate.
2/ Data shown are for harvests of the spring of the year indicated.

The upward trend in flue-cured tobacco production abroad has been pronounced during the last 10 years. The increase in foreign consumption of flue-cured tobacco has been sufficient to absorb the increased production of this type from foreign sources and at the same time to permit some increase in imports from the United States.

The United Kingdom

The United Kingdom is the most important single export market for tobacco. During the 1938-39 marketing year 228 million pounds (export weight) of flue-cured were exported to the United Kingdom as compared with the record exports of 237 millions during the preceding crop year and 170 millions 2 years earlier. Total tobacco stocks from all sources, largely flue-cured, in the United Kingdom on July 1, 1939, were 543 million pounds, about 72 percent of which was United States leaf. The following table shows the stocks position in the United Kingdom on July 1 for recent years:

Total stocks of tobacco in the United Kingdom, July 1, 1935-39

Year beginning July	Empire grown	Other, largely United States flue-cured	Total
	Million pounds	Million pounds	Million pounds
1935	94	302	396
1936	93	343	436
1937	100	329	429
1938	123	372	495
1939	144	399	543

Although the present total stocks are the largest on record, those of United States leaf are not excessive when compared with the increased consumption. Based upon the present rates of consumption, stocks of United States leaf are sufficient to last manufacturers 2 years and stocks of Empire-grown leaf about 2.7 years.

The most important long-time consideration in the British market is the competition from Empire-grown leaf which has a duty preference of slightly more than 2 shillings per pound, equivalent at the October 1, 1939 rate of exchange to about 41 cents. Moreover, in April 1939, duties on all tobacco were increased 2 shillings per pound and a similar increase was made as a war measure in September 1939. This brings the total duty on American leaf to the equivalent of about $2.73 per pound as compared with $2.32 on Empire leaf. The recent decision of the British Government not to allow the use of foreign exchange for the purchase of United States leaf will reduce the immediate import of United States leaf. The tendency to conserve foreign exchange and the increased duties on tobacco may cause British manufacturers to use a greater proportion of Empire-grown leaf than at present. Supplies of Empire leaf now in the United Kingdom are relatively large, and large crops and export surpluses from India and Canada are in prospect.

Other European countries

The stocks of flue-cured leaf in Ireland and Sweden are reported to be about normal but in Western continental countries which usually take predominantly from our lower grades the stocks are below normal. These smaller stocks of the lower grade leaf, together with the lower prices in this country, would normally have resulted in increased exports to these countries but this may be offset by the difficulties of shipping incident to war.

The Far East

The combined 1939 production of flue-cured tobacco in China, Manchuria, the Japanese Empire, India, Netherland India, and Siam, is estimated at about 280 million pounds as compared with 220 million pounds in 1938 and the record 1937 production of about 315 million pounds.

Reduction in stocks on October 1, 1939 results primarily from the fact that the Chinese crop of 1938 was about 60 percent below that of 1937, whereas the reduction in Chinese consumption through 1938-39 was only 25 percent below that of 1937-38. In the Japanese Empire and Manchuria, which are the other two important flue-cured consuming countries, consumption was maintained or increased slightly and production increased substantially. For Netherland India and Siam, flue-cured consumption increased slightly in 1938-39 and about in proportion with increased domestic production. In India, which is the principal flue-cured exporting country, the 1938-39 consumption was only slightly greater than the 16 million pounds of the preceding year, and the 1937-38 production of about 40 million pounds was nearly double the 1936-37 production.

Present conditions indicate that the 1939-40 consumption of China will be about equal that of the preceding 12 months, and that only small increases will occur in the other countries under consideration. With only a small increase in consumption and larger flue-cured supplies as a result of the sharp increase in 1939 production, larger quantities may be available for export.

Total supplies of flue-cured tobacco in these countries are estimated to be about 10 percent greater than they were a year ago but about 8 percent below the 1937 supplies. The current stocks are about 25 million pounds below those of a year ago, but the 1939 production is approximately 60 million pounds greater than that of 1938. This resulting increase in supply is considerably greater than the anticipated increase in consumption which is forecast to be only about 10 million pounds greater in 1939-40 than in 1938-39. Furthermore, the trend toward increased utilization of native flue-cured in place of American continues.

The above factors would indicate that the 1939-40 imports of American flue-cured tobacco into these countries may be below the 1938-39 imports of approximately 90 million pounds, (including about 25 million pounds of stems). On the other hand, the lower prices for the 1939 flue-cured crop in the United States may encourage imports from this crop to replenish stocks of American flue-cured leaf.

Fire-cured Tobacco, Types 21-24

According to October indications, production of fire-cured tobacco in 1939 will be somewhat below the disappearance of recent years. However, about half of the fire-cured leaf is usually exported and exports in 1939-40 are likely to be reduced by the European war.

Although the supply of fire-cured leaf in 1939-40 is the lowest of record, disappearance has been declining and the 1939-40 supplies in relation to disappearance are adequate. Disappearance since 1935 would have been even less but for the byproducts-diversion programs of the Agricultural Adjustment Administration. The quantity of fire-cured leaf diverted by these programs from 1935-36 to 1938-39 amounted to more than 55 million pounds, and averaged about 14 million pounds annually.

Exports of fire-cured leaf have declined for years and in 1938-39 amounted to only 57 million pounds (export weight). In 1937-38 they were the smallest of record and about one-third below the 1928-37 average. The exports in 1938-39 of 57 million pounds compares with 55 million pounds for the 1937-38 season. Of the total exports more than 80 percent has been taken by European countries with France the largest buyer, but imports by the Netherlands, Scandinavian countries, Belgium, Switzerland, Germany, and the United Kingdom have also been important. Takings by Spain were important before the 1936-37 season but have since been negligible.

Stocks of United States fire-cured leaf in European countries at the beginning of the present war were reported to be about normal and adequate for maintaining the manufacturing output of these countries for some time. As a result of the war, exports of tobacco in 1939-40 are likely to be under even the low levels of recent years. Even though European utilization of American fire-cured in 1939-40 may be maintained at near the 1938-39 rate, imports may be deferred until European stocks are materially reduced from present levels.

The principal domestic outlet for fire-cured leaf is in the manufactureof snuff. Snuff withdrawals in the first 9 months of 1939 were about 4 percent higher than for the corresponding period of 1938. The 1938 fire-cured crop was deficient in the snuff grades and the demand for these grades in 1939-40 is expected to be relatively favorable. The demand for fire-cured leaf for manufacturing domestic Italian-type cigars in 1939-40 is expected to be slightly improved over the year earlier.

Burley Tobacco, Type 31

The Burley situation is dominated by the fact that the present supply is the third largest in history. The crops of 1937

and 1938 exceeded the disappearance, and stocks on hand have risen from 572 million pounds on October 1, 1937, to an estimated 683 million pounds for October 1, 1939, an increase of approximately 20 percent in 2 years. The production in 1939, estimated at 354,217,000 pounds, when added to existing stocks, creates a total supply for the ensuing 12 months of 1,038 million pounds. Disappearance for the year ended October 1, 1939, is expected to be around 316 million pounds and only a moderate increase in disappearance can be anticipated during the next 12 months. It appears probable, therefore, that stocks on October 1, 1940, will be at least 30 million pounds larger than those on hand in October 1939, and this will have a marked influence upon the situation confronting the growers when their 1940 crop is offered for sale.

Prospects are good for some further increase in consumption of cigarettes but this may be offset in part by some decrease in the consumption of chewing tobacco.

No significant change in the foreign demand for the 1939 crop of Burley tobacco is anticipated. Around 5 percent of the total Burley production in the United States is exported. Belgium and Portugal continue to be the largest foreign markets for this type, and consumption there continues at a fairly constant level of from 4 to 5 million pounds annually. The shift to blended cigarettes in several countries would indicate an increased use of Burley. However, other light air-cured types are being substituted for Burley, particularly light Java leaf and improved varieties of light home-grown leaf. Exports of Burley during the marketing year 1938-39 totaled 11.2 million pounds, compared with 11.1 million pounds during the same period of 1937-38.

With a further increase in October stocks in prospect for 1940, a downward adjustment of acreage next year is necessary if supplies are to be kept in line with consumption.

Maryland Tobacco, Type 32

Production of Maryland tobacco in the past 2 years has been somewhat greater than disappearance, and stocks are increasing moderately. Anticipated increases in the consumption of cigarettes may stimulate the sales of grades used, and there may be a moderate increase in the quantities of the cheaper grades used in short-filler cigars.

On the other hand, exports, which have declined in recent years, may be further adversely affected by the European war. Exports declined from 5.3 million pounds in 1937, to 4.5 million in 1938. France, formerly the most important foreign market, has reduced the proportion of Maryland leaf in its blends and now takes only about two-thirds of a million pounds annually, compared with an average of 2.5 million during the 10-year period 1928-37. Switzerland is now the leading foreign customer for Maryland leaf, and accounted for more than 40 percent of the 1938 exports. The Netherlands and Belgium have reduced their takings of Maryland leaf through substitution of other types, such as light Java.

Dark Air-cured Tobacco, Types 35-37

According to October indications, production of dark air-cured tobacco in 1939 will be fairly well in line with annual disappearance in recent years. However, the export situation for 1939-40 is not favorable, and disappearance is expected to show a decrease. Stocks at the beginning of the 1940-41 season are therefore likely to be larger.

The supply of One Sucker, Type 35, for 1939-40 is about the same as for the 1938-39 season. The estimated production of 13 million pounds is about the same as the 1938-39 disappearance. Disappearance of One Sucker in 1938-39 was about 5 million pounds larger than in 1937-38 but some 2 million pounds of this increase resulted from the diversion program of the Agricultural Adjustment Administration. Total exports of One Sucker in 1938-39 were 1,799,000 pounds, due to increased takings by Belgium. Exports of Black Fat, processed principally from this type, decreased slightly.

Supplies of Green River, Type 36, in 1939-40 are about the same as a year earlier and estimated production is about the same as the disappearance of 1938-39. Exports in 1939-40 are likely to be reduced as a result of the European war. The bulk of the crop, however, is used by domestic manufacturers of smoking and chewing tobacco, and this outlet will probably show but little change.

Supplies of Virginia Sun-cured, Type 37, in 1939-40 show but little change from the 1938-39 supplies. Production in 1939 as estimated in October is fairly well in line with the prospective disappearance. The sun-cured leaf is utilized almost entirely by domestic manufacturers of chewing tobacco.

Cigar Types

Present and prospective improvement in business conditions indicates that cigar consumption will continue its upward trend. The 1939 production of cigar types is fairly well in line with the prospective disappearance of 1939-40, and stocks of cigar tobacco are not expected to show much change between now and October 1, 1940. If growing conditions are average, a total acreage in 1940 about the same as in 1939, would result in a production about equal to prospective disappearance.

Cigar Tobacco, Types 41-62

Although the general situation for cigar tobacco for 1939-40 seems to warrant a 1940 crop about as large as that in 1939, prospects vary slightly for different types. In order to bring supplies more closely in line with prospective disappearance, a somewhat smaller crop of Southern Wisconsin, Type 54, seems desirable. On the other hand, a slight increase in Georgia-Florida Sungrown, Type 45, New York and Pennsylvania Havana Seed, Type 53, Pennsylvania Seedleaf, Type 41, and Northern Wisconsin, Type 55, would seem justified.

Consumption of cigars, as indicated by tax-paid withdrawals, increased each year from 1934 through 1937. It declined in 1938 but has been increasing consistently during 1939. Consumption of scrap-chewing tobacco continues to decrease slightly.

Filler types. Supplies for the current marketing year for all continental types are substantially the same as a year ago. Stocks have been slightly reduced, but 1939 production is somewhat larger than that of 1938 and almost equal to current disappearance. The production of each continental filler type is practically the same as disappearance. The total supply of Pennsylvania Type 41 is nominally equivalent to about 4 years' disappearance, but inasmuch as existing stocks are somewhat deficient in grades desirable for cigar manufacturing purposes, a moderate increase in acreage appears to be justified.

Binder types. The supplies of all binder types combined, allowing for farm stocks, are substantially the same as a year ago. Most of the farm stocks appear to be of the stemming grades. Although the supplies of Types51 and 52 are rather large, the prospective increase in cigar withdrawals probably justifies a 1940 production equal to that of 1939. Disappearance of Southern Wisconsin, Type 54, appears to be less than the 1939 production when allowance is made for the large farm stocks, and in view of the decline in production of scrap-chewing tobacco, a decrease in acreage appears to be justified. Supplies of Wisconsin Type 55, are lower than usual. Disappearance seems to exceed slightly 1939 production, and some increase in the acreage in 1940 appears to be desirable.

Wrapper types. Stocks of Connecticut Valley wrapper tobacco, Type 61, are unusually low as a result of the short crop and the storm damage of 1938, but in view of the large 1939 crop some increase in stocks is expected. Normal disappearance has not changed appreciably during the last few years but the expanding consumption of cigars may have the effect of increasing the use of this type. This effect would be heightened should the present war impose difficulties on the importation of Sumatra tobacco.

Production of Georgia-Florida shade tobacco, Type 62, in 1939, was fairly well in line with disappearance and no appreciable change in stocks a year hence is expected.

Table 1.- United States tobacco, all types: Acreage, production, stocks, supply, disappearance, ratio of supply to disappearance, and price, average 1928-37, annual 1934-39

Year	Acreage harvested	Production	Stocks beginning of marketing year, farm sales weight 1/	Total supply	Disappearance during marketing year	Ratio of total supply to disappearance	Season average farm price per pound
	1,000 acres	Million pounds	Million pounds	Million pounds	Million pounds	Ratio	Cents
1928-37 10-year average	1,700.3	1,360.4	2,009.6	3,370.0	1,310.0	2.6	16.6
1934	1,278.5	2/ 1,055.1	2,286.8	3,341.9	1,121.9	3.0	21.3
1935	1,437.1	1,297.2	2,220.0	3,517.2	1,323.1	2.7	18.4
1936	1,438.3	1,155.3	2,194.1	3,349.4	1,323.1	2.5	23.6
1937	1,750.6	1,562.9	2,026.3	3,589.2	1,400.1	2.6	20.4
1938	1,602.8	1,378.5	2,189.1	3,567.7	3/ 1,426.4	2.5	4/ 19.7
1939	4/ 1,802.5	4/ 1,634.2	3/ 2,141.3	3/ 3,795.5	---	---	---

1/ Stocks held on farms not included. Marketing or crop year, flue-cured, July-June; Maryland, beginning January of year following production; other types, October-September.
2/ Quantity marketed.
3/ Estimated.
4/ Preliminary. Acreage estimate as of July 1 and production estimate as of October 1.

The totals by types or classes may not add (by one or two points) to totals shown in this table due to rounding. In tables 4, 8, 10, 11, and 12 production or stocks, and therefore supply and disappearance, may differ by one point from type figures previously published due to adding to totals for the class.

Table 2.- Flue-cured tobacco, Types 11-14: Acreage, production, stocks, supply, disappearance, ratio of supply to disappearance, and price, average 1928-37, annual 1934-39

Year	Acreage harvested	Production	Stocks July 1, farm-sales weight	Total supply July 1	Disappearance, year beginning July 1	Ratio of total supply to disappearance	Season average farm price per pound
	1,000 acres	Million pounds	Million pounds	Million pounds	Million pounds	Ratio	Cents
1928-37 10-yr.av.	928.0	704.8	765.7	1,470.5	675.1	2.2	17.5
1934	684.2	556.3	763.0	1,319.8	567.2	2.3	27.3
1935	774.0	811.2	752.6	1,563.8	692.5	2.3	20.0
1936	864.5	682.8	871.3	1,554.1	670.9	2.3	22.2
1937	989.5	866.3	883.2	1,749.5	795.0	2.2	23.0
1938	912.1	785.7	954.5	1,740.2	793.9	2.2	22.2
1939 1/	1,103.9	1,012.2	946.3	1,958.5	---	---	---

1/ Preliminary. Acreage estimate as of July 1 and production estimate as of October 1.

Table 3.- Fire-cured tobacco, Types 21-24: Acreage, production, stocks, supply, disappearance, ratio of supply to disappearance, and price, average 1928-37, annual 1934-39

Year	Acreage harvested	Production	Stocks Oct. 1, farm-sales weight	Total supply Oct. 1	Disappearance, year beginning Oct. 1	Ratio of total supply to disappearance	Season average farm price per pound
	1,000 acres	Million pounds	Million pounds	Million pounds	Million pounds	Ratio	Cents
1928-37 10-yr.av.	177.0	140.0	186.7	326.7	141.5	2.3	9.9
1934	152.0	1/126.4	200.0	326.4	102.5	3.2	10.8
1935	142.6	117.4	223.9	341.3	133.3	2.6	9.2
1936	126.7	99.7	208.0	307.7	137.0	2.2	12.3
1937	143.4	119.0	170.7	289.7	121.4	2.4	10.7
1938	114.5	84.3	168.3	252.6	2/113.6	2.2	3/ 8.2
1939	3/ 113.9	3/ 94.7	2/139.0	2/233.7	---	---	---

1/ Quantity marketed.
2/ Estimated.
3/ Preliminary. Acreage estimate as of July 1 and production estimate as of October 1.

Table 4.- Fire-cured tobacco: Acreage, production, stocks, supply, disappearance, and price, by types, average 1928-37, annual 1934-39

Year	Acreage harvested	Production	Stocks Oct. 1, farm-sales weight	Total supply Oct. 1	Disappearance, year beginning Oct. 1	Season average farm price per pound
	1,000 acres	Million pounds	Million pounds	Million pounds	Million pounds	Cents
			Virginia fire-cured, Type 21			
1928-37 10-yr. av.	28.5	21.2	38.6	59.8	24.0	10.2
1934	22.5	1/ 17.7	32.9	50.6	19.8	12.2
1935	23.5	20.5	30.8	51.3	20.0	10.2
1936	23.5	18.1	31.3	49.4	21.3	13.2
1937	25.4	20.1	28.1	48.2	18.5	10.7
1938	20.4	14.5	29.7	44.2	2/ 20.4	3/ 10.7
1939	3/ 21.4	3/ 17.7	2/ 23.8	2/ 41.5	---	---
			Kentucky and Tennessee fire-cured, Type 22			
1928-37 10-yr. av.	100.9	81.7	4/ 119.6	201.3	79.8	11.7
1934	88.5	1/ 75.4	130.2	205.6	57.0	11.3
1935	83.0	68.1	148.6	216.7	82.0	9.7
1936	70.0	56.4	134.7	191.1	80.9	13.4
1937	81.0	68.6	110.3	178.8	72.9	11.5
1938	64.0	46.1	105.9	152.0	2/ 63.8	3/ 8.0
1939	3/ 63.1	3/ 53.6	2/ 88.2	2/ 141.8	---	---
			Kentucky and Tennessee fire-cured, Type 23			
1928-37 10-yr. av.	41.3	32.1	4/ 31.3	63.4	31.4	7.8
1934	36.5	1/ 29.5	32.1	61.6	21.1	8.9
1935	32.5	25.8	40.5	66.3	27.8	7.4
1936	30.5	23.2	38.5	61.7	30.9	9.3
1937	34.5	28.2	30.8	59.0	27.4	8.9
1938	28.1	22.0	31.6	53.6	2/ 27.3	3/ 6.9
1939	3/ 27.4	3/ 21.8	2/ 26.3	2/ 48.1	---	---
			Henderson fire-cured, Type 24			
1928-37 10-yr. av.	6.3	5.0	3.4	8.4	5.4	7.5
1934	4.5	1/ 3.8	4.8	8.6	4.6	8.0
1935	3.6	3.0	4.0	7.0	3.5	6.4
1936	2.7	2.0	3.5	5.5	3.9	8.9
1937	2.5	2.1	1.6	3.7	2.6	7.2
1938	2.0	1.7	1.1	2.8	2/ 2.1	3/ 7.3
1939	3/ 2.0	3/ 1.6	2/ .7	2/ 2.3	---	---

1/ Quantity marketed.
2/ Estimated.
3/ Preliminary. Acreage estimate as of July 1 and production estimate as of October 1.
4/ 9-year average, 1929-37.

Table 5.- Burley tobacco, Type 31: Acreage, production, stocks, supply, disappearance, ratio of supply to disappearance, and price, average 1928-37, annual 1934-39

Year	Acreage harvested	Production	Stocks Oct. 1, farm-sales weight	Total supply Oct. 1	Disappearance, year beginning Oct. 1	Ratio of total supply to disappearance	Season average farm price per pound
	1,000 acres	Million pounds	Million pounds	Million pounds	Million pounds	Ratio	Cents
1928-37 10-yr.av.	396.3	315.7	600.3	916.0	290.9	3.1	19.1
1934	303.5	1/ 234.2	820.3	1,054.5	284.6	3.7	16.9
1935	278.9	220.9	769.9	990.8	309.1	3.2	19.1
1936	302.3	219.6	681.7	901.3	329.5	2.7	35.7
1937	443.9	402.4	571.8	974.2	313.5	3.1	20.1
1938	406.6	338.8	660.7	999.5	2/ 315.2	3.2	3/ 19.0
1939	3/ 407.3	3/ 354.2	2/ 603.3	2/ 1,037.5	---	---	---

1/ Quantity marketed.
2/ Estimated.
3/ Preliminary. Acreage estimate as of July 1 and production estimate as of October 1.

Table 6.- Maryland tobacco, Type 32: Acreage, production, stocks, supply, disappearance, ratio of supply to disappearance, and price, average 1928-37, annual 1934-39

Year	Acreage harvested	Production	Stocks Jan. 1, farm-sales weight 1/	Total supply Jan. 1 1/	Disappearance, year beginning Jan. 1 1/	Ratio of total supply to disappearance	Season average farm price per pound
	1,000 acres	Million pounds	Million pounds	Million pounds	Million pounds	Ratio	Cents
1928-37 10-yr.av.	35.7	25.2	30.2	55.4	23.5	2.4	21.1
1934	36.4	26.2	36.0	62.2	23.6	2.6	17.5
1935	37.0	28.7	38.6	67.3	28.8	2.3	20.0
1936	37.5	30.8	38.5	69.3	28.2	2.5	25.4
1937	35.0	22.8	41.1	63.9	26.2	2.4	17.2
1938	37.5	29.2	37.7	66.9	2/ 27.6	2.4	3/ 20.0
1939	3/ 37.9	3/ 29.6	2/ 39.3	2/ 68.9	---	---	---

1/ Stocks as of January 1 of year following production; disappearance beginning January 1 of year following production.
2/ Estimated.
3/ Preliminary. Acreage estimate as of July 1 and production estimate as of October 1.

Table 7.- Dark air-cured tobacco, Types 35-37: Acreage, production, stocks, supply, disappearance, ratio of supply to disappearance, and price, average 1928-37, annual 1934-39

Year	Acreage harvested	Production	Stocks Oct. 1, farm-sales weight	Total supply Oct. 1	Disappearance, year beginning Oct. 1	Ratio of total supply to disappearance	Season average farm price per pound
	1,000 acres	Million pounds	Million pounds	Million pounds	Million pounds	Ratio	Cents
1928-37							
10-yr. av.	55.0	44.5	69.0	113.5	46.7	2.4	8.4
1934	45.6	1/38.3	73.3	111.6	41.9	2.7	7.6
1935	36.7	31.0	69.7	100.7	38.5	2.6	8.0
1936	34.1	24.6	62.2	86.8	38.6	2.2	15.3
1937	52.9	47.4	48.2	95.6	35.2	2.7	8.1
1938	40.6	32.8	60.4	93.2	2/37.8	2.5	3/ 8.0
1939	3/42.8	3/36.4	2/55.4	2/91.8	----	---	---

1/ Quantity marketed.
2/ Estimated.
3/ Preliminary. Acreage estimate as of July 1 and production estimate as of October 1.

Table 8.- Dark air-cured tobacco: Acreage, production, stocks, supply, disappearance, and price, by types, average 1928-37, annual 1934-39

Year	Acreage harvested	Production	Stocks Oct. 1, farm-sales weight	Total supply Oct. 1	Disappearance, year beginning Oct. 1	Season average farm price per pound
	1,000 acres	Million pounds	Million pounds	Million pounds	Million pounds	Cents
			One Sucker, Type 35			
1928-37 10-yr. av.	24.8	20.2	30.7	50.9	19.8	8.4
1934	21.2	1/ 18.1	34.8	52.9	20.2	6.9
1935	15.6	13.0	32.7	45.7	16.9	8.2
1936	14.8	10.8	28.8	39.6	15.8	16.3
1937	27.1	24.6	23.8	48.4	14.8	7.4
1938	20.8	15.8	33.6	49.4	2/ 19.8	3/ 5.9
1939	3/ 21.8	3/ 18.5	2/ 29.6	2/ 48.1	---	---
			Green River, Type 36			
1928-37 10-yr. av.	26.0	21.3	34.2	55.5	23.5	8.4
1934	21.0	1/ 17.5	35.9	53.4	19.1	8.1
1935	18.0	15.2	34.3	49.5	18.8	7.3
1936	16.0	11.2	30.7	41.9	19.9	14.4
1937	22.0	19.8	22.0	41.8	18.2	9.0
1938	17.0	14.8	23.6	38.4	2/ 15.6	3/ 9.6
1939	3/ 18.0	3/ 15.3	2/ 22.8	2/ 38.1	---	---
			Virginia sun-cured, Type 37			
1928-37 10-yr. av.	4.2	3.0	4.1	7.1	3.4	9.6
1934	3.4	2.7	2.6	5.3	2.6	9.7
1935	3.1	2.8	2.7	5.5	2.8	11.0
1936	3.3	2.6	2.7	5.3	2.9	15.1
1937	3.8	3.0	2.4	5.4	2.2	8.9
1938	2.8	2.2	3.2	5.4	2/ 2.4	3/ 12.7
1939	3/ 3.0	3/ 2.6	2/ 3.0	2/ 5.6	---	---

1/ Quantity marketed.
2/ Estimated.
3/ Preliminary. Acreage estimate as of July 1 and production estimate as of October 1.

Table 9.- Cigar tobacco, all types: Acreage, production, stocks, supply, disappearance, ratio of supply to disappearance, and price, average 1928-37, annual 1934-39

Year	Acreage harvested	Production	Stocks Oct. 1, farm-sales weight 1/	Total supply Oct. 1	Disappearance, year beginning Oct. 1	Ratio of total supply to disappearance	Season average farm price per pound
	1,000 acres	Million pounds	Million pounds	Million pounds	Million pounds	Ratio	Cents
1928-37							
10-yr. av.....	107.6	129.4	357.7	487.1	131.5	3.7	15.7
1934.....	56.8	73.2	394.2	467.4	102.1	4.6	16.8
1935.....	67.9	87.9	365.3	453.2	120.3	3.7	17.0
1936.....	73.2	97.9	332.4	430.3	119.0	3.6	19.4
1937.....	85.9	105.0	311.3	416.3	108.8	3.8	18.1
1938.....	91.5	2/ 107.6	307.5	415.1	3/ 137.1	3.0	4/ 16.1
1939.....	4/ 96.7	4/ 127.1	3/ 278.0	3/ 405.1	---	---	---

1/ Stocks held on farms not included.
2/ Production includes an estimated storm loss of 5,955,000 pounds.
3/ Estimated.
4/ Preliminary. Acreage estimate as of July 1 and production estimate as of October 1.

Table 10.- Cigar filler tobacco, Types 41-45: Acreage, production, stocks, supply, disappearance, and price, by types, average 1928-37, annual 1934-39

Year	Acreage harvested	Production	Stocks Oct. 1, farm-sales weight 1/	Total supply Oct. 1	Disappearance, year beginning Oct. 1	Season average farm price per pound
	Total cigar filler, Types 41-45					
	1,000 acres	Million pounds	Million pounds	Million pounds	Million pounds	Cents
1928-37 10-yr. av.	53.7	58.8	2/ 162.2	221.0	2/ 58.7	9.2
1934	31.8	38.1	169.7	207.8	39.4	9.0
1935	37.8	46.8	168.4	215.2	50.6	9.7
1936	37.8	47.3	164.6	211.9	50.8	11.0
1937	40.1	45.0	161.1	206.1	49.2	9.9
1938	38.8	45.6	156.9	202.5	3/ 52.2	4/ 12.3
1939	4/ 44.1	4/ 53.1	3/ 150.3	3/ 203.4	--	--
	Pennsylvania Seedleaf, Type 41					
1928-37 10-yr. av.	30.7	37.5	102.0	139.5	36.7	9.2
1934	17.7	21.2	104.0	125.2	25.3	9.3
1935	20.5	28.2	99.9	128.1	25.9	11.0
1936	23.0	33.3	102.2	135.5	28.1	11.5
1937	23.5	28.7	107.4	136.1	30.8	10.4
1938	24.0	31.8	105.3	137.1	3/ 33.8	4/ 13.6
1939	4/ 26.9	4/ 35.0	3/ 103.3	3/ 138.3	--	--
	Miami Valley, Types 42-44					
1928-37 10-yr. av.	22.0	20.3	57.5	77.8	21.0	9.1
1934	13.6	16.3	63.4	79.7	13.9	8.6
1935	16.2	17.4	65.8	83.2	23.0	7.2
1936	14.0	13.2	60.2	73.4	21.7	9.5
1937	15.5	15.1	51.7	66.8	18.8	8.8
1938	13.6	12.3	48.0	60.3	3/ 16.6	4/ 8.8
1939	4/ 15.6	4/ 16.4	3/ 43.7	3/ 60.1	--	--
	Georgia and Florida sun-grown, Type 45					
1928-37 10-yr. av.	1.0	1.0	5/ 2.7	3.7	6/ 1.0	14.8
1934	.5	.6	2.3	2.9	.2	12.0
1935	1.1	1.2	2.7	3.9	1.7	13.5
1936	.8	.8	2.2	3.0	7/	13.5
1937	1.1	1.2	7/ 2.0	3.2	7/	13.5
1938	1.2	1.5	3.6	5.1	3/ 1.8	4/ 13.5
1939	4/ 1.6	4/ 1.7	3/ 3.3	3/ 5.0	--	--

1/ Stocks held on farms not included. Data on farm stocks, which have considerable bearing on disappearance in the case of some types of cigar leaf, are not available. 2/ Includes 9-year average, 1929-37, for Type 45. 3/ Estimated. 4/ Preliminary. Acreage estimates as of July 1 and production estimates as of October 1. 5/ 8-year average, 1929-36. 6/ 7-year average 1929-35. 7/ The 1937 stocks appear to be out of line and are subject to revision. For this reason the 1936 and 1937 disappearance can not be made comparable.

Table 11.- Cigar binder tobacco, Types 51-55: Acreage, production, stocks, supply, disappearance, and price, by types, average 1928-37, annual 1934-39

Year	Acreage harvested	Production	Stocks Oct. 1 farm-sales weight 1/	Total supply Oct. 1	Disappearance, year beginning Oct. 1	Season average farm price per pound
	Total cigar binder, Types 51-55					
	1,000 acres	Million pounds	Million pounds	Million pounds	Million pounds	Cents
1928-37 10-yr. av.	44.8	61.4	180.3	241.7	63.7	14.0
1934	18.0	27.8	209.7	237.5	54.1	12.1
1935	22.1	33.3	183.4	216.7	59.9	12.8
1936	26.4	41.2	156.8	198.0	60.6	14.7
1937	35.8	51.5	137.4	188.9	50.9	13.4
1938	42.2	2/53.0	138.0	191.0	3/74.2	4/ 9.6
1939	4/41.7	4/62.5	3/116.8	3/179.3	---	---
	Connecticut Valley Broadleaf, Type 51					
1928-37 10-yr. av.	9.1	14.0	35.3	49.3	14.0	18.4
1934	5.3	9.0	39.8	48.8	13.3	17.0
1935	6.3	10.7	35.5	46.2	12.0	18.5
1936	7.5	12.8	34.2	47.0	14.0	20.5
1937	8.9	13.7	33.0	46.7	11.9	15.5
1938	8.1	2/9.1	34.8	43.9	3/15.7	4/15.5
1939	4/ 8.1	4/13.8	3/28.2	3/42.0	---	---
	Connecticut Valley Havana Seed, Type 52					
1928-37 10-yr. av.	8.6	12.9	34.7	47.6	14.4	17.6
1934	3.6	5.9	37.8	43.7	12.9	15.6
1935	4.1	6.7	30.8	37.5	11.4	17.4
1936	4.9	8.3	26.1	34.4	10.7	17.9
1937	7.0	10.8	23.7	34.5	8.6	16.4
1938	7.3	2/ 8.4	25.9	34.3	3/12.0	4/14.8
1939	4/7.7	4/13.2	3/22.3	3/35.5	---	---
	New York and Pennsylvania Havana Seed, Type 53					
1928-37 10-yr. av.	1.2	1.4	2.9	4.3	1.5	10.3
1934	.3	.4	3.1	3.5	1.5	8.2
1935	.5	.7	2.0	2.7	.7	10.3
1936	.8	1.1	2.0	3.1	1.0	10.6
1937	1.1	1.5	2.1	3.6	1.5	10.1
1938	1.4	2.0	2.1	4.1	3/1.5	4/10.5
1939	4/ 1.7	4/2.1	3/2.6	3/4.7	---	---

Continued -

Table 11.- Cigar binder tobacco, Types 51-55: Acreage, production, stocks, supply, disappearance, and price, by types, average 1928-37, annual 1934-39 - Cont'd.

Year	Acreage harvested	Production	Stocks Oct. 1 farm-sales weight 1/	Total supply Oct. 1	Disappearance, year beginning Oct. 1	Season average farm price per pound
	1,000 acres	Million pounds	Million pounds	Million pounds	Million pounds	Cents
Southern Wisconsin, Type 54						
1928-37						
10-yr.av.	15.2	19.7	5/ 67.6	87.5	5/ 20.0	8.4
1934	5.2	7.2	81.3	88.5	14.9	6.0
1935	6.0	8.4	73.6	82.0	20.6	6.6
1936	7.2	11.0	61.4	72.4	21.7	8.0
1937	11.0	14.5	50.7	65.2	19.7	10.5
1938	15.0	20.1	45.5	65.6	3/ 27.1	4/ 7.0
1939	4/ 14.0	4/ 18.9	3/ 38.5	3/ 57.4	--	--
Northern Wisconsin, Type 55						
1928-37						
10-yr.av.	10.7	13.2	5/ 42.7	55.7	5/ 13.7	9.7
1934	3.6	5.3	47.7	53.0	11.5	8.4
1935	5.2	6.8	41.5	48.3	15.2	7.1
1936	6.0	8.0	33.1	41.1	13.2	12.0
1937	7.8	11.0	27.9	38.9	9.2	12.3
1938	10.4	13.4	29.7	43.1	3/ 17.9	4/ 8.2
1939	4/ 10.2	4/ 14.5	3/ 25.2	3/ 39.7	--	--

1/ Stocks held on farms not included. Data on farm stocks, which have considerable bearing on disappearance in the case of some types of cigar leaf, are not available. Present farm stocks of Type 54 are known to be large.

2/ Production shown here includes an estimated storm loss for Type 51 of 3,820,000 pounds and for Type 52 of 1,547,000 pounds.

3/ Estimated.

4/ Preliminary acreage estimate as of July 1 and production estimate as of October 1.

5/ 9-year average, 1929-37.

Table 12.- Cigar wrapper tobacco, Types 61-62: Acreage, production, stocks, supply, disappearance, and price, by types, average 1928-37, annual 1934-39.

Year	Acreage harvested	Production	Stocks Oct.1 farm-sales weight 1/	Total supply Oct.1	Disappearance, year beginning Oct.1	Season average farm price per pound
	1,000 acres	Million pounds	Million pounds	Million pounds	Million pounds	Cents
			Total cigar wrapper, Types 61-62			
1928-37 2/						
10 yr.av.	9.1	9.2	15.2	24.4	9.1	69.8
1934	7.0	7.3	14.8	22.1	8.6	75.1
1935	8.0	7.8	13.5	21.3	10.3	79.7
1936	9.0	9.4	11.0	20.4	7.6	82.6
1937	10.0	8.5	12.8	21.3	8.7	89.4
1938	10.5	3/ 9.0	12.6	21.6	4/10.7	5/72.9
1939	5/10.9	5/11.5	4/ 10.9	4/ 22.4	---	---
			Connecticut Valley shade-grown, Type 61			
1928-37						
10-yr.av.	6.3	6.3	9.7	16.0	6.5	77.8
1934	5.0	5.5	10.0	15.5	6.8	80.0
1935	5.7	5.7	8.7	14.4	7.6	85.0
1936	6.4	6.7	6.8	13.5	6.6	88.0
1937	7.2	6.0	6.9	12.9	6.4	98.0
1938	7.3	3/ 5.4	6.5	11.9	4/ 7.3	5/75.0
1939	5/7.7	5/ 8.3	4/ 4.6	4/12.9	---	---
			Georgia and Florida shade-grown, Type 62			
1928-37						
10 yr.av.	2.7	2.8	6/ 5.5	8.3	6/ 2.6	53.0
1934	2.0	1.8	4.8	6.6	1.8	60.0
1935	2.3	2.1	4.8	6.9	2.7	65.0
1936	2.6	2.7	4.2	6.9	1.0	69.0
1937	2.8	2.5	5.9	8.4	2.3	69.0
1938	3.2	3.6	6.1	9.7	4/ 3.4	5/ 70.0
1939	5/ 3.2	5/ 3.2	4/ 6.3	4/ 9.5	---	---

1/ Stocks held on farms not included. Date on farm stocks, which have a considerable bearing on disappearance in the case of some types of cigar leaf, are not available.

2/ Acreage, production, and price include Type 65 for the years 1928-29. Stocks and disappearance include a 9-year average, 1929-37, for Type 62.

3/ Production shown here for Type 61 includes an estimated storm loss of 588,000 pounds.

4/ Estimated.

5/ Preliminary. Acreage estimate as of July 1 and production estimate as of October 1.

6/ 9-year average, 1929-37.

Table 13.- United States exports of tobacco to principal importing countries, by types, average 1928-37, annual 1934-38 1/

FLUE-CURED, TYPES 11-14

Country to which exported	10-year average 1928-37	1934	1935	1936	1937 2/	1938 2/
	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.
United Kingdom	176,122	152,389	226,631	170,478	237,459	228,310
China 3/	78,068	28,976	24,039	43,096	40,162	53,854
Australia	16,171	14,818	18,120	19,407	18,014	20,805
Germany	6,835	1,102	6,619	2,726	4,641	4,972
Netherlands	7,799	3,604	7,107	9,017	7,928	6,202
Japan	8,088	9,370	6,702	9,909	1,718	0
Canada	8,497	7,817	4,143	3,748	3,679	2,806
British India	3,000	1,659	2,299	2,901	2,968	3,623
Belgium	3,343	1,878	2,365	4,809	5,557	3,267
Other countries	31,415	22,361	24,767	36,549	39,793	38,662
Total	339,388	244,474	322,792	302,640	361,919	362,501
	VIRGINIA FIRE-CURED, TYPE 21					
United Kingdom	1,566	1,620	1,382	1,603	1,657	1,238
Australia	565	42	60	649	217	213
Germany	1,582	1,293	1,213	993	962	1,002
Netherlands	889	445	297	315	227	1,013
China	44	10	125	6	0	0
Norway	1,704	1,539	1,870	2,090	1,667	2,953
Canada	115	114	176	101	37	27
Sweden	980	1,169	1,537	1,161	546	739
Denmark	262	250	150	75	290	128
Belgium	947	906	421	425	129	212
Portugal	402	600	258	267	462	218
France	266	56	20	34	46	846
Other countries	3,223	2,237	2,387	1,773	1,511	1,506
Total	12,545	10,281	9,896	9,492	7,751	10,095
	KENTUCKY AND TENNESSEE FIRE-CURED, TYPES 22, 23, and 24					
France	21,838	17,515	18,915	18,986	18,452	17,733
Spain	5,848	12,222	7,844	0	0	981
Belgium	6,716	5,502	4,606	6,587	3,414	4,224
Italy	1,335	574	101	780	695	229
Netherlands	5,986	2,114	2,296	6,227	6,721	5,873
Germany	6,162	7,015	3,570	2,272	2,307	1,668
United Kingdom	4,323	3,470	2,842	3,278	2,516	1,626
Argentina	1,125	141	85	124	91	293
Switzerland	1,847	1,548	1,520	2,176	1,994	3,327
Other countries	13,062	10,164	11,087	9,963	10,809	10,466
Total	68,242	60,265	52,866	50,393	46,989	46,420

Continued -

Table 13.- United States exports of tobacco to principal importing countries, by types, average 1928-37, annual 1934-38 1/ Continued

BURLEY, TYPE 31

Country to which exported	10-year average 1928-37.	1934	1935	1936	1937 2/	1938 2/
	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.
Belgium	3,295	3,554	2,293	2,928	2,089	1,404
Portugal	2,140	2,659	2,111	2,021	2,815	2,307
United Kingdom	288	159	219	182	406	343
Netherlands	831	1,165	586	676	1,066	1,415
Germany	410	550	399	426	422	572
Newfoundland and Labrador	279	282	265	390	419	391
Australia	497	521	314	1,289	469	265
Other countries	2,566	3,140	2,741	3,275	3,403	4,525
Total	10,306	12,030	8,928	11,187	11,089	11,222
	MARYLAND, TYPE 32 (including eastern Ohio)					
France	2,476	162	556	880	746	633
Netherlands	2,095	3,267	1,623	2,434	2,030	648
Germany	305	280	398	243	78	86
Belgium	778	894	161	488	774	327
Italy	146	109	85	0	2	7
Switzerland	1,544	1,684	1,174	1,067	1,290	1,997
Other countries	892	707	693	988	401	811
Total	8,236	7,103	4,690	6,100	5,321	4,509

1/ This table has been prepared on a crop-year basis as follows: Flue-cured, July-June; Maryland, beginning January 1 of year following production (i.e., 4,509,000 pounds are exports beginning January 1938 and are of the 1937 crop); other types, October-September. These figures do not include a small amount of several types shipped to Puerto Rico; no shipments of leaf tobacco were made to Alaska or Hawaii.

2/ Preliminary.

3/ Includes Hong Kong and Kwantung.

Compiled from Monthly Summary of Foreign Commerce of the United States and official records of the Bureau of Foreign and Domestic Commerce.

Table 14.- United States exports of tobacco by types, average 1928-37, annual 1934-38 1/

Type	10-year average 1928-37	1934	1935	1936	1937 2/	1938 2/
	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds	Million pounds
Flue-cured	339.4	244.5	322.8	302.6	361.9	362.5
Virginia fire-cured	12.6	10.3	9.9	9.5	7.8	10.1
Kentucky and Tennessee fire-cured	63.2	60.3	52.9	50.4	47.0	46.4
Burley	10.3	12.0	8.9	11.2	11.1	11.2
Maryland 3/	8.2	7.1	4.7	6.1	5.3	4.5
One Sucker	1.4	1.1	.8	.5	.2	1.8
Green River	4.6	3.4	3.7	2.2	3.7	2.2
Cigar leaf	2.0	1.2	.7	.7	1.3	3.0
Black fat, water baler and dark African	8.4	9.7	10.1	9.5	7.8	7.8
Perique	4/ .1	.1	.1	.1	.1	.2
Stems, trimmings, and scrap	17.7	16.2	17.5	20.5	14.8	28.4

1/ This table has been prepared on a crop-year basis as follows: Flue-cured, July-June; Maryland, beginning January 1 of the year following production (i.e., 4,500,000 pounds are exports beginning January 1938 and are of the 1937 crop); other types, October-September.
2/ Preliminary.
3/ Includes eastern Ohio, Type 71.
4/ 8-year average.

Compiled from Monthly Summary of Foreign Commerce of the United States and official records of the Bureau of Foreign and Domestic Commerce.

Table 15.- Withdrawals of small cigarettes and large cigars, and production of smoking and scrap chewing tobacco, average 1928-37, annual 1934-39 1/

Calendar year	Small cigarettes		Smoking tobacco		Large cigars		Scrap chewing	
	Number	Change from preceding period	Quantity	Change from preceding period	Number	Change from preceding period	Quantity	Change from preceding period
	Billions	Percent	1,000 lb.	Percent	Millions	Percent	1,000 lb.	Percent
1928-37								
10-yr. av	124.9		2/188,901		5,556.8		2/33,574	
1934	125.6	+12.4	193,075	+0.7	4,868.1	+6.0	44,786	+0.1
1935	134.6	+ 7.2	191,750	-0.7	5,031.3	+3.4	44,007	-1.7
1936	153.2	+13.8	194,007	+1.2	5,394.0	+7.2	45,342	+3.0
1937	162.6	+ 6.1	187,774	-3.2	5,534.1	+2.6	45,559	+0.5
1938 3/	163.8	+ 0.7	198,930	+5.9	5,325.7	-3.8	44,471	-2.4
1st 9 mos.								
1938 3/	124.3	+ 0.8 4/	111,402	+1.6	3,907.2	-5.5	4/26,260	-1.2
1939 3/	129.8	+ 4.4 4/	113,845	+2.2	4,073.5	+4.3	4/23,239	-11.5

Compiled from reports of the Bureau of Internal Revenue.
1/ Including tax-paid withdrawals from Puerto Rico and the Philippines.
2/ Prior to 1931, production of smoking and scrap chewing tobacco was not published separately; 7-year average, 1931-37.
3/ Preliminary.
4/ 1st 7 months.

Table 16.- Production of plug, twist, and fine-cut chewing tobacco, and withdrawals of snuff, average 1928-37, annual 1934-39

Calendar year	Plug		Twist		Fine-cut		Snuff	
	Quantity	Change from preceding period	Quantity	Change from preceding period	Quantity	Change from preceding period	Quantity	Change from preceding period
	1,000 lb.	Percent	1,000 lb.	Percent	1,000 lb.	Percent	1,000 lb.	Percent
1928-37								
10-yr. av	72,447		6,487		4,420		38,136	
1934	62,760	+2.3	5,080	+0.8	2,970	-4.8	37,165	+2.3
1935	60,588	-3.5	5,604	+10.3	4,683	+57.7	36,077	-2.9
1936	59,165	-2.3	6,372	+13.7	5,068	+ 8.2	38,100	+5.6
1937	58,331	-1.4	6,774	+ 6.3	4,999	- 1.4	36,934	-3.1
1938 1/	54,911	-5.9	5,256	-22.4	4,668	- 6.6	37,334	+1.1
1st 7 mos.								
1938 1/	31,648	-3.3	[illegible]	-24.9	2,753	-16.3	2/27,414	+1.6
1939 1/	29,862	-5.6	[illegible]	+ 7.5	2,695	- 2.1	2/28,544	+3.4

Compiled from reports of the Bureau of Internal Revenue.
1/ Preliminary.
2/ 1st 9 months.

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FEED CROPS AND LIVESTOCK OUTLOOK FOR 1940

Summary

Supplies of both forage crops and feed grains in the United States are again above average and, except in limited areas, are more than ample to meet livestock requirements. But excluding the quantity of corn now under seal because of Government loans, the remaining supply is only about average in total quantity and in pounds per unit of livestock to be fed.

No material increase in the acreage of feed grains over the low acreage of the last 3 years is expected, and growing conditions about equal to the average during either the last 3 years or the last 50 years would result in a production about equal to the tonnage produced in 1939. Conditions about the same as the average for 1930-39 would reduce production somewhere between 10 and 15 percent below the production of this year.

Livestock numbers are expected to show an increase of about 7 percent during 1939 and some further increases in 1940. Present livestock, even if fed at rates slightly lower than prevailed in pre-drought years, would consume as much feed grain as was produced this year, and the total stocks of feed grain next July may possibly be reduced slightly below the very large holdings of last summer. Unless grain yields per acre are unusually high, it seems probable that supplies of feed grain per animal unit will be somewhat further reduced next season, and the livestock-feed price ratio is not expected to be so favorable for livestock producers as it has been for the past 2 years.

The total supply of high-protein feeds this season will probably be above that of last year and much above average. The supply of other byproduct feeds this season is expected to be about the same as that of last season.

Feed-grain prices during the winter and spring months are expected to average a little higher than a year earlier, but conditions which would cause a substantial advance from present levels are not expected.

Exports of feed grain are expected to be relatively small in 1940. Exports of livestock products are expected to show some increase in 1940, but are not likely to be large enough to have any material effect on the livestock situation in this country. Some improvement in the situation for feed-grain producers is probable, however, as an indirect result of the expected increase in the incomes of domestic consumers, for such an increase would improve the domestic demand for livestock products and increase the prices that livestock feeders could pay for grain.

There appears to be a general tendency for farmers to increase production of hay along with increases in feeding requirements. The 1939 hay supply per animal is large, but with requirements increased by poor pastures the carry-over next spring is not expected to be above the average during the pre-drought years, 1923-32. Due to local drought conditions in 1939, present supplies of both hay and feed grain are unevenly distributed among the States, and there are wide regional differences in present prices and in prospective carry-overs.

Outlook for Feed-Grain Acreage and Supplies

The total acreage of feed grains in the commercial corn-producing area will probably be no larger in 1940 than in 1939. The acreage of feed grains for next year is not expected to be influenced to any considerable extent by developments in Europe, since the European war is not expected to exert any material effect on the domestic feed-grain situation before the seeding of the 1940 crops. Present indications point to a reduction in the corn acreage allotment under the Agricultural Conservation Program, and it is possible that participation in the program may not be so great as in 1939, because of the smaller allotments and higher prices. But it is not probable that increases in the corn acreage on the farms of non-cooperators will offset the decreases in corn acreage on the farms of those who do participate.

The AAA acreage allotments of general soil-depleting crops, which include all feed grains except corn in the commercial corn area, are expected to remain about the same in 1940 as in 1939, and no material change in the total acreage of these crops is to be expected. The amount United States corn yields have been above the 1923-32 average in 1938 and 1939 may be accounted for largely by increased use of hybrid corn. If the 1940 growing season should be about the same as for that period, United States yields in 1940 will again be above the 1923-32 average.

The carry-overs of corn and barley at the beginning of the 1940-41 marketing years will probably be as large as the carry-overs this year, whereas the carry-over of oats will probably be considerably smaller. Assuming a 7-percent increase in livestock numbers during 1939, if the consumption of corn per animal unit should be about the same as during the last 2 years, the quantity of corn consumed domestically in 1939-40 would amount to about 2,500 million bushels. This, together with the probable exports, would give a total disappearance about equal to the 1939 production, and the carry-over would be practically unchanged. The rate of corn disappearance this year will be influenced to a large extent by the quantity of corn going under seal, by the level of corn-livestock price ratios, and by the smaller supplies of oats available for feeding.

Feed-Grain Supplies

Total feed-grain supplies now ample

Total October 1 supplies of feed grains, including sealed corn, amounted to about 108 million tons as compared with 104 million tons last year and 101 million tons for the period 1928-32. These supply figures include October 1 stocks of corn and oats, plus the 1939 production of corn, barley, and grain sorghums. When the October 1 supply as thus calculated is compared with the prospective number of livestock to be fed, the supply per animal unit is 4 percent smaller than the very large supply of last year, but 8 percent more than the average October 1 supply during 1928-32.

If from these supply calculations is deducted corn already sealed (for this is not likely to be used extensively for feeding until prices rise above the September 1939 level), the remaining supply is 101 million tons, or close to the pre-drought average, and the supply per animal unit is only slightly above this average.

It is expected that a considerable quantity of corn from the 1939 crop will be sealed, and that practically all the 1937 and 1938 corn sealed will be retained under seal or held by the Government. It, therefore, appears probable that, if the total quantity of corn sealed or held by the Government is deducted, the remaining supply of feed grains will be below the 1928-32 average - some preliminary estimates indicate by about 5 percent.

As farmers appear to have fed rather liberally in recent months and as they are expected to continue fairly liberal feeding during the remainder of the season, feed supplies, excluding corn now sealed, would be down to about average next July, even though no more corn were sealed.

Total supplies will be ample to meet the requirements of livestock in practically all parts of the Corn Belt east of the Missouri River, but will again be short in drought areas of the western Corn Belt. High yields of corn in the central and eastern Corn Belt and an unusually large carry-over are largely responsible for the difference between the present supply and the 1928-32 average. The total acreage of four feed grains planted in 1939 is estimated to have been 150.4 million acres, 10 percent below the 1923-32 average. The total production of all feed grains, as indicated on October 1, is 95 million tons compared with 97 million tons last year and 100 million tons during the period 1928-32.

Corn supplies nearly 200 million bushels larger than last year

The total supply of corn for 1939-40, including the October 1 indicated production of 2,532 million bushels and the estimate of 561 million bushels for the October 1 carry-over, is 3,093 million bushels, compared with 2,905 million bushels last year and 2,718 million bushels for the 1928-32 average.

Of the 1938 supply, about 257 million bushels were sealed for loans, leaving 2,647 million bushels unsealed. The total quantity of 1939 corn sealed may be nearly as large as the quantity of 1938 corn sealed. In this event, the total quantity of corn neither under seal nor held by the Government will be about the same as the total quantity of unsealed corn last year.

The domestic disappearance of corn in 1937-38 totaled 2,216 million bushels, and in 1938-39 2,310 million bushels, or 18.2 bushels per grain consuming animal unit in each year.

Acreages of corn hybrids continue to increase

The rapid increase in the use of hybrid corn in the Corn Belt has been an important factor in raising the yields of corn during recent years. In 1976 less than 5 percent of the corn acreage in Iowa, Indiana, and Illinois was planted to hybrid corn. This year more than three-fourths of the corn acreage in Iowa and over 60 percent of the corn acreage in Indiana and Illinois was planted to corn hybrids. Although further expansion in the acreages in these States may be moderate, other States may show a material increase as soon as suitable types are developed for use in those States. In Nebraska only 17 percent of the 1939 acreage was planted to hybrids, in South Dakota only 15 percent, and in Missouri only 26 percent.

Oats supplies below average

The 1939-40 supply of oats is now estimated to be 1,132 million bushels compared with 1,257 million bushels last year. This estimate includes the October 1 indicated crop of 941 million bushels and the estimated carry-over on July 1 of 191 million bushels. This indicated supply is 17 percent below the 1928-32 average, and is lower than the supply in any of the past 12 years with the exception of the drought years 1933, 1934, and 1936.

Barley and grain sorghum supplies

The 1939-40 barley supply, including the indicated production on October 1 and the June 1 carry-over, is 328 million bushels, which is the largest supply since 1928, and compares with a total supply of 289 million bushels last year. But yields were lower than in 1938, and the increased supply this year was due to a 2-million acre increase in the acreage seeded to barley and a 22-million bushel increase in the carry-over.

The supply of barley available for feeding this year will probably be larger than during the last 2 years. The 1937 supply of barley totaled about 248 million bushels, about 61 million bushels of which were used in the production of alcoholic beverages. Of the 1938 supply of 289 million bushels, about 57 million bushels were used for alcoholic beverages. As it does not appear probable that there will be any substantial increase in the quantity of barley used by these industries in 1939-40, practically all of the increase in the barley supply will be available for feeding.

The 1939 grain-sorghums crop was indicated on October 1 to be about 88 million bushels, or 13 percent below the production in 1938 and 1 million bushels above the 1928-37 average. The slightly above-average production this year was due to increased acreage, since the September 1 indicated yield of grain sorghums was only 10.0 bushels per acre compared with 12.9 bushels last year and 11.8 bushels for the 10-year average. Yields of grain sorghum were low this year in large parts of Kansas, Texas, and Colorado, where temperatures have been unusually high and rainfall has been much below average. There has been a marked expansion in the acreage planted to grain sorghums in the Western Corn Belt during the last few years. The drought-resistant qualities of the crop and the development of improved varieties are largely responsible for this increase.

Wheat and rye feeding reduced

The total quantity of wheat from the 1939 crop fed on the farms where produced is expected to be around one-fourth smaller than the 132 million bushels fed from the 1938 crop. The total supply of wheat this year is estimated at 993 million bushels compared with 1,084 million bushels last year. While wheat feeding was comparatively heavy during the summer, advances in prices of wheat relative to those of other grains since August have probably curtailed feeding.

The quantity of rye fed from the 1939 crop is expected to be about one-fourth smaller than the quantity from the 1938 crop, which is now estimated to have been 19.5 million bushels. Prices for rye in August were again below prices for corn in the Western States and in all North Central States except Missouri, but the margin in both of these areas was somewhat smaller than in August last year.

Feedstuffs supplies larger

An increase in the 1939-40 supply of commercial feeds over that of the previous season was indicated on the first of October. The principal increases were in linseed and soybean meals. Supplies of wheat millfeeds probably will not be greatly different from those of a year ago and supplies of cottonseed cake and meal may be slightly smaller.

High-protein feeds

Supplies of oilseed cakes and meals, based on crop prospects October 1, will be considerably larger in 1939-40 than 1938-39. A 1939 flax crop more than double that of a year earlier will provide a domestic supply of around 360,000 tons of linseed cake and meal against about 205,000 tons available for domestic use in 1938-39. Production of soybean meal is expected to reach a new high record of around 1,500,000 tons, if farmers harvest the quantity of soybeans indicated on October 1, and if as large a percentage is crushed as in 1938-39. Production of soybeans has increased steadily during recent years in the North Central States, and the output of meal has increased from about 225,000 tons in 1934-35 to around 1 million tons in 1938-39.

Supplies of cottonseed cake and meal for 1939-40 will probably be slightly below those of 1938-39, since the cotton crop will apparently be about the same as last year and the carry-over of cottonseed cake and meal is much smaller. Relatively high prices for cottonseed may slightly increase the percentage crushed. Exports and imports are likely to continue negligible, since foreign markets are disrupted by the European War. Little change is indicated in the production of peanut meal, as a diversion program similar to that of 1938-39 has been announced. Production of peanut cake and meal in 1938-39 totaled about 75,000 tons, and imports a little over 5,000 tons.

Oilseed cake and meal supplies available for domestic use, 1926-27 to 1939-40

Year	Cottonseed 1/	Soybean 2/	Linseed 3/	Other 4/	Total
	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons
1926-27	2,000	32	462	94	2,588
1927-28	1,577	61	530	114	2,282
1928-29	1,771	91	478	102	2,442
1929-30	1,833	112	396	142	2,533
1930-31	1,780	122	370	115	2,387
1931-32	1,712	132	222	66	2,132
1932-33	1,625	113	220	84	2,042
1933-34	1,648	99	161	123	2,031
1934-35	1,462	237	222	209	2,130
1935-36	1,680	620	286	183	2,769
1936-37	1,933	548	303	223	3,007
1937-38	2,288	732	206	109	3,335
1938-39	1,985	1,042	246	182	3,455
1939-40 5/	1,920	1,300	360	150	3,730

1/ Total stocks August 1 plus production and imports, minus exports and quantity used for fertilizer.
2/ October-September, production plus imports during period October 1926 - December 1938; production plus imports minus exports during period January 1939 to date.
3/ October-September, production plus imports, minus exports.
4/ Includes production of copra, peanut, sesame, hempseed, and babassu cakes and meals, plus imports, minus exports of these cakes and meals. Prior to January 1, 1939 exports of soybean cake and meal were included with other cakes and meals.
5/ Estimated October 1939.

Other byproduct feeds

Supplies of wheat feeds for the 1939-40 season may approximate those of 1938-39. The United States production of wheat millfeeds during 1938-39 was 4,485,000 tons, the largest since 1931-32. Imports increased to 157,000 tons, and in addition 87,000 tons were withdrawn from bonded mills, making a total importation of 244,000 tons. Exports were negligible at only 26,000 tons. On the basis of these data, supplies of wheat offal available for domestic consumption in 1938-39 were 4,703,000 tons against 4,464,000 tons in 1937-38.

Supplies of other byproduct feeds will also probably be slightly above those of last season. Some improvement in the demand for the main products of the wet-process corn-grinding industry is expected to give a somewhat larger supply of gluten feed and meal for the 1939-40 season than was available in 1938-39, when production totaled approximately 610,000 tons. No data are available on the production of hominy feed, but if the domestic demand for food products continues to improve, hominy feed may be more plentiful in 1939-40 than in 1938-39. About 250,000 tons would appear to be the probable production of brewers' and distillers' grains in 1939-40, since about that quantity was produced in 1938-39, and there are at present no indications of any material change in the production of these industries. Increased slaughterings of livestock, particularly hogs, should result in larger supplies of tankage and meat scraps, which were relatively scarce and high-priced during 1938-39. Based upon the October 1 estimate of sugar-beet production, supplies of beet pulp in 1939-40 may be slightly smaller than in 1938-39.

Supplies of indicated byproduct feeds available for domestic use, 1929-39 1/

Year beginning July	Wheat mill-feeds	Gluten feed and meal	Distillers' and brewers' dried grains	Dried beet pulp	Rice mill-feeds
	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons
1929	5,008	671		211	
1930	5,105	568		285	
1931	4,533	512		196	2/ 90
1932	4,453	575		263	2/ 90
1933	4,165	575		182	85
1934	4,412	494		245	92
1935	4,578	565	3/ 315	226	86
1936	4,899	618	368	295	105
1937	4,464	539	265	244	120
1938	4,703	608	252	280	120
1939 4/	4,750	650	250	260	120

1/ Production and net imports of wheat millfeeds and beet pulp.
2/ Partly estimated for 1931-32 and 1932-33.
3/ Data first available for 1935-36.
4/ Estimated.

Hay and Pastures

Pastures in 1939 have not furnished so much feed as in 1938, and the hay crop is about 7 percent smaller than was harvested in 1938, but is 8 percent larger than the 10-year (1928-37) average. The carry-over of hay from the exceptionally large 1938 crop was the second largest in the 30 years for which records are available. The supply of hay per hay-consuming animal unit expected to be on farms next January 1 is the second largest since 1928, being exceeded only by the supply available a year ago. However, the condition of fall pastures was much below average on October 1, and feeding started early and farm stocks of hay next May are expected to be down to about the usual average in pre-drought years unless the winter is unusually mild.

The large supplies of hay, together with the rather small numbers of hay-consuming livestock on farms since 1936, have made hay very cheap compared with livestock. With encouragement for the expansion of the acreage of crops that may be used for hay, pasture, or soil improvement crops, there is no reason to expect a reversal in these price relationships in 1940.

Because of inadequate rainfall, the 1939 yields per acre of both tame and wild hay are generally below the 10-year average in the East as far south as the Potomac River, in most States west of the Rocky Mountains, and in much of the western Great Plains area between Wyoming and western Nebraska and the Mexican border. On the other hand, yields of tame hay are generally above average in a broad belt extending from Canada to the Gulf of Mexico, between the Great Plains and the Appalachian Mountains. The relatively high yields in this central area are partly the result of fairly good growing conditions this year and partly due to a continuation of the shift in recent years to a greater proportion of the higher yielding kinds of hay.

Supplies of practically all kinds of grass and clover seeds are ample for the usual seeding requirements in 1940.

Livestock Numbers and Feed Requirements

The acute feed shortage resulting from the droughts of 1934 and 1936 caused prices of feed grains to be high in relation to prices of livestock and livestock products, and livestock numbers consequently were sharply reduced. As feed-grain production increased in 1937 and 1938, however, grain prices declined sharply. Livestock prices also declined, but not so much as did prices of feed grains. This resulted in a more favorable situation for livestock feeders from the standpoint of feed costs, and stimulated increased livestock production, especially of hogs. Hog numbers increased sharply in 1938 and 1939 and cattle numbers also increased to some extent.

The number of feed-grain consuming animal units (including poultry) on farms January 1, 1940, is expected to be between 136 and 137 million. This number compares with 127.0 million on January 1, 1939, 121.6 million on January 1, 1938, 144.4 million on January 1, 1933, and a 10-year (1923-32) average of 138.5 million. The greater part of the increase during 1939 has been in hogs, but there will be a substantial increase in all cattle and chickens and a small increase in sheep. Numbers of work stocks, however, are expected to show a further reduction.

With supplies of feed grains (either including or excluding sealed corn) smaller in relation to animal units than comparable supplies last year, the ratio of livestock prices to feed prices is expected to be less favorable in 1939-40 than in 1938-39. This will tend to prevent such a large increase in livestock production in 1940 as took place in 1939. The pig crop of 1940 is expected to be slightly larger than the crop of 1939, and cattle numbers probably will increase at least as much as they have this year. Sheep numbers may also increase slightly, but numbers of work stock will continue their decline.

Changes in the livestock and feed-grain situation during the next year or two cannot be clearly foreseen at this time, because they will be determined in a large part by crop yields, war developments, changes in the price level, and policies followed with respect to accumulating or disposing of reserves of corn on farms. If feed-grain crops in 1940 in the Western Corn Belt should be average or better, there will be a tendency to increase hog production in that area, and thus bring about an adjustment towards the distribution that prevailed in the 1928-32 period. This would also result in some further increase in 1941 in hog production for the country as a whole, as any decrease that might occur in the Eastern Corn Belt probably would be more than offset by increases in the western area.

In view of the broad demand for cattle-breeding stock and the general tendency throughout the country to expand cattle herds, cattle numbers are expected to show further increases in both 1940 and 1941. The Agricultural Conservation Program, through its general objective of increasing the production of forage crops and improving pastures and ranges, will contribute to this increase in cattle numbers.

Feed-Grain Prices

Feed-grain prices higher than last year

Feed-grain prices are expected to average higher during the coming fall, winter, and spring months than during the corresponding period of 1938-39. The domestic demand is expected to be somewhat improved over that of a year ago. The wholesale price level will be higher, and livestock numbers will be larger. Following the outbreak of hostilities in Europe, feed-grain prices advanced sharply, but since September 7 they have declined, and much of the gain the first week of September was lost by the end of the month.

Livestock feeding ratios have become less favorable to livestock producers during the past year, as livestock numbers have increased relative to feed-grain supplies. During September they were, in general, near the 1928-32 average or above. Ratios are expected to continue favorable to livestock producers during 1939-40, but they will probably be somewhat less favorable than during the last 2 marketing years.

During recent months the prices of oats and barley have been high relative to corn prices. This relationship is expected to continue during the remainder of the marketing years for oats and barley.

Corn prices slightly higher than a year ago

During the week ended October 7 the average price of No. 3 Yellow corn at Chicago was 49 cents per bushel compared with 54 cents for September, 45 cents for August, and 47 cents for the corresponding week last year. Prices for corn are expected to average higher during the 1939-40 marketing year than in 1938-39, despite larger supplies of corn.

Corn: Average farm price per bushel in Iowa, and average price of No. 3 Yellow at Chicago, compared with the loan rate (Total quantity of corn sealed in 1933-34 - 271 million bushels; in 1937-38 - 28 million bushels; and in 1938-39 - 227 million bushels)

Month	1933-34			1937-38			1938-39			1939-40		
	Loan rate	Iowa farm price	Chicago No. 3 Yellow	Loan rate	Iowa farm price	Chicago No. 3 Yellow	Loan rate	Iowa farm price	Chicago No. 3 yellow	Loan rate	Iowa farm price	Chicago No. 3 Yellow
	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.
July		47	55.8		117	118.4	1/50	46	58.7		36	48.0
Aug.		37	51.0		97	104.5	1/50	39	53.6		36	45.0
Sept.		36	47.5		86	105.9	2/57	41	52.7		48	54.0
Oct.		24	40.2		46	66.1	2/57	33	44.7		39	48.3
Nov.	45	32	44.4	50	41	53.4		34	46.0			
Dec.	45	35	46.5	50	43	56.1	3/57	38	51.0			
Jan.	45	37	49.7	50	47	59.3	3/57	39	51.5			
Feb.	45	36	48.6	50	45	56.9	3/57	35	48.1			
Mar.	45	37	48.9	50	43	57.9	3/57	35	47.5			
Apr.	45	36	47.3	50	44	58.6	3/57	36	48.7			

1/ Rate on corn testing 15½ percent or less in moisture content; the range was 44 to 50 cents, depending on grade.
2/ Rate on corn testing 15½ percent moisture content or less; the range is 50 to 57 cents.
3/ Minimum rate expected on corn testing 15½ percent or less in moisture content.

The 1939 loan program

Present indications are that a corn loan will be available to eligible producers on their 1939 crop at about the same rate as the 1938 loan. Just what effect the 1939 loan rate will have on farm prices is complicated by the uncertainty of the European situation, an increased number of farmers eligible for the loan, and a large quantity of 1938 corn still under seal. As the war in Europe this year may be an added incentive for producers to retain their stocks of corn, the loan may be especially significant as the means of securing the necessary cash to supply their current needs. The farm price of corn in the Corn Belt will probably be maintained nearer the loan rate than it was last year.

Corn: Weighted average price per bushel of No. 3 Yellow, Chicago, 1933-39

Year beginning Oct.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Av.
	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.
1933	40.2	44.4	46.5	49.7	48.6	48.9	47.3	51.3	58.4	64.1	76.1	80.0	49.7
1934	77.9	83.4	93.3	90.8	87.7	83.3	89.0	87.6	85.1	84.8	80.6	83.2	85.8
1935	82.0	62.1	59.0	60.8	61.3	60.8	63.2	63.2	64.0	85.8	114.5	112.1	73.6
1936	106.6	104.7	107.2	112.2	111.2	116.0	135.0	134.9	122.4	118.4	104.5	105.9	121.0
1937	66.1	53.4	56.1	59.3	56.9	57.9	58.6	57.7	57.0	58.7	53.6	52.7	57.2
1938	44.7	46.0	51.0	51.5	48.1	47.5	48.7	51.2	51.2	48.0	45.0	54.0	48.4
1939	48.3												

Oats prices highest since 1937

Advances in prices for oats since the outbreak of the war in Europe carried the price of oats to the highest level since July 1937. During the last half of September, however, prices declined and the average price of No. 3 White oats at Chicago for the week ended October 7 was 33 cents per bushel compared with 26 cents per bushel for the corresponding week last year. The price of oats will probably continue higher than a year ago during the winter and spring months, as a result of comparatively small supplies and an improved domestic-demand situation.

Oats: Weighted average price per bushel of No. 3 White, Chicago, 1933-39

Year beginning Oct.	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Av.
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
1933	39.2	35.5	35.0	32.0	33.6	34.6	36.7	36.0	33.3	31.8	34.7	43.4	36.1
1934	44.8	48.9	55.4	52.5	54.1	55.7	56.3	54.1	49.0	49.5	43.6	39.2	48.4
1935	36.1	29.2	29.7	29.8	29.0	29.3	30.0	30.3	27.8	27.6	26.6	28.4	29.3
1936	37.2	44.3	43.6	42.1	46.0	50.4	53.6	51.5	51.2	54.4	52.2	48.0	42.8
1937	39.3	30.3	32.2	31.8	31.8	32.4	33.5	32.8	32.2	31.2	29.3	28.4	32.0
1938	25.6	24.0	26.6	25.4	26.3	29.3	30.7	30.4	30.8	32.2	34.0	34.0	28.1
1939	28.7	29.6	35.9	34.5									

Barley prices near the 1938 level

Since the outbreak of the European War, barley prices have advanced about 12 cents per bushel, and they did not recede during September as did prices of corn and oats. For the week ended October 7 the average price of No. 3 barley at Minneapolis was 50 cents per bushel, which was 1 cent higher than the corresponding weekly average for 1938. Prices for barley during the coming winter and spring may not be greatly different from prices during the

corresponding period of 1938-39, since the prospective increase in demand will probably largely offset larger barley supplies.

The margin between No. 2 malting barley and No. 2 feeding barley has been somewhat narrower since the harvesting of the 1939 crop than it was following the harvesting of the 1937 and 1938 crops. This narrower margin is largely accounted for by ample supplies of malting barley as compared with the last 2 years, some decline in the quantity of barley required by the brewing industry, and increased livestock numbers.

Barley: Weighted average price per bushel, No. 3 at Minneapolis, 1933-38

Year beginning July	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Av.
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
1933	60.9	55.9	65.5	62.2	58.6	64.2	65.1	65.9	66.3	67.0	66.0	81.6	63.6
1934	79.0	92.8	101.9	97.0	101.0	105.1	103.8	103.0	95.1	93.4	81.2	66.7	94.5
1935	54.0	48.1	53.1	52.1	50.2	51.9	59.7	61.9	57.8	57.9	54.5	58.7	55.2
1936	85.2	114.5	124.1	122.4	116.5	120.9	124.7	124.2	110.4	114.6	103.0	76.7	112.2
1937	70.7	61.1	67.8	69.3	68.5	71.5	76.9	78.4	72.2	69.4	66.2	54.2	69.4
1938	46.7	46.1	51.1	47.5	46.9	49.2	51.2	49.0	48.6	47.7	50.4	48.8	48.5
1939	40.8	41.5	50.4	50.1									

Feedstuffs prices

Prices of commercial feeds during 1939-40 are likely to average higher than they did last season as a result of increased feed requirements and a general improvement in the domestic demand. Prices advanced sharply early in September as a result of the rush of feed manufacturers and distributors to replenish or accumulate stocks following the outbreak of European hostilities, but much of the advance was lost by the close of the month. Little increase in export trade during the current season is probable as a result of the war, and, with an abundant supply of feed grains, an increase of around 10 percent in commercial feedstuffs, and a gain of only about 7 percent in the number of feed-consuming animal units, there is little in the feed situation to indicate unusually high prices for feed in 1939-40.

The index number of wholesale feedstuff prices averaged 102 (1935-36 = 100) for the feeding season July 1938 through June 1939. The average for October, 1939, was 112.7 compared with 93.8 in August, 121.8 in September, and 93.5 for October last year.

Prices of linseed and soybean meals are likely to be materially lower in relation to prices of other high-protein concentrates in 1939-40 than in other recent years, because of the relatively larger supplies of these feeds available for domestic consumption.

Hay prices

Most of the United States hay crop is used either on the farm where grown or in that immediate vicinity; only a small percentage moves through trade channels. With a large supply of hay in 1938 and additional acreages

that could have been cut for hay, the average farm price for the 1938 crop of all hay was only $6.76 per ton, which was the lowest average, with the exception of that of 1932, for more than 30 years. On September 15, 1937, the average farm price of loose alfalfa hay was $10.39 per ton. A year later it was $7.73 per ton, and on September 15, 1939, it was $8.04 per ton. (Comparative prices of prairie, clover-timothy, alfalfa, and all hay are shown below.) With large supplies of hay in sight and an opportunity for expansion in 1940, the general level of hay prices during 1939-40 may be expected to continue low in relation to feed-grain and livestock prices.

United States average prices received by farmers for hay, specified periods, 1937-39

Kind	Sept. 15, 1937	Sept. 15, 1938	Aug. 15, 1939	Sept. 15, 1939	Oct. 15, 1939
	Dollars	Dollars	Dollars	Dollars	Dollars
Clover-timothy .:					
Clover-timothy .:	10.19	7.75	8.00	8.33	8.76
Prairie .....:	6.03	4.36	4.09	4.46	4.68
Alfalfa .....:	10.39	7.73	7.45	8.04	8.36
All hay .....:	8.91	6.70	6.77	7.17	7.31

Foreign Feed-grain and Livestock Outlook

Developments in the foreign situation during the coming year will be governed primarily by the war in Europe. The United Kingdom, the most important single importer of feed grains and feedstuffs and almost the only remaining European importer of pork and lard, will have much to say, through its control of the seas, about the trade in feed grains and livestock between Europe and overseas countries. Information received to date points to the following developments: a reduction in meat consumption in Europe, reduced imports of feeds and feedstuffs as a result of declining livestock numbers, and an increase in the demand for overseas supplies of lard and pork, resulting from the shutting off of such shipments from central Europe and the Baltic countries.

An important factor that is expected to prevent runaway markets and to keep European imports down to a minimum is the control over foreign trade and prices and the rationing of consumption already put into effect by most of the countries that have access to overseas supplies. Such complete control was not instituted until well toward the end of the World War.

Feed grains

The British blockade has cut off central Europe from overseas supplies of feed grains and feedstuffs, and it appears that the British regulation of shipping will reduce the imports of such products into the Netherlands, Belgium, Denmark, and the other neutral countries so as to prevent such supplies from reaching Germany through those countries. Furthermore, it may be expected that the United Kingdom itself will reduce its import requirements of feed grains as a result of some increase in domestic grain production, a reduction in hog numbers, and the wish to import products in more concentrated form - in this case in the form of meat. It is expected, therefore, that there will be a reduction in the imports of feed grains and feedstuffs into Europe this coming year.

It may be noted that during the World War exports of corn from the United States averaged no larger than during the 5 years immediately preceding the war, even though European import-control measures were not put in effect until later in the war. Furthermore, Argentine corn production during the last war averaged only 196 million bushels annually compared with 330 million for the 5 years ended in 1937-38. The Argentine acreage this year is expected to be fully equal to that of recent years.

On the supply side, Argentina alone will have more than sufficient feed grains to supply the expected lower level of European import requirements, as shipments formerly made to central Europe may now be diverted elsewhere. The advantage of Argentina as a low-cost producer, however, may be offset to some extent by the necessity of the British to maintain a convoy system, which would tend to direct their purchases to North America.

Livestock

If previous experience is any criterion, a decrease in livestock numbers in Europe is to be expected, particularly if the war extends beyond one year. The greater dietary efficiency of grain consumed directly rather than through conversion into meat, the high price of feed supplies and difficulty in obtaining them, and the relatively large amount of labor necessary for the production of livestock all tend to bring about a curtailment in livestock production during war times. The European neutral countries, most of which are exporters of pork, are also faced with the problem of keeping their imports and exports in balance, and of assuring prompt payment for their exports. As they are expected to encounter difficulties in maintaining the volume of their exports, it will be necessary for them to curtail imports, including feed grains.

With the exception of small imports of lard into some of the neutral countries of western Europe, the United Kingdom is the only European country in a position to import pork and lard from overseas. Up to the outbreak of the war this year, that country was importing from Poland and the Baltic countries at the rate of 125 million pounds a year. These supplies are no longer available. Furthermore, because of difficulties in obtaining feed supplies and pressure from both warring factions, the neutral countries, such as Denmark and the Netherlands, are expected to supply less pork and lard to the United Kingdom than in the past. Because of the need of the convoy system and higher shipping charges it also appears probable that somewhat smaller supplies of meats will be obtained from Australia, New Zealand, and Argentina, though the adherence of two of these countries to the sterling block may tend to help maintain their trade with the United Kingdom. These factors point to a considerable increase in British purchases of American pork and lard, though such an increase need not be expected to completely offset the reduction in the quantity of these products formerly obtained from other areas, nor are the exports from this country expected to reach anything like the high levels of 1918 and the immediate post-war years. Increased slaughterings incident to the expected reduction in livestock numbers will tend to keep European imports during the coming year at a lower level than might otherwise be expected.

United States exports of bacon, hams, and shoulders

Year ended June 30	Bacon					Hams and shoulders				
	Includes Cumberland sides and Wiltshire sides since July 1, 1931					Includes Wiltshire sides before July 1, 1931				
	United Kingdom	France and Belgium	Total Europe	Canada	Total	United Kingdom	France and Belgium	Total Europe	Canada	Total
	— Million pounds —									
1914-15	201	51	322	10.0	347	179	8	191	2	204
1915-16	339	113	524	39.6	580	251	11	263	3	282
1916-17	347	142	531	118.7	667	217	26	245	6	267
1917-18	533	143	751	42.8	815	373	18	392	14	420
1918-19	657	330	1,202	26.2	1,238	416	146	649	7	667
1919-20	411	66	760	21.6	804	183	36	250	6	275
1920-21	245	34	450	12.7	489	134	8	146	8	172
1921-22	185	26	313	11.0	351	234	11	247	11	272
1922-23	188	31	371	9.9	408	259	16	281	20	319
1934-35	2		4	.2	12	55		55	.3	64
1935-36	1		1	.1	4	41		41	.4	47
1936-37	1		1	.1	4	34		34	.5	39
1937-38	1		3	.5	6	42		42	.5	48
1938-39	6			1.0	13	51			2.1	59
July-Aug.										
1938	1	a/	1	a/	2	9	a/	9	1	10
1939	1	a/	2	a/	3	11	a/	11	1	13

Compiled from records of the Bureau of Foreign and Domestic Commerce, U. S. Dept. of Commerce (Sept. 21, 1939).

a/ Less than 500,000 lbs.

The Feed Grain Situation by Regions

Although the nation-wide supplies of feed crops appear to be abundantly ample for feeding the livestock on farms and ranches, the current feed situation varies considerably in the principal agricultural regions of the country. Reports on feed crops show an unusually large production from western Minnesota, Iowa, and Missouri, eastward to western Pennsylvania and eastern Virginia and North Carolina. In many other sections, particularly in North Dakota, South Dakota, Nebraska, and Kansas, there has been a repetition of the drought conditions which have so adversely affected corn production in recent years.

Great Plains and western Corn Belt

In 1939 the Great Plains region and the western part of the Corn Belt again experienced conditions unfavorable to the production of feed crops. The drought was severe in South Dakota, Nebraska, western Kansas, central Oklahoma and Texas, and in eastern and northern North Dakota. The drought was most severe in July and September, and corn and grain sorghums were more seriously affected than small grains, except in Nebraska and Kansas. The 1939 production of corn in this section is considerably smaller than last year, and only approximately half of the 1928-37 average. The production of oats in Nebraska and Kansas was about half of the 10-year average. In other States of this section the production of oats was about average and the production of barley was near average throughout the section. The production of grain sorghums ranged from 10 to 35 percent below that of last year in the different States, except in the South, where production was much above that of last year. Hay and pasture were both below normal.

Although the supplies of feed will be short in comparison with pre-drought years, they should be adequate for feeding the livestock in the area. Recovery from the liquidation of livestock in other recent drought years has not progressed very far. Nebraska and Kansas probably are the only States in which the quantity of feed grains produced in relation to the number of grain-consuming animal units is smaller than the average of the years 1928-32.

The current shortage of feed grains in the western Corn Belt will continue to restrict cattle feeding in the area. This area normally is an important source of supply of grain-fed cattle for slaughter, but it has marketed relatively few such cattle in the last 3 years.

Central and eastern Corn Belt

The supply of corn in the central and eastern Corn Belt States is about one-third larger at harvest time this year than the 1928-32 average supply. The supply of oats, however, in the principal producing States is about one-third below the 1928-32 average. The supply of oats is about on a par with the 1928-32 average in the Great Lakes States. The total supply of feed grains in the central and eastern Corn Belt is slightly larger than last year, when it was about 25 percent above the 1928-32 average. Hay and other roughages are abundant between the Great Plains and the Appalachian Mountains. Late summer and fall pastures have been affected by dry weather throughout the Corn Belt.

Present indications point to a considerable increase in livestock fattening in this section during the 1939-40 marketing season. With a 20-percent increase in hog numbers as compared with a year ago and an active demand for feeder cattle and feeder sheep, present prospects are that some corn under seal will be redeemed and fed before the 1940 harvest.

Southern States

Supplies of feed grains and hay in the Southern States are below those of last year but are near average, except in parts of Mississippi and Alabama. The supplies of cottonseed and cottonseed meal also are below average, but are slightly larger than a year ago. Pastures have been good throughout the Southern States this year.

North Atlantic States

The North Atlantic States - especially southern New England, New Jersey, southern and eastern New York, and eastern Pennsylvania - have suffered severely from drought this year. Pastures have been so short that many herds were placed on practically a winter-feeding basis during the late summer. There is an acute shortage of hay on many farms. Although the production of grain crops was not so seriously affected as hay and pastures, heavier supplementary feeding than usual during the drought period has created a scarcity of concentrates.

Western States

Range and pasture conditions have been exceptionally poor this year throughout the region west of the Rocky Mountains. In Washington, the condition of ranges was the lowest on record for September. Conditions were almost as bad in Colorado, Utah, and Arizona. Supplies of hay are generally below those of last year, but the supplies of oats and barley are above average.

Supplies of feed grains and hay, numbers of grain consuming and hay consuming animal units on farms, and supplies of feed grains and hay per animal unit, 1920-39

Year beginning Oct. 1	Total supply of feed grains Oct. 1 1/	Grain consuming animal units on farms Jan. 1 following 2/	Supply of feed grains per grain consuming animal unit	Year beginning May 1	Supply of hay 3/	Hay consuming animal units on farms Jan. 1 following 4/	Supply of hay per hay consuming animal unit
	1,000 tons	Thousands	Tons		1,000 tons	Thousands	Tons
1920	118,423	136,683	.87	1920	100,978	86,774	1.16
1921	112,229	138,732	.81	1921	101,182	86,078	1.18
1922	103,285	145,713	.71	1922	104,687	84,628	1.24
1923	105,793	143,696	.74	1923	100,784	82,822	1.22
1924	91,989	138,748	.66	1924	102,155	80,367	1.27
1925	106,750	133,595	.80	1925	91,557	77,864	1.18
1926	100,991	135,457	.75	1926	85,225	75,478	1.13
1927	102,374	140,453	.73	1927	106,640	74,428	1.43
1928	105,023	137,038	.77	1928	98,000	75,318	1.30
1929	97,827	135,806	.72	1929	95,953	76,322	1.25
1930	87,215	134,944	.65	1930	84,133	78,084	1.08
1931	99,222	139,456	.71	1931	82,448	79,841	1.03
1932	115,985	144,459	.80	1932	92,390	82,850	1.12
1933	94,591	143,123	.66	1933	85,869	85,872	1.00
1934	61,972	120,314	.52	1934	67,593	80,856	.84
1935	92,147	123,113	.75	1935	94,460	79,899	1.18
1936	64,002	122,793	.52	1936	84,110	78,663	1.07
1937	99,237	121,578	.82	1937	88,564	77,649	1.14
1938	104,245	127,040	.82	1938	103,396	78,022	1.33
1939	108,035	5/136,500	.79	1939	100,216	5/79,000	1.27

1/ Includes total stocks of corn and oats on October 1, plus total production of corn, barley, and grain sorghums in each of the years considered.
2/ Number of animals on farms January 1, weighted as follows: milk cows, 1.00: other cattle, 0.51; hogs, 0.37; sheep, 0.04; horses and mules, 1.14; poultry 0.045.
3/ Total production of tame and wild hay plus carry-over on May 1.
4/ Number of animals, excluding poultry, on farms January 1, weighted as follows: milk cows, 1.00: other cattle, 0.75; sheep, 0.12; horses and mules, 1.00.
5/ Estimated.

Corn: Farm supply, including sealed corn, in relation to the number of pigs saved, 1928-32 average, and yearly 1935-39

Section and State	Corn supply per pig saved 1/											1939 quantity as percentage of 1938
	Quantity						Expressed as a percentage of the 1928-32 average					
	1928-32 av.	1935	1936	1937	1938	1939 2/	1935	1936	1937	1938	1939 2/	
	Bush.	Bush.	Bush.	Bush.	Bush.	Bush.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
United States	34	43	26	44	41	37	126	76	129	121	109	90
North Atlantic	59	84	64	67	64	57	142	108	114	108	97	89
E.North Central	40	52	32	55	49	47	130	80	138	122	118	96
W .North Central	31	37	16	41	40	38	119	52	132	129	123	95
Total N. Central	34	43	23	47	44	42	126	68	138	129	124	95
South Atlantic	35	42	34	36	34	29	120	97	103	97	83	85
South Central	43	44	33	41	37	27	102	77	95	86	63	73
Western	11	12	9	9	10	7	109	82	82	91	64	70
Ohio	33	48	33	41	39	36	145	100	124	118	109	92
Ind.	34	41	28	47	37	37	121	82	138	109	109	100
Ill.	53	69	42	85	73	72	130	79	160	138	136	99
Mich.	37	68	36	50	52	42	184	97	135	141	114	81
Wis.	28	36	18	31	34	28	129	64	111	121	100	82
Minn.	26	46	23	43	38	42	177	88	165	146	162	111
Iowa	32	39	20	46	46	50	122	62	144	144	156	109
Mo.	27	22	13	39	31	29	81	48	144	115	107	94
N. D.	16	46	4	31	26	18	288	25	194	162	112	69
S. D.	23	49	9	36	27	23	213	39	157	117	100	85
Nebr.	37	38	12	33	41	29	103	32	89	111	78	71
Kans.	38	23	8	22	29	16	61	21	58	76	42	55

1/ Production and farm carry-over of corn per pig saved from the combined spring and fall pig crops.
2/ Preliminary.

Corn and oats: Production in the United States by geographical Divisions, 1928-32 average, yearly 1933-39

Year	North Atlantic	East North Central	West North Central	Total North Central	South Atlantic	South Central	Western	Total United States
	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.
				CORN				
1928-32 av.	79,924	731,060	1,175,985	1,907,045	161,002	370,605	36,197	2,554,772
1933	87,600	622,159	1,120,961	1,743,120	179,993	354,547	34,372	2,399,632
1934	90,097	496,498	397,879	894,377	168,125	296,513	12,011	1,461,123
1935	103,104	783,602	814,172	1,597,774	199,536	378,702	24,631	2,303,747
1936	89,711	536,695	367,668	904,364	170,230	320,547	22,237	1,507,089
1937	103,301	958,690	962,314	1,921,004	201,234	402,787	22,958	2,651,284
1938	100,201	858,270	937,767	1,796,047	204,880	415,037	26,073	2,542,238
1939 1/	94,078	914,142	950,895	1,865,037	191,166	316,975	20,161	2,532,417
				OATS				
1928-32 av.	61,297	405,592	607,532	1,013,124	24,882	74,924	10,874	1,215,102
1933	46,574	230,373	346,348	576,721	22,092	46,337	41,442	733,166
1934	56,810	184,645	178,483	363,128	22,791	67,726	31,851	542,306
1935	60,516	329,149	649,101	978,250	27,441	82,918	45,777	1,194,902
1936	50,885	270,346	350,377	620,723	22,664	52,214	30,920	785,506
1937	51,194	360,550	611,954	972,504	23,244	69,876	39,794	1,161,612
1938	64,808	300,532	540,483	841,015	31,171	75,952	40,933	1,053,879
1939 1/	60,856	275,909	453,360	734,799	21,595	67,586	46,514	941,230
				BARLEY: Production in important producing States				
	Wis.	Minn.	Iowa.	N. D.	S. D.	Neb.	Calif.	Total U. S.
1928-32 av.	22,178	49,615	17,834	39,055	35,277	15,386	29,534	281,237
1933	17,710	28,070	9,230	17,902	3,451	8,390	26,174	153,767
1934	18,534	21,315	4,901	7,310	1,685	1,313	26,073	116,630
1935	25,548	59,798	15,264	42,340	41,964	15,180	36,983	285,774
1936	17,896	31,620	5,984	4,522	8,977	5,360	29,925	147,475
1937	22,022	51,536	12,448	21,120	20,068	10,642	28,350	220,327
1938	24,286	46,020	12,963	21,318	28,930	21,526	27,550	252,139
1939 1/	23,026	57,145	12,768	26,406	24,320	15,119	30,850	269,540

1/ October estimate.

Ratios between the prices of feed grains and prices of livestock and livestock products, by months, 1928-32 average, annual 1933-39

Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Av.
Av.1928-29 to					Hog-corn ratio 1/								
1932-33	11.7	11.4	11.4	11.4	12.4	13.1	12.0	11.6	11.4	11.1	10.8	11.1	11.6
1933-34	11.0	9.1	7.0	6.9	9.0	8.8	8.1	6.8	7.0	7.0	7.7	8.5	8.1
1934-35	7.2	6.8	6.3	8.5	9.5	10.9	10.0	10.6	10.9	11.2	13.4	13.2	9.9
1935-36	12.0	15.0	16.2	16.2	16.9	16.8	16.6	15.2	15.4	11.4	8.9	8.8	14.1
1936-37	9.0	9.1	9.3	9.1	9.1	8.7	7.4	8.0	9.0	9.8	11.3	10.7	9.2
1937-38	15.2	16.2	14.1	13.3	14.6	15.8	14.1	14.2	14.9	14.7	14.5	15.8	14.8
1938-39	17.5	16.7	14.2	14.2	16.2	15.6	14.2	13.0	12.4	12.3	12.3	13.8	14.5

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Av.
Av.					Beef-corn ratio 2/								
1928-32	15.2	14.7	15.0	15.0	14.9	15.5	15.7	16.4	17.5	18.5	18.3	17.5	15.9
1933	21.0	20.8	19.6	14.4	13.4	13.3	10.8	11.5	12.1	13.8	11.6	11.1	13.6
1934	10.8	11.3	12.1	13.6	13.5	12.6	11.2	9.6	10.1	9.6	8.7	7.9	10.4
1935	10.2	12.0	12.9	12.5	12.7	12.1	11.6	12.7	12.5	12.7	16.1	16.6	12.6
1936	15.3	13.7	14.2	13.3	12.5	12.3	9.5	7.5	8.2	8.6	9.8	9.6	10.6
1937	9.5	9.2	9.3	8.0	8.3	9.9	11.8	13.5	13.0	19.3	19.9	16.0	11.1
1938	13.7	13.7	14.6	14.7	15.3	16.7	18.2	19.2	19.8	23.1	21.8	19.9	17.2
1939	20.1	21.1	21.7	20.6	18.9	18.0	19.4	20.2	18.9	20.4			
Av.					Butterfat-feed ratio 3/								
1928-32	31.2	29.1	29.4	28.1	26.4	25.4	26.2	29.7	32.4	37.6	38.1	38.8	30.3
1933	51.1	42.7	38.7	32.4	29.7	28.1	21.9	20.4	22.3	26.4	24.9	21.7	27.2
1934	18.5	24.0	25.5	23.3	23.4	20.7	19.6	18.1	16.3	16.5	18.5	17.6	19.7
1935	18.9	22.4	19.9	21.4	18.1	16.8	17.6	19.4	21.7	23.3	31.5	36.3	21.6
1936	36.8	37.1	33.4	32.8	27.9	28.6	25.1	21.4	21.0	20.7	20.7	20.2	25.6
1937	19.5	18.7	19.3	16.8	16.1	16.7	17.6	21.9	24.7	35.1	40.7	42.7	21.9
1938	35.3	32.1	31.7	28.7	27.0	26.6	27.5	30.5	30.1	33.0	34.2	34.6	30.8
1939	30.7	30.7	27.7	25.8	24.2	24.4	26.2	28.0	24.9	30.2			
Av.					Feed-egg ratio 4/								
1928-32	4.63	6.00	6.94	7.32	7.55	7.31	6.75	6.03	5.05	4.12	3.33	3.32	6.21
1933	2.21	4.36	5.03	6.31	7.08	8.54	8.90	7.92	6.14	4.23	3.82	4.25	6.16
1934	5.32	6.22	7.00	7.52	7.68	8.61	8.46	8.12	6.84	6.30	5.18	5.91	7.15
1935	6.45	6.29	8.38	8.02	7.38	7.13	6.62	6.19	5.25	4.80	3.81	3.89	6.64
1936	4.97	4.86	6.66	6.89	6.50	6.24	7.49	8.21	7.60	6.47	5.41	5.95	6.52
1937	8.32	9.77	9.86	10.65	11.93	11.56	10.39	8.59	7.08	4.85	3.86	4.19	9.31
1938	5.31	6.96	6.87	6.94	6.17	5.82	5.30	4.53	3.80	3.26	3.03	3.30	5.58
1939	5.22	5.86	6.04	6.50	7.02	7.05	6.11	5.43	5.61				

1/ Number of bushels of corn required to buy 100 pounds of live hogs based upon the average monthly price of hogs and of No. 3 Yellow corn, both at Chicago. Figures on hog prices prior to 1920 are general average hog prices as published in the Chicago Drovers' Journal Yearbook; subsequent figures were compiled from reports of packer and shipper purchases, excluding pigs, sows, boars, extremely rough sows, or cripples. 2/ Monthly average price of "Beef steers from the Corn Belt, sold out of first hands, at Chicago for slaughter, all grades", per 100 pounds, divided by monthly average price of No. 3 Yellow corn per bushel at Chicago. 3/ Average price per pound for butterfat received by producers on the 15th of each month divided by the average price of dairy feed (mixture of corn, oats, barley, and cottonseed meal) per pound. 4/ Average cost of poultry ration (corn 62 pounds, wheat 14 pounds, oats 8 pounds, barley 2 pounds, bran 9 pounds, and tankage 5 pounds) per 100 pounds in the United States, divided by the United States average price per dozen received for eggs by farmers.

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THE DAIRY OUTLOOK FOR 1940

Summary

Increases in the number of milk cows in the next 2 years are expected to be more rapid than in the last 2 years. The number of young stock on farms is more than enough to provide for normal replacements to dairy herds in 1940 and 1941. The number of milk cows increased 1 percent in 1938, and probably an additional 1 percent in 1939.

Upward tendencies in dairy-cow numbers seem to be most marked in the northeastern and Lake State dairy regions, the Corn Belt and the Cotton Belt. For the next few years the northern dairy regions may be expected to show the greatest increase. Over the longer period the Corn Belt and the Cotton Belt are likely to assume greater importance.

The production of feed grains and the production of hay in 1939 are somewhat less than a year earlier, but relatively large stocks were carried over from the preceding year. The total supplies of both feed grains and hay for the 1939-40 feeding season are somewhat larger than a year earlier. The number of livestock on farms has increased sharply in the past year. Supplies of feed grains and hay per animal unit for the 1939-40 feeding season are somewhat less than a year ago but decidedly above average.

During the 1939-40 winter feeding season, milk production is expected to be about as large as the heavy winter production a year earlier. As far as can be foreseen at present, it seems probable, that, with increases in the number of cows, the trend in milk production will be gradually upward, as long as feed supplies per animal unit are relatively high.

With the improvement in business, some increase in consumption of fluid milk and cream is expected. Total production of manufactured dairy products for the coming year is likely to continue high but to show little change from 1938 or 1939. Consumption of dairy products in 1939 was unusually high. Milk production in 1939 was high, and there was a marked reduction in stocks. There was an increase in apparent consumption of butter through regular trade channels and a large volume was distributed for relief purposes.

Total supplies of dairy products available for consumption during the coming winter will be considerably less than a year earlier because of the lower stocks on hand. Supplies in the hands of the trade may be larger, but holdings by Government agencies are decidedly less.

During the World War, 1914-18, our imports of cheese were curtailed, while our exports of dairy products, particularly concentrated milks and

cheese, were stimulated. Even though our exports expanded rapidly, a relatively small proportion of the milk produced was shipped to foreign countries in the form of manufactured dairy products. If the present war continues, our exports, particularly of concentrated milks, may increase.

Prices of dairy products were unusually low during last summer because of the relatively large supplies of dairy products (production plus stocks) and the relatively low level of all commodity prices. With the improvement in business and the general rise in commodity prices, dairy markets have strengthened. The reduction in stocks of dairy products has also strengthened the prices of dairy products. Further improvement in the dairy situation will depend primarily on further improvement in business and commodity prices generally.

Number of milk cows increasing

The number of milk cows on farms January 1, 1939 was estimated to be 1 percent larger than a year earlier. This was the first increase in 5 years and it brought to an end the decline in numbers which started in 1934. A relatively small part of the 7-percent decline from 1934 to 1938 was recovered, but there have been only 4 years, 1933-36 inclusive, when numbers were higher than on January 1, 1939.

The tendency for numbers to increase was general throughout the country except in Missouri, Kentucky, Idaho, Wyoming, and Colorado. Even in these States the declines were small.

There was a further increase in numbers of milk cows during 1939. By January 1, 1940 the number on farms will probably be nearly 1 percent larger than the 25,093,000 head a year earlier. This would be the largest number since 1936. The long-time trend in number of milk cows per capita has been slightly downward. The number per capita at the beginning of 1940 is about in line with the long-time trend. Milk production per capita, however, has not declined because of the general upward trend in production per cow.

Marked increase in number of heifers

More significant than the increase in the number of milk cows is the increase in the number of heifers and heifer calves being saved for milk cows. The droughts in 1934 and 1936 and the short supplies of feed on farms during the early part of 1935 and 1937 tended to reduce the number of calves saved in those years.

Since the harvesting of the 1937 feed crops, however, the supplies of both feed grain and hay have been large in relation to the number of livestock on farms and prices of milk cows and beef cattle have been exceptionally high in relation to feeds. The price of dairy products has been higher in relation to feeds than in the 4-year period from the fall of 1933 to the fall of 1937. These factors have stimulated the saving of heifer calves.

On January 1, 1939 the number of heifers 1 to 2 years old and the number of heifer calves were both about 5 percent higher than a year earlier. The number of heifer calves was about the same as the peak on January 1, 1934.

There were further increases in the number of heifers during the past year. By January 1, 1940 it is expected that there will be about 5,400,000 head of heifers 1 to 2 years old on farms. This would be equivalent to 21.3 heifers per 100 cows and would be the highest number of heifers in relation to cows in the 20 years of record, and decidedly more than needed for ordinary replacements in 1940. During the 15 years, 1920-34, the number of cows eliminated from herds averaged 18.1 head per 100 cows on hand at the first of the year.

The number of heifer calves being saved for milk cows on January 1, 1940 is expected to be about 5,800,000 head. This would be 4 percent more than a year earlier and the highest number ever reported and the highest on record in relation to the number of cows on hand. Calves in this age group would ordinarily be added to milking herds in 1941.

A large number of heifer calves were saved during 1939, and it also seems probable that relatively large numbers will be saved during the spring of 1940. Large supplies of feed and relatively high prices of cattle will stimulate the saving of heifer calves.

The number of heifers and heifer calves on farms is decidedly more than needed for ordinary replacements to dairy herds in 1940 and 1941, and is large enough to provide a marked increase in milk cow numbers in those years with average rates of culling.

Changes in milk cow numbers greatly affected by culling

While the number of heifers indicates a marked increase in milk-cow numbers in 1940 and 1941 the actual increase will depend to a large extent on the rate of culling. During the last 20 years the number of cows eliminated from herds has been much more variable than the number of young stock added to herds.

In 1938 the rate of culling as determined from the inventory of numbers at the beginning and end of the year, was somewhat above the long-time average. Culling in 1939 also appears to have been considerably above average.

Federal and State programs for eradicating tuberculosis and Bang's disease from dairy herds were continued through 1938 and 1939, but the number of diseased cattle eliminated declined.

Under the tuberculosis program, the number of reactors eliminated during the fiscal year which ended June 30, 1939 was approximately 60,000, compared with an annual average of 300,000 during the preceding 2 years. These reactors were found on routine retesting of modified accredited tuberculosis-free States, and in work toward the accreditation of one additional State.

The number of Bang's disease reactors eliminated during the fiscal year which ended June 30, 1939 was approximately 220,000, compared with an annual average of 390,000 since this program was initiated in 1934. As the Bang's disease program continues, it is expected that the trend of reactors eliminated will continue downward.

In areas where a considerable portion of the cows milked are of dual purpose type, there may be some shifting of cows from a milk-cow to beef-cow

classification depending on the prices of butterfat and beef. Prices of beef cattle are unusually high in relation to butterfat at the present time. This price relationship may stimulate the culling of cows from dairy herds.

If production of feed crops is about average it seems probable that the increase in number of milk cows during 1940 and 1941 will be greater than in 1938 and 1939. The number of cows per capita will probably increase.

Milk cow numbers increased during the World War

At the outbreak of the World War in 1914 prices of milk cows and beef cattle were high in relation to prices of other farm products. Cattle prices had been rising rapidly for several years. From 1914 to 1919 the number of milk cows increased about 9 percent, and the number of beef cattle 32 percent. During the period 1914-18, prices of milk cows and beef cattle increased but not so much as the general level of prices.

Feed grain supplies per animal unit above average but less than year earlier

The total supply of feed grains and byproduct feeds for the 1939-40 season is estimated to be 3 percent larger than a year earlier and the largest since 1932-33. In the past year there has been a marked increase in the number of grain-consuming animals on farms. The feed supply per animal unit for the 1939-40 season (July through June) is estimated to be 1,902 pounds. 1/ Except for 1938-39 when the supply per animal unit was 1,980 pounds this is the largest in more than a decade and 10 percent above the average for the 8 years before the 1934 drought.

Even if the corn sealed under the loan program up to September 1 is excluded the supply per animal unit is 4 percent above the pre-drought average.

Hay supplies per animal above average

The supply of hay per hay-consuming animal unit for 1939-40 season is estimated at 1.27 tons, compared with 1.33 tons a year earlier, and the 10-year average before the 1934 drought of 1.18 tons.

Although feed production in some sections was greatly curtailed by drought in 1939, for the country as a whole feed supplies per unit of livestock are above average but not so great as a year earlier.

High milk production in prospect

Total milk production in the 1939-40 winter feeding season is expected to be about as large as the heavy production in that period a year earlier. The number of cows on farms will be somewhat larger, and apparently ample supplies of feed are available. As far as can be foreseen at present, it seems probable that, with increases in the number of cows, milk production will continue gradually upward as long as feed supplies are ample.

1/ This supply per unit is computed from the production of all corn, oats, barley, and all grain sorghums, the July 1 stocks of corn and oats on farms, and production of byproduct feeds.

Milk production on farms in 1938 was estimated to be 107 billion pounds. This was nearly 4 percent larger than in 1937 and considerably higher than the preceding peak in 1933. Based on preliminary indications, it appears that production in 1939 will be about 1 percent higher than in 1938.

During the last 15 years, annual milk production per cow has varied from a low of 4,029 pounds in 1934 to a peak of 4,578 pounds in 1929. Changes in milk production per cow have tended to offset variations in the number of cows per capita, so that milk production per capita has changed less than number of cows or production per cow. Production per cow in 1939 is estimated to be about the same as the peak in 1929.

Including milk produced by cows in towns and villages, milk production in 1938 is estimated to be 845 pounds per capita. This was 3 percent above the 1924-29 average but slightly less than in the 3-year period 1931-33. Unless there is very unfavorable weather for feed production, milk production per capita in the next year or two may continue near the high level of 1938 and 1939.

No marked change in total production of manufactured dairy products in prospect

Production of manufactured dairy products in 1939 will probably be about as high as in 1938. During the first 9 months of 1939 creamery butter production was the same as a year earlier. Production of evaporated milk was also about the same, but cheese production was considerably lower. Ice cream production was probably somewhat higher than in 1938.

With rather marked increase in milk production in 1938, and little change in consumption of fluid milk and cream, there was a sharp increase in production of manufactured dairy products. The monthly data on production of manufactured dairy products indicate that after allowing for the usual seasonal changes the sharp increase in production occurred from November 1937 to the spring of 1938. Since that time there has been no tendency for production of manufactured dairy products to expand. On a milk equivalent basis total production of these products in 1938 was 7 percent higher than a year earlier and by far the highest on record. All the principal products except ice cream shared in the increase. Even on a per capita basis total production was high, being about 5 percent above the 1924-29 average, and the highest in many years.

Production of manufactured dairy products in 1940 may continue relatively high, but show little change from 1938 or 1939 due to some probable increase in the consumption of fluid milk and cream.

Consumption of dairy products high

Total consumption of dairy products in 1939 will probably be considerably larger than in 1938 even though there was relatively little change in total milk production. By the end of 1939 stocks will be decidedly lower than a year earlier.

Little information is available on consumption of fluid milk and cream. The receipts of milk at the three principal eastern markets, Boston, New York,

and Philadelphia, indicate that consumption in these markets during the first 8 months of 1939 was higher than in 1938 and also higher than the peak in 1930. Cream receipts at these markets in 1939 were also higher than in 1938 but decidedly less than in 1930-31. With improvement in business some further increase in consumption of fluid milk and cream appears in prospect.

In the first 9 months of 1939 consumption of butter was 11 percent larger than in 1938. The distribution of butter for relief accounted for a considerable part of the increase. Nevertheless apparent consumption through regular trade channels was about 5 percent larger than a year earlier.

Consumption of cheese in 1938 was far the largest on record, being about 5 percent larger than the preceding peak in 1937. During the first 9 months of 1939 cheese consumption was the same as in 1938 but high compared with other years.

Consumption of evaporated milk in 1938 also reached a new high, and there was a further increase during 1939.

Consumption of ice cream in 1938 was down about 5 percent from the recovery peak in 1937. There was some further decline during the first 4 months of 1939, but during the second 4 months of 1939 the decline was checked, and some increase occurred. With improving business, consumption of ice cream will probably increase.

Consumption of margarine reached a peak in 1937, but declined about 3 percent during 1938. In the first 7 months of 1939, however, there was a very drastic decline. Relatively low prices of butter have tended to curtail consumption of margarine.

Surplus-Removal and Butter-Price Stabilization Program

The 1939-40 Government loan program for butter authorizes the purchase and storage of up to 25 million pounds of butter, and provides that such butter will be available to the trade at a seasonal price increase. Under this authorization, the Dairy Products Marketing Association, which is the regional organization of cooperatives which was set up to help operate the Government program, began buying butter this season on July 26, and by September 7 had purchased 12 million pounds, mostly on the basis of 23.5 cents for 92-score butter, which was 2 cents lower than a year earlier. With the outbreak of war in Europe, domestic butter prices showed a sharp increase in early September, and the D. P. M. A. discontinued buying butter.

The Federal Surplus Commodities Corporation, 2/ which is the agency handling governmental purchases of dairy products for relief distribution, has

2/ Purchases by F.S.C.C. have been made with funds available under Section 32, Public Law No. 320, which law appropriates for each fiscal year 30 percent of the customs receipts of the preceding calendar year for purposes including the encouragement of domestic consumption of agricultural products by diverting them from normal trade channels, but providing also that not more than 25 percent of such funds may be used for any one class of agricultural commodities. The Agricultural Appropriations Act for 1939-40 appropriated additional funds for Section 32 purposes during the 1939-40 fiscal year.

been given authorization to purchase up to 50 million pounds of butter during the 1939-40 fiscal year. From July 1 to September 30, 1939, this agency bought from the D. P. M. A., 11 million pounds of butter which had been placed under loans the preceding season.

During the storage season from May 1938 to April 1939, the Government surplus-removal and price-stabilization programs had an important influence on the dairy products price level. The pressure of record dairy production on supplies and prices of dairy products during this period resulted in purchases equivalent to about 6 percent of the total production of principal manufactured dairy products. Although these purchases were largely in the form of butter, other dairy products shared in the support. In the absence of the usual seasonal rise of butter prices in the early fall of 1938, F. S. C. C. began to take over butter from the D. P. M. A. for relief distribution. In addition to 57 million pounds secured from the D. P. M. A. during the 1938-39 season, the F. S. C. C. purchased 33 million pounds of butter in the market. F. S. C. C. market purchases were discontinued in early March 1939, and prices declined irregularly during the spring. Such F. S. C. C. purchases for relief distribution as were made from March to late July 1939, were from the D. P. M. A.

Purchases of dairy products by the Government for relief distribution and by the Dairy Products Marketing Association under the Government butter loan programs, August 1933 - September 1939 1/

Period	DPMA market purchases of butter 2/	Government purchases for relief distribution						
		Butter			Cheese	Evaporated milk	Dry skim milk	Fluid milk
		From DPMA	From markets	Total				
	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.	1,000 lb.
Aug.1933-Apr.1934			45,774	45,774	6,346	---		
May 1934-Apr.1935			16,176	16,176	11,580	37,596	6,526	
May 1935-Apr.1936			8,680	8,680	192	9,431	10,188	
May 1936-Apr.1937			1,715	1,715	932	25,448	15,609	
May 1937-Apr.1938			10,817	10,817	---	---	18,882	17,697
May 1938-Apr.1939	114,137	57,184	32,923	90,107	3,463	3/19,034	22,760	60,668
May - Sept. 1939	12,118	50,447	---	50,447	---	3,263	---	4/20,000

1/ Excludes 5,908,000 pounds of butter bought in early 1934 with Federal Surplus Relief Corporation funds and subsequent small purchases of dairy products by Federal Surplus Commodities Corporation with State relief funds.
2/ Includes quantities resold to Federal Surplus Commodities Corporation for relief distribution.
3/ Acquired in exchange for fluid milk bought under the New York fluid milk diversion program of November and December 1938.
4/ Approximate.

The quantities of butter held by the D. P. M. A. and the F. S. C. C. early in the fall of 1939 were greatly below the quantities held in the corresponding period of 1938. On October 1, 1939, out of a total United States stocks of 155 million pounds, the D. P. M. A. held about 18 million, (including 6 million pounds purchased in 1938), and the F. S. C. C. and State relief agencies held 8 million pounds, pending relief distribution. Commercial holdings on October 1 were thus 128 million pounds. On October 1, 1938, total United States stocks were 211 million pounds, but commercially owned stocks totaled only 109 million pounds, the remainder being held by the D. P. M. A. under Government loans.

Improvement in prices of dairy products

During the summer of 1939, prices of manufactured dairy products were in many cases the lowest since 1933. The general level of commodity prices was low and supplies of dairy products, production plus stocks, were unusually high. Since mid-summer the consumption of dairy products has been relatively high compared with production, and stocks are much lower than a year ago. Business has improved and there has been a general rise in commodity prices. These factors have strengthened the prices of dairy products. Further improvement in dairy prices will depend on the improvement in business and commodity prices generally.

Prices of dairy products reached the recovery peak in the latter part of 1937, but declined rapidly during the first part of 1938. This decline was due primarily to the general decline in commodity prices and business from the 1937 peak, and to the increase in production of manufactured dairy products. During the summer and fall of 1938, large purchases of butter by the Dairy Products Marketing Association supported prices. During January and February 1939, purchases by the Federal Surplus Commodities Corporation also supported the butter market. From early March until late July 1939 no market purchases of butter were made by governmental agencies.

Even though prices for butter were unusually low during the first 8 months of 1939, the relationship between butterfat and feed grain prices was about as favorable for dairy producers as in the period 1925-29. Prices of butterfat have been low in relation to beef cattle and calves, and were also low in relation to hogs. During the past spring and summer, however, prices of hogs declined in relation to butter and in August the relationship was about the same as the long-time average.

During the sharp rise in prices in September 1939, prices of butter did not rise as much as grains or hogs. This change, however, has not altered the outlook for production during the coming winter. In the period 1914-18, prices of dairy products did not rise so much as feed grains and hogs but it was not until the war had been in progress for some time that the difference was very striking.

Exports of dairy products increased during World War, 1914-18

Our exports of dairy products rose rapidly during the World war period. Exports of concentrated milks showed the largest and most consistent increase, and by 1918 amounted to 550,000,000 pounds, about one-third of production.

Cheese exports rose abruptly at the outbreak of the war. In 1915, exports were 12 times as large as the pre-war average and amounted to 14 percent of domestic production. After this abrupt rise, exports continued at a high level, but there was no tendency for our shipments to foreign countries to expand as the war progressed. For the four years, 1915-18, exports averaged 55,000,000 pounds per year or 12 percent of domestic production. Exports of butter increased but not so much as cheese and concentrated milk. In 1918 when butter exports were at the peak for the war period, they were only 2 percent of domestic production.

In 1915, our exports of dairy products on a milk-equivalent basis amounted to 1,173,000,000 pounds and were 7 times as large as in the pre-war period, 1910-14. Exports increased each year during the war period and by 1918 were nearly twice as large as in 1915. Although these figures show a tremendous increase in exports in the period, 1915-18, a better idea of their importance is obtained by comparing them with domestic production. In the period, 1910-14, exports amounted to only 0.4 percent of domestic production; in 1915 they were 2.6 percent of production; and by 1918 they were 5.6 percent of production.

In addition to the increase in exports, our imports of dairy products, primarily cheese, were greatly curtailed during the World War.

During the first year of the World War, total exports of butter from the principal exporting countries showed little change, but by 1918 they were only one-third as great as in 1915. This decrease in exports was due almost entirely to the decrease from the Northern Hemisphere countries, particularly Denmark. Exports from the Southern Hemisphere were not curtailed.

Production and exports of both butter and cheese from the Southern Hemisphere during recent years have been much larger than in the pre-war period. A large part of the increase in world production has been in the Southern Hemisphere. It seems probable that the war in Europe at the present time will have less effect on production and exports of butter and cheese than did the World War. Production in countries not directly affected is much larger.

The situation in regard to concentrated milks is considerably different. The Netherlands and Denmark are the two leading countries in volume of exports with about 70 percent of the total, and the United States is third with about 6 percent. The dairy industries in both The Netherlands and Denmark depend to a considerable extent on imported feedstuffs and to some extent on imported fertilizer. Shipment of these products may be greatly curtailed by the war, and the dairy output in The Netherlands and Denmark may be reduced. England is by far the most important country in volume of imports. War developments may stimulate our exports of concentrated milks more than the exports of other dairy products.

In 1914 our tariff rates on dairy products were relatively small - butter, 2.5 cents per pound; cheese, 20 percent ad valorem; and other dairy products free. Including the changes effective in trade agreements, the tariff rate on butter is now 14 cents; cheese, 5 cents; condensed milk, 2.75 cents per pound; and evaporated milk, 1.80 cents per pound. These

tariff rates on butter and cheese have tended to maintain domestic prices of these products above the level in world markets. England has a tariff on non-Empire butter now and did not have one in 1914.

The net result of these changes in tariffs since 1914 would seem to make a marked increase in exports of butter at the present time less probable than in 1914.

The Longer Term Dairy Outlook by Regions

Aside from the uncertainties arising from the war situation, the continuing production shifts in agriculture which appear to be underway are such that long term prospects are for increases in dairy production. On the consumption side also some further increase in population and in per capita consumption are expected. Although the general production tendencies therefore appear to be continuing upward there are significant regional and area variations, related to prevailing types of farming and the changing prospects of competing enterprises.

The Northeastern and Lake States dairy region

Consistent increases in dairy-cattle numbers have been occurring for several years throughout the dairy belt extending from the Lake States eastward through the Northeast. This tendency has undoubtedly been influenced by significant changes in production technique and practices. In the northeastern States experimental data and farm-management studies of changing farm practices indicate that increases in milk production are related to the increased use of lime and fertilizer and more frequent re-seeding to legumes and improved grasses. In the Lake States a marked increase in the proportion of alfalfa and other legumes in the roughage feed is definitely improving both the quantity and quality of the average dairy ration. As the full influence of improved cropping practices is not likely to be felt for several years, and many dairymen are still in the early stages of adopting the improved practices, a continuing stimulus to production may be anticipated.

The Corn Belt

From 1934 to 1938 the general tendency through the Corn Belt was away from dairy cows except in the areas rather definitely committed to commercial dairying. Numbers on January 1, 1939, however, indicate a reversal of this trend. The A. A. A. programs, through their effect on farm incomes and upon the relative advantages of other enterprises, have probably retarded certain long time adjustments toward dairying which seem likely to occur eventually in the Corn Belt. On the other hand, these same programs have resulted in an increase in hay and pasture acreage along with the decrease in grain acreage.

Not only have these changes in acreage been occurring but marked increases in yields per acre both for hay and grain are underway. It is estimated for the Corn Belt as a whole that hybrid corn by 1945 will have increased the average yeild on the total commercial corn acreage by approximately 16 percent as compared with the 10-year average yeild for 1923-32. Perhaps half of this increase had occurred by 1939. Similarly, the substitution of legumes for lower yielding hays has already increased the

normal yield of tame hay by about 7 percent in the Corn Belt and by 1945 may easily reach 15 percent. If further limits on corn production are necessary, the proportion of hay and pasture to concentrates may become still higher. This seems likely to encourage dairying.

The Cotton Belt

The Cotton Belt experienced a rapid percentage rise in dairy-cattle numbers from 1928 to 1934. After some decline to 1936, numbers levelled out and then showed a tendency to increase in 1939, but are still 6 percent below the 1934 peak. Although the long-time trend appears to be upward in the Cotton Belt it will probably be closely paralleled by increased local consumption of milk and dairy products. The absolute increases in commercial production have thus far been small compared with those in the dairy regions of the north except in certain localized areas.

Major wheat regions

The tendency in the wheat type-of-farming regions has been definitely away from dairying in recent years, although dairy-cow numbers showed a slight upturn on January 1, 1939.

Drought conditions have undoubtedly had much to do with this trend and some further recovery may be expected when weather conditions improve and more normal crop and pasture conditions are restored. But any marked expansion beyond local needs, seem very unlikely.

Range livestock regions

Dairy production in the range livestock regions has tended downward since 1934. Although some recovery is anticipated with more normal weather conditions prevailing no particular increase in numbers of production is anticipated. Long-term natural and economic conditions in the range livestock regions appear less favorable for dairy cows than for beef cattle. Depression conditions may cause a temporary increase in cows milked but there seems to be no reason to expect any marked trend in this direction.

Mixed and general farming regions

Mixed and general farming regions scattered throughout the country show some divergent dairy tendencies but in general they appear to be moving in the direction of increased dairy production although at a more gradual rate of increase than the dairy regions, the Corn Belt, or the Cotton Belt.

Fruit and truck farming regions

In the fruit and truck farming regions it appears that dairy-cow numbers have remained almost constant in recent years with no indication of any trend up or down. In most of these areas the production of fruits and vegetables has been expanding to meet the increasing demand for these commodities. Additional resources have been more profitably employed in these enterprises than in dairying. This situation may later change but there seems to be no immediate prospect of an upward trend in dairy production in these regions.

Trends in the Marketing of Dairy Products

Retail and wholesale distribution of fluid milk and cream in the larger cities has developed into a complicated marketing structure, characterized by rigid sanitary regulations, complex processing and delivery operations, heavy capital investments, and large-scale business units. The system is also highly organized from the standpoint of corporation control of capital and the unionization of labor.

Changes in distribution methods

There are increasing indications during the last few years of changes in distribution methods designed to promote a greater volume of sales. These include the development of sales through stores, the use of paper containers and half-gallon and gallon containers for retail sales, and various plans of giving price advantages to consumers on retail routes where regular deliveries exceed specified minimum quantities. Store sales have increased, and in most of the larger markets store prices are below those charged for home delivery on retail milk routes. The increased use of single-service containers is mostly in connection with store sales.

The furnishing of milk to relief clients which has been followed in a number of cities for several years, has more recently been expanded into milk-depot schemes, whereby persons on relief may buy milk at about half the regular price. This has increased milk consumption in such cities.

A more general outgrowth following the depression years has been the rapid increase in the number of farmers' cooperative associations engaged in distributing milk. There are approximately 100 such associations today whose main business is the distribution of milk. This number is almost four times larger than it was 10 years ago. In addition, many other cooperative associations are distributing milk as a side-line activity. The total volume of milk handled is as yet comparatively small, but it has been increasing rapidly.

Some of the foregoing developments are the result of depression conditions which emphasized the rigidity of retail prices and distribution costs for fluid milk and cream. Enthusiasm for them may decline if and when price relationships change. Others are still in an experimental stage and may not prove to be so beneficial in increasing consumption as they now seem. All of them, however, may prove to be highly significant from the standpoint of the longer time outlook.

Butter marketing undergoes changes

In the marketing of butter there is a trend toward the development of concentration points in producing areas where the butter is assembled, graded, and packed for shipment direct to the consuming markets. This shift has not only introduced some new marketing methods, but also has reduced the quantity of butter available for open trading in wholesale terminal markets.

An important feature of such programs is increased emphasis of quality improvement and standardization. Then, too, cost reductions have been made possible through the use of less expensive and lighter bulk-butter containers,

and through more efficient transportation arrangements.

Market control interpreted by Court Decision

On June 5, 1939 the Supreme Court of the United States rendered decisions upholding the constitutionality of the Agricultural Marketing Agreement Act of 1937 and the validity of Federal milk control plans in the New York and Boston marketing areas.

Since the decision of the Supreme Court in June the number of requests for Federal assistance for stabilizing milk markets has increased. In two large markets, - Chicago and New Orleans, hearings on proposed agreements were held during the month immediately following the decision. The handling of milk is now regulated by the Federal Government in 26 markets. A number of petitions for Federal assistance in other markets is now pending. In some markets such regulation is complementary to similar programs undertaken by the States in which these markets are located.

The two principal points contested in the New York and Boston milk cases were the right of the Federal Government to fix minimum prices to producers of milk moving in interstate commerce and the right of the Federal Government to establish a program including the principle of equalization. The Court also considered several other legal questions raised with respect to the provisions of the Agricultural Marketing Agreement Act of 1937 and the Orders, including the obligation of cooperatives to comply with provisions relating to equalization, the right of cooperatives to blend the net proceeds from its sales after complying with equalization provisions, the validity of nearby differentials, the possibility of eliminating certain milk from the pricing provisions of the Order and the delegation of authority to the Secretary of Agriculture to establish marketing areas, the delegation of authority to producers to approve a marketing order without an agreement of handlers, and the delegation of authority to cooperatives to cast the votes of producer patrons. With respect to these and other questions, the Court upheld the contentions of the Government.

There are few large markets in the United States in which milk does not move in interstate commerce. The effect of the Supreme Court decisions point to gradual expansion in milk control and to more general acceptance of milk control as a permanent feature in stabilizing fluid-milk markets.

Release Date
November 10. P.M.

THE OUTLOOK FOR POULTRY AND EGGS (INCLUDING TURKEYS) FOR 1940

After considering all important elements in the poultry, egg, and turkey outlook for next year, and assuming that there will be a considerable increase in the general level of consumer demand, the Bureau of Agricultural Economics expects:

The feed-egg ratio to continue less favorable from the poultry producers' viewpoint than last year and possibly less favorable than the 1926-37 average.

Hatchings during 1940, therefore, to be somewhat smaller than the large hatch of 1939.

Laying flocks in 1940 to be somewhat larger than in 1939.

Total egg production to be slightly larger than a year earlier.

Egg marketings in 1940, therefore, to be slightly larger than in 1939.

Egg prices to remain less favorable than a year earlier to producers for the remainder of 1939 because of larger storage holdings and some increase in current production. The effect of larger consumers' income on prices during 1940 as compared with a year earlier is expected to more than offset the effect of any probable increase in production unless winter weather conditions are unusually mild.

Marketings of poultry meat in the first half of 1940 to be larger than in 1939 because of the heavy 1939 hatch of both chickens and turkeys. Poultry marketings in the last half of 1940 to be smaller because of the expected smaller 1940 hatch.

Fall and winter broiler production to be somewhat larger than last year's record high production unless relative feed costs increase considerably. If production increases, the situation is likely to be less favorable for producers than in the preceding year.

Storage stocks of poultry meat in early 1940 to be larger than in 1939. The into-storage movement in late 1940 to be smaller than in 1939 because of smaller marketings.

Prices of chickens to be less favorable in the winter of 1939-40 than a year earlier because of greatly increased marketings. In the spring of 1940, the effect of increased consumer incomes on prices may offset the effect of the expected larger marketings as compared with a year earlier. The expected decrease in marketing in the latter half of 1940 will tend to increase prices as compared with 1939.

Cash farm income from poultry and eggs in 1940 to be larger than in 1939 because of improved consumer demand. However, feed costs will also be higher.

Turkey prices through the remainder of this season to be less favorable to producers than a year earlier.

Turkey production in 1940 to be somewhat smaller than the record crop of 1939, which was 22 percent above last year and 15 percent above the previous record high production in 1936.

Possible Economic Effects of Present War on Domestic Poultry and Egg Industry

Any influence which the European War may have on prices for poultry and eggs will be largely a result of its effects on our domestic economy, since it is not probable that exports of poultry meats or of eggs and egg products will increase within the next year to a sufficient extent to affect prices materially. Imports in 1938 were less than one-fourth of 1 percent of domestic production and have been equally small so far in 1939 and, therefore, need not be considered.

The general stimulus of the war to domestic business activity and consumer incomes will add to the domestic demand for poultry and eggs but during the next 6 to 12 months the poultry industry probably will not be greatly affected by the war.

Effects of the World War

In contrast to some of the other agricultural products, eggs and poultry were not important in our export trade to Europe during the World War. At no time during or immediately following that war did the value of egg exports represent more than approximately 2-1/2 percent of the cash farm income from this product. The following table shows how these exports varied during this period. Exports of poultry meat were even less important than those of eggs, and never represented more than 1-1/2 percent of the farm cash income from this source. The great majority of these exports were shipped to Latin American countries, with only a small percentage going to Europe. (The Latin American countries have greatly increased their production of poultry and eggs since the World War, so this market will be available only to a limited extent during the present war).

United States exports of eggs and egg products and of poultry meat, fiscal year beginning July 1, 1909-20

Year beginning July 1	Exports of shell eggs	Exports as a percentage of all eggs sold by farmers	Value of exports of eggs and egg products	Value as a percentage of the value of all eggs sold by farmers	Value of exports of poultry meat	Value as a percentage of the value of all chickens sold by farmers
	1,000 dozen	Percent	1,000 dollars	Percent	1,000 dollars	Percent
Average 1909-13	13,170	.80	2,945	.91	899	.72
1914	20,784	1.22	5,093	1.51	1,188	.87
1915	26,396	1.53	6,345	1.76	1,561	1.12
1916	24,926	1.50	7,641	1.65	1,327	.82
1917	18,969	1.15	7,693	1.35	1,241	.63
1918	28,385	1.60	12,786	1.84	3,799	1.51
1919	38,327	2.11	19,432	2.51	1,628	.54
1920	26,960	1.47	11,453	1.82	1,065	.36

The major effect of the World War on the poultry industry was the result of changes in the general price level. Prices of specific commodities seldom change at the same rate when violent changes in the general price level take place. However, prices for certain groups of commodities do change in a similar way.

Following the start of the World War in August 1914, there was a brief upward movement in commodity prices, similar to that which has occurred since the outbreak of the present war. Following the flurry at the beginning of the World War, there was no significant change in prices of agricultural commodities for about 2 years. In 1916 the index of wholesale food prices began to rise and prices of eggs and chickens followed. The rise in egg prices became apparent in September of that year - some 2 years after the war started. The all-time high in farm prices for eggs was reached in December 1919 when they were 69.6 cents per dozen. This was about 18 cents a dozen higher than the farm price of eggs at the time of the signing of the Armistice, 13 months before. The all-time high of chicken prices was reached in 1920 when, during April and July, the farm price was 28.4 cents a pound. As a matter of fact, the post-war period from 1918 through 1920 was one of much higher prices for poultry and eggs than was the period of actual war operations.

Wholesale food prices and farm prices of poultry feed, chickens and eggs, 1910-23

Index numbers (1910-14 = 100)

Calendar year	Wholesale prices: All foods	Prices received by farmers: Poultry feed 1/	Eggs	Chickens
	Percent	Percent	Percent	Percent
Average 1910-14	100.0	100.0	100.0	100.0
1910	100.6	98.6	106.1	100.9
1911	96.1	92.5	88.8	93.2
1912	103.6	104.3	102.5	94.0
1913	99.5	95.4	98.5	105.1
1914	100.3	109.1	104.1	107.7
1915	101.4	113.9	98.5	100.9
1916	117.4	127.0	112.2	115.4
1917	162.0	218.1	161.4	144.4
1918	184.7	236.5	182.7	185.5
1919	200.8	239.5	209.6	210.3
1920	213.0	220.9	220.8	224.8
1921	140.5	92.5	143.7	178.6
1922	135.8	95.4	126.9	164.1
1923	143.7	119.4	134.5	163.2

1/ Includes corn, wheat, oats, and barley, weighted in the same manner as in the feed-egg ratio.

Feed costs were high in relation to chicken and egg prices during the period when general prices were increasing rapidly; feed costs were low in relation to chicken and egg prices during the period of declining prices in the post-war depression. As a result of the unfavorable feed-egg ratio, farm production of eggs dropped off slightly from 1916 to 1918. Poultry producers were in a less favorable position during the actual period of the war than were producers of some of the other staple farm commodities.

Possible Effects of the Present War

It is not probable that exports of poultry meats or of eggs and egg products will increase within the next year to a sufficient extent to affect prices materially.

During the last few years, most European countries have been attempting to become self-sufficient so far as their supplies of agricultural commodities are concerned and this has been true in connection with poultry and eggs. At the outbreak of the previous war many of the belligerents were unprepared with respect to food supplies. This has not been true in the case of the present war, as they have been accumulating stocks of some foods for just such a contingency. Furthermore, eggs and poultry hardly would be considered basic food commodities for war purposes in contrast with more staple commodities. Consequently, the immediate need for imports into these countries has diminished.

Many of the countries in Europe that are neutral in the present conflict have been on an export basis for poultry and eggs. If these countries have difficulty in obtaining feed supplies, their production of poultry products may be somewhat reduced but this does not necessarily indicate that the United States will be able to increase its exports correspondingly since the belligerent nations may curtail their consumption of poultry and eggs.

The growth of the frozen and dried egg industry in the United States during recent years is a factor that could tend to increase exports slightly more during the present war than they increased during the World War. About 4 percent of the total eggs produced in the United States from 1933 to 1937 were used in a dried or frozen form. Production of frozen and dried eggs could be expanded quickly, but it is not expected that any considerable proportion of the domestic egg production will be exported in this form at least within the next year.

It is evident that any influence that the war may have on poultry and egg prices will be largely a result of its effects on our domestic economy. The general stimulus to domestic business activity and consumer incomes will add to the domestic demand for poultry and eggs. During the next 6 to 12 months, however, the poultry industry probably will not be greatly affected by the war.

The feed situation

Feed supplies for livestock are ample again this season. The total supply of all grains, including wheat and wheat products available for feeding and carry-over, will be about 6 percent above the average of the predrought period, 1928-32, and about 4 percent larger than the 1938 supply. Feed-grain production was abundant in most of the Corn Belt States but poor in the plains area from North and South Dakota to Texas and in portions of the Southern, North Atlantic, and Far Western States. The unequal distribution of the current production will be partly adjusted by a heavy movement of feeder stock into surplus-feed areas. The supply of feed grains per grain-consuming animal unit, after allowing for an increase of about 7 percent in livestock numbers, is estimated to be about 3 percent smaller than a year ago but 8 percent larger than the average for 1928-32.

During September, 59 percent more eggs were required to purchase 100 pounds of poultry feed at Chicago prices than a year earlier and 12 percent more than the 1928-37 average. Almost 2-1/2 dozen more eggs were required to buy 100 pounds of feed in this month in 1939 than in 1938. The feed-egg ratio will probably continue less favorable to producers than last year and may be less favorable than the 1928-37 average.

The feed-egg ratio at Chicago, by selected weeks 1/
(Dozens of eggs required to buy 100 pounds of poultry ration)

Period	Week ending as of 1939											
	Jan. 7	Feb. 4	Mar. 4	Apr. 1	May 6	June 3	July 1	Aug. 5	Sept. 2	Oct. 7	Nov. 4	Dec. 2
	Dozen	Dozen	Dozen	Dozen	Dozen	Dozen	Dozen	Dozen	Dozen	Dozen	Dozen	Dozen
Average 1928-37	4.67	5.45	6.23	6.69	6.83	7.12	7.00	6.65	6.06	5.19	4.33	4.09
1938	5.30	6.68	6.89	6.70	5.73	5.44	5.50	4.98	4.26	3.91	3.48	3.56
1939	5.02	6.52	6.38	6.35	6.84	7.45	6.71	5.85	6.13	6.10		

1/ These data are published monthly in the Poultry and Egg Situation reports issued by the Department. Feed-egg and feed-chicken ratios based on farm prices are published in its Monthly Poultry and Egg Production Report.

Hatchings

The total number of chicks hatched commercially during 1939 was the largest for any year of record. Hatchings were approximately 21 percent larger than those of 1938, and 19 percent larger than in 1936--the previous high year of record. This increased production represents in part an increase in the number of hatchery chicks bought by producers for replacement and expansion purposes, as well as a continuation of the shift from home hatchings to commercial hatchings. Because of the shift from farm to commercial hatchings, total hatchings have increased by a smaller percentage than have commercial hatchings.

Since 1929, when records on commercial hatchings first became available, they have followed a definite 3-year cycle - 1 year down and 2 years up. Should this cycle be continued, fewer chicks will be produced by hatcheries in 1940 than were produced in 1939.

The continuation of an unfavorable feed-egg ratio for the remainder of 1939 and the spring of 1940 as compared with a year earlier will probably reduce the demand for chicks, especially as there will be fewer needed for flock-building purposes owing to some expansion in the number of pullets raised this year and retained for egg-producing purposes.

Laying flock size

On September 1, laying flocks were 2 percent below the 10-year September 1 average, but 4 percent above the relatively low level of last year.

Hens and pullets per farm flock on the first day of the month

Year	Jan.	Mar.	May	June	Aug.	Sept.	Oct.	Dec.
	Number	Number	Number	Number	Number	Number	Number	Number
Average 1928-37	86.0	82.3	75.1	70.9	64.2	63.5	68.6	79.8
1938	77.6	75.8	68.6	65.0	59.3	59.8	65.6	78.0
1939	82.8	79.8	72.2	68.5	61.3	62.1	68.0	

The increase over last year in the number of pullets entering the laying flocks indicates that flocks may be somewhat larger during the coming year than during 1939, although the present unfavorable feed-egg ratio will tend to hold any increase to small proportions. Laying flocks may average smaller on January 1, 1941, than on the same date in 1940, and about equal to the size of flocks on January 1, 1939.

Rate of lay

During 1939 there has been a continuation of the record high rate of lay per hen. The aggregate of the nine daily first-of-the-month layings from January 1 to September 1 fell below the layings for the corresponding period last year by less than 1 percent and exceeded all other years on record for the same period. Egg production per hen is expected to remain well above the 10-year average, unless winter weather conditions are exceedingly severe.

Eggs laid per 100 hens and pullets on the first day of the month

Year	Jan.	Mar.	May	July	Sept.	Total Jan.-Sept.	Oct.	Dec.
	Number	Number	Number	Number	Number	Number	Number	Number
Average 1928-37	17.9	37.7	55.5	42.8	32.7	351.8	25.5	15.2
1938	22.7	42.2	58.1	46.5	35.3	389.6	28.2	19.9
1939	24.6	41.4	57.6	45.9	36.0	386.5	27.5	

Total egg production

Total egg production from January 1 to September 1, 1939, as reflected by sample farm flocks, was 4 percent larger than during the same period of last year and 6 percent larger than the 1928-37 average. Increased numbers of layers, as compared with last year, have more than offset the slight decrease in the rate of lay per bird.

Eggs laid per farm flock on the first day of the month

Year	Jan.	Mar.	May	July	Sept.	Total Jan.-Sept.	Oct.	Dec.
	Number	Number	Number	Number	Number	Number	Number	Number
Average 1928-37	15.4	31.1	41.3	28.3	20.4	258.7	17.3	12.3
1938	17.8	32.5	39.4	28.2	20.7	264.6	18.3	15.9
1939	20.4	33.3	41.1	29.0	21.7	274.2	18.5	

With some increase indicated in the number of layers next year and no great change probable in the rate of lay per bird, total egg production during the coming year may be slightly larger than in 1939. Because of the expected smaller hatch in 1940, total egg production in the last few months of that year may be smaller than in 1939.

Egg marketings

As a result of increased egg production, egg marketings during the first 8 months of 1939 were 8 percent larger than in 1938.

Unless weather conditions are severe during the winter, marketings during the remainder of 1939 and most of 1940 will probably be slightly larger than in the previous year. Egg marketings in the last few months of 1940 may be smaller than in 1939 and about equal to marketings in 1938.

Egg storage

Stocks of shell eggs in cold storage in the United States at the peak of the 1939 season, August 1, were larger than a year ago by about 600,000 cases, or 10 percent. Stocks of frozen eggs were larger by an amount equivalent to about 260,000 cases of shell eggs, or 7 percent.

Combined stocks of shell and frozen eggs were about 8 percent above the abnormally low stocks of last year but 8 percent below the 1928-37 average. In the latter part of this report some of the reasons why storage stocks, particularly of shell eggs, have been smaller in recent years than in former years will be discussed.

Supplies of eggs available for storage in 1940 are expected to be slightly larger than a year earlier. The outcome of this year's egg-storage deal will affect the quantity of eggs stored this spring. Should the present deal turn out favorably, storage stocks of shell and frozen eggs in 1940 may be about the same or slightly larger than in 1939.

Storage stocks of shell and frozen eggs, converted to shell-egg equivalent 1/

Year	Jan. 1	Mar. 1	May 1	Aug. 1	Sept. 1	Oct. 1	Dec. 1
	1,000 cases	1,000 cases	1,000 cases	1,000 cases	1,000 cases	1,000 cases	1,000 cases
Average 1928-37	2,730	1,421	6,310	12,138	11,458	9,968	4,947
1938	3,951	2,817	6,515	10,278	9,514	7,915	3,670
1939	2,099	1,436	5,896	11,149	10,482	8,900	

1/ Cases of 30 dozen eggs.

Egg prices

Prices received by farmers for eggs were lower than last year during most of the first 8 months of 1939. The effect on prices of larger consumers' income was more than offset by larger egg production, particularly in January and from April through June. Since July 1, larger storage stocks and some increase in current production have kept prices below last year. During the remainder of 1939, the price effects of larger storage stocks and increased production may continue to be only partly offset by the effect of larger consumers' income, as compared with 1938. Prices will probably be higher in 1940 than in 1939 because of the expected increase in consumers' income.

Price per dozen received by farmers for eggs

Year	Jan. 15	Mar. 15	May 15	July 15	Sept. 15	Nov. 15
	Cents	Cents	Cents	Cents	Cents	Cents
Average 1928-37	25.9	18.0	17.5	18.7	23.9	31.1
1938	21.6	16.2	17.6	19.9	24.9	29.0
1939	18.8	16.0	15.2	16.5	20.6	

Marketings of poultry meats

Poultry marketings in the first 8 months of 1939 were 24 percent above those in 1938 mainly because of the increased number of hens sold from the larger laying flocks and the increased production of winter broilers.

Because of the heavier hatch and the larger laying flocks now on hand, market receipts for the remainder of 1939 and the first months of 1940 are expected to continue above those of the previous year. The larger production of turkeys will also increase receipts of dressed poultry in this period. Receipts of dressed poultry during the spring of 1940, will partially depend on the price of eggs then prevailing. Laying flocks are expected to be slightly larger next spring than last, so if farmers sell the same percentage of hens as in 1939, receipts of poultry may be slightly larger. Because of the prospective smaller hatch in 1940, marketings of poultry during the last half of that year are likely to be smaller than in 1939.

Fall and winter broilers

Some further increase in the number of fall and winter broilers to be raised in the principal commercial broiler-producing areas in the East is in prospect for the coming fall and winter, according to reports received from representative producers. Despite the fact that the past season was one of record-high production and that prices were comparatively low, many commercial producers were able to realize some profit in their operations. This was possible partly because of low feed prices and partly through efficient management in commercial operations. Any further increase in feed costs will tend to modify present indications of production for the coming season. Should any material expansion of production occur, it probably would more than offset whatever price advantage would be gained through a more favorable demand situation.

Storage stocks of poultry meats

Stocks of frozen poultry at the peak in early 1940 are expected to be heavier than in 1939 but lighter than the record holdings in 1937. Because of the larger production of chickens and turkeys in 1939, the net into-storage movement during the period of accumulations from September to January is expected to exceed that of a year ago but to be smaller than the movement in 1936.

The into-storage movement of poultry during the latter part of 1940 is expected to be smaller than that of 1939.

United States storage stocks of poultry meats

Marketing season	Sept. 1	Net into storage movement Sept. 1 - Jan. 1	Jan. 1
	1,000 pounds	1,000 pounds	1,000 pounds
10-year average (1928-29 to 1937-38)	46,368	79,426	125,794
1936-37	65,488	122,399	187,887
1937-38	63,733	59,767	123,500
1938-39	54,941	84,167	139,108
1939-40	63,789		

Chicken prices

During the first 8 months of 1939, prices received by farmers for chickens have been considerably below both last year and the 1928-37 average. The effect on prices of larger market supplies of poultry during the remainder of the year and of larger supplies of meats competing with poultry probably will be only partly offset by the effect of larger consumer incomes.

Price per pound received by farmers for chickens

Year	Jan. 15	Mar. 15	May 15	July 15	Sept. 15	Nov. 15
	Cents	Cents	Cents	Cents	Cents	Cents
Average 1928-37	15.1	15.7	16.3	15.8	16.0	14.9
1938	16.7	15.9	16.1	15.0	14.3	13.6
1939	14.0	14.3	13.9	13.7	13.6	

Storage supplies of poultry in the first half of 1940 will probably be considerably larger than in 1939 and fresh supplies may be slightly larger. However, consumers' incomes may increase sufficiently to offset the effect of these larger supplies.

The expected decrease in 1940 hatchings will tend to increase prices in the latter half of 1940 as compared with 1939.

Long-Time Factors in the Chicken and Egg Outlook

The expansion of the poultry and egg industry during 1939 is expected to lead to some contraction of production in the latter part of 1940. The swing of egg production during the next 5 or 10 years, however, is likely to be upward from the relatively low levels of the period from 1932 to 1936.

The peak in the production of eggs on farms of about 39 billion was reached in 1930. Because of droughts and unfavorable economic conditions, production declined to about 33 billion in 1935 but it increased to 37.6 billion in 1937. In view of the large volume of egg production of the poultry industry at its peak in 1930, it seems reasonable to expect some further increase in production. With the increased production of eggs per hen, a corresponding increase in the number of layers is not expected. The increase in population during the last decade is a further factor requiring some increase in total production if the former per capita consumption is to be regained. Per capita consumption of eggs in 1938 was about 25-1/2 dozen; of chickens it was about 20 pounds (live weight) as compared with an average of 28 dozen eggs and 23 pounds of chicken from 1925 to 1929.

Specific factors pointing to an increased output of eggs are (1) a long-time tendency toward a higher rate of lay per bird, (2) no further increase in present heavy mortality rates, and (3) a continuation of the trend toward more efficient production methods.

A trend toward more commercialized methods is important in the production of poultry meats. The development of more efficient egg-production methods has reduced the supply of poultry meats arising as a byproduct of egg production. The growing practice of sexing baby chicks is further reducing the supply of poultry meat from commercial egg production. This has encouraged the production of broilers as a specialized enterprise and may possibly lead to similar methods in the production of roasters and heavier meat birds. Commercial production of fall and winter broilers has increased to such an extent that the former wide margin between prices of "out-of-season" broilers and prices of hens has been almost completely eliminated.

Regional Trends in Egg Production

In 1938, egg production was below the record high average of 1927-31 in all regions except the North Atlantic and the East North Central States. The West North Central States showed the greatest reduction, largely as a result of the droughts in 1934 and 1936. Egg production in this area increased in 1938, and more normal crop conditions there during the next few years will undoubtedly continue to bring about a recovery of production.

Egg production in the highly commercialized far Western States has declined in contrast to an increase in the similarly commercialized North Atlantic States as compared with the 1927-31 average. One reason for the decrease in production in the far West has been the low level of prices in recent years, which has made it difficult for eggs from that area to bear the cost of transportation to eastern markets. Another factor has been the increase in the proportion of high-quality eggs produced in other areas. Such eggs now compete strongly in the eastern metropolitan markets with eggs from the Pacific Coast. Flock sizes increased considerably in the Western States during 1939, but it is not probable that the proportion of eggs produced in this area will be so large in years to come as it was in the period from 1928 to 1931.

For the last 15 years, about 30 percent of the hens in the United States have been kept in the South but the rate of lay per bird has not increased quite so much as for the rest of the country. This region will probably endeavor to increase production in the future, because of a more diversified agriculture and to care for its increasing urban population.

Changes in Seasonality of Egg Supplies

Since 1930, there has been a pronounced shift in the form in which eggs are stored. This is shown by storage stocks on the first of August, which is usually the month of peak holdings for the year. Holdings of shell eggs have declined from about 10,000,000 cases annually during the late 1920's to a little less than 7,500,000 cases annually during the last 5 years, whereas holdings of frozen eggs in those same periods have increased from a shell-egg equivalent of about 2,000,000 cases to about 4,000,000 cases. The total holdings of shell plus frozen eggs, however, have shown only a slight decrease of a little less than 1,000,000 cases.

Cold storage holdings of shell and frozen eggs on August 1

Period	Shell eggs		Frozen eggs 1/		Total holdings	
	1,000 cases	Percentage change	1,000 cases	Percentage change	1,000 cases	Percentage change
Average 1925-29	10,015		1,995		12,010	
Average 1935-39	7,487	-25.2	3,876	+ 94.3	11,363	- 5.4

1/ Shell egg equivalent.

There are at least two important reasons for the decline in storage holdings of shell eggs during recent years: (1) the increasing supply of frozen eggs, and (2) the pronounced seasonal shift that has occurred in the production of shell eggs.

There has been a consistent and rapid growth in the production of frozen eggs from the period following the World War until the present time. Before that War, eggs were broken and frozen as a means of salvaging egg meats that otherwise would be wasted because of cracked and dirty shells, or because of a lack of proper refrigeration facilities. Following the war, however, the greater convenience of frozen eggs in contrast to shell eggs began to be appreciated by large commercial users.

Not only are frozen eggs a convenience to food manufacturers, but the eating habits of Americans have been undergoing a decided change in favor of prepared foods. Home-baking of bread and pastries has practically disappeared in urban homes, and home-made salad dressings, candies, and confectioneries of all kinds have been largely supplanted by commercially-made products. Shell eggs, of course, are used exclusively in the home-made products whereas frozen eggs are used almost exclusively in the commercially-manufactured products. This has been especially true in the last few years, during which many improvements have been made in the methods of breaking, freezing, and transporting frozen eggs, as well as in the use of higher quality eggs and improved methods of sanitation.

Estimates of production of frozen eggs begin with 1921 and show an increase from 46,000,000 pounds produced in that year to 225,000,000 pounds produced in 1937, the peak year of production to date.

Frozen-egg production, 1921-38 1/

Year	Total frozen-egg products	Shell-egg equivalent	Year	Total frozen-egg products	Shell-egg equivalent
	Million pounds	Million cases		Million pounds	Million cases
1921	46	1.3	1930	185	5.3
1922	49	1.4	1931	152	4.3
1923	71	2.0	1932	138	3.9
1924	57	1.6	1933	171	4.9
1925	79	2.3	1934	198	5.7
1926	92	2.6	1935	206	5.9
1927	129	3.7	1936	208	5.9
1928	148	4.2	1937 2/	225	6.4
1929	155	4.4	1938 2/	140	4.0

1/1921-36 unpublished estimates made by U. S. Tariff Commission, based on original entry into cold storage.
2/Estimated by Poultry Section, Division of Marketing and Marketing Agreements.

It will be noted in the above table that the production of frozen eggs in 1938 declined a great deal from 1937. But total consumption in 1938 did not decline so drastically as might be assumed, because large stocks of frozen eggs were carried over from the 1937 season and were consumed in 1938.

The other important reason for the decline in shell-egg holdings has been the increasing production of fresh eggs during the fall and winter, particularly during November, December, January, and February. This increase has occurred in all regions and in farm flocks as well as commercial flocks. Not only has there been an increase in the actual number of eggs produced per hen per year, but a larger proportion of the total annual egg crop is being produced in these 4 months, as shown in the following table:

Seasonal variation in eggs laid per 100 layers on the first day of each month

(Percentage each month is of the 12-month aggregate)

Year	Jan. 1	Feb. 1	Mar. 1	Apr. 1	May 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent
Average 1925-27	3.7	5.2	9.8	13.4	13.8	12.4	10.6	9.4	8.2	6.3	4.0	3.2
Average 1936-38	4.9	6.3	8.7	12.6	13.2	12.0	10.3	9.0	7.8	6.3	4.7	4.2
Increase from 1925-27	1.2	1.1	-	-	-	-	-	-	-	-	0.7	1.0
Decrease from 1925-27	-	-	1.1	0.8	0.6	0.4	0.3	0.4	0.4	0	-	-

There has been a compensating decline in the proportion of the annual egg supply produced in the other 8 months of the year, particularly during the 3 peak-production months -- March, April, and May. This increasing proportion of eggs laid in the 4 months, November through February, is even more pronounced in the North Atlantic region where many commercial flocks are located.

This increasing proportion of the total annual egg crop produced in the winter months has been occurring in response to high prices for fresh eggs in these months and to the increasing average production per bird. Many of the scientific advances made in feeding, breeding, and housing poultry have been directed toward obtaining more eggs per bird in the winter. As an example, it long has been the practice for extension workers to advocate earlier hatching so that pullets would come into production during the high-priced months of the fall and winter instead of during the following spring. As would be expected, the increased production during these months has caused not only a flattening out of the seasonal curve in egg production, but a flattening out of the seasonal curve in farm prices for eggs.

Seasonal variation in farm prices for eggs

(Percentage each month is of a 3-year annual average)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent	Per-cent
Average 1925-27	130.3	100.2	73.6	74.2	74.7	74.5	79.5	85.4	98.5	117.8	142.6	148.7
Average 1936-38	102.3	91.4	81.3	80.0	81.2	82.9	89.9	96.7	109.6	121.1	135.7	127.9
Decrease from 1925-27	28.0	8.8	-	-	-	-	-	-	-	-	6.9	20.8
Increase from 1925-27	-	-	7.7	5.8	6.5	8.4	10.4	11.3	11.1	3.3	-	-

As is shown in the preceding table, there was much more fluctuation of the average monthly prices around the 3-year annual average price during the 1925-27 period than there was during the 1936-38 period. It is apparent from the table that prices in the latter period have not risen as high in the winter months nor fallen as low in the spring months in relation to the 3-year annual average as in the former period.

It seems probable that the proportion of the total egg production to be stored as shell eggs will continue to decline because of the increasing use of frozen eggs, as well as the increased production of eggs in the fall and winter months, but it is not probable that the decline will continue at so rapid a rate as it has maintained during the last few years. There is a point at which no more frozen eggs can be profitably substituted for shell eggs, but it is impossible to say, at present, how nearly this limit has been approached. But if per capita consumer buying power should return to somewhere near its predepression level, it seems probable that the demand for shell eggs would increase to such an extent that storage holdings could be again increased.

Turkey Situation

The number of turkeys raised in 1939 was about 32 million birds, which was 22 percent more than were raised in 1938 and 15 percent more than the previous record crop of 1936. Large increases were reported in all areas. The average live weight of turkeys when marketed is expected to be slightly above that of last year. Although marketings began unusually early this year, the proportion of the crop to be marketed after the end of November will be larger than last year.

Number of turkeys raised

Region	Number raised			1939 as a percentage of 1938
	1931-35 average	1938	1939 1/	
	Thousands	Thousands	Thousands	Percent
North Atlantic	1,054	1,661	2,021	122
East North Central	1,700	2,692	3,382	126
West North Central	5,736	7,829	9,942	127
South Atlantic	1,956	2,166	2,445	113
South Central	5,946	5,869	6,648	113
Western	4,694	6,062	7,519	124
United States	21,086	26,279	31,957	122

1/ Preliminary.

As a result of the very large production of turkeys, prices will be lower for the crop of 1939 than for the crop of 1938. However, the effect of the larger supplies on prices will be partly offset by the effect of larger consumer incomes. Another factor that has helped to support prices in recent years has been the rapidly increasing use of turkeys throughout the year.

Price per pound received by farmers for turkeys

Period	Oct.	Nov.	Dec.	Jan.
	Cents	Cents	Cents	Cents
Average 1928-37	17.9	18.9	18.5	18.1
1937-38	16.7	17.9	18.0	17.5
1938-39	16.5	17.1	18.4	18.3
1939-40	15.3			

Large increases in production, such as occurred this year, have invariably been followed by recessions in production. Such a recession is to be expected next year. The extent of the decrease will depend partly upon the outcome of the present marketing season and partly upon relative feed costs next year. Prices of turkeys will be lower this year than last but feed costs on the whole will probably not be greatly different. Feed costs next year are expected to be above those of this year.

Long-Time Factors in the Turkey Outlook

The turkey crop of 1939 of about 31,957,000 birds is estimated to be almost double the size of the crop produced 10 years ago. The present crop is equal to about 1 bird for every 4 persons in the United States. This compares with about 1 bird for every 5 persons from the big crop of 1936 and with 1 bird for every 7 persons in 1929. No records exist to show with certainty the production per capita in earlier years. The U. S. Census of June 1, 1890, reported 10,754,000 turkeys on hand. Probably many poults were missed. The number thus reported would be about 1 bird for every 6 persons, but a complete enumeration would probably have shown a considerably larger per capita supply.

Between 1910 and 1930 the losses of poults from blackhead became so serious, especially in the more humid areas, that the expense of producing turkeys for market became prohibitive in many sections. Production was greatly reduced during this period in practically all the States east of the Mississippi River and in the first tier of States west of the Mississippi River where rainfall is also normally abundant. Gains were rapid in the Plains States lying farther west and having more limited rainfall. The far Western States increased production greatly. The total number of turkeys in the humid States and the tier west of the Mississippi River amounted to 73 percent of the United States total in 1910 but fell to 60 percent in 1920 and to 32 percent in 1929. The decrease during this period in the East was only partly balanced by the rapid increase in the West.

With the discovery in 1918 of the cause of blackhead and the development of successful methods for its control, the possibility of renewed successful production of turkeys in the Eastern States was demonstrated. But these improved methods came into use slowly and the number of turkeys continued to decrease in the United States until they reached the low point in 1927 of approximately 14,800,000 birds. This was equivalent to only about 1 turkey for every 8 persons.

Turkey production in large flocks had long been practiced in many parts of the West, because of the advantages large flocks possess in the matter of management and marketing, aside from the problem of disease control. In the humid Eastern States, where production in small farm flocks had been largely discontinued because of the extreme losses of poults, it was now found both possible and profitable to produce turkeys if they were grown in large flocks so they could be kept separate from other

poultry and handled under improved methods of brooding, feeding, and sanitation. Such flocks have gradually grown in number and size in the North Central and Eastern States and are now extending into the South. The principal increase in turkey production during the last decade has come from these large flocks, numbering from a few hundred birds up to several thousand each.

Present numbers of turkeys as compared with 1929 are about 4 times as great in the North Atlantic and East North Central States and between 2 and 3 times as great in the West North Central and Pacific Coast States. Although numbers in most of the West North Central States are now from 2 to 5 times as great as in 1929 and in Iowa 16 times as great, numbers in North Dakota are the same as in 1929. Likewise, in the Rocky Mountain States, while Utah has 3 times as many and Colorado, Wyoming, and Arizona have small increases, the remaining States of this group have considerably fewer turkeys than in 1929. Increases in the South as a whole are relatively small, numbers in the South Atlantic States being only 1.6 times as many and in the South Central States 1.2 times as many as in 1929, with Texas up only 1 or 2 percent.

The proportion of the total crop produced east of the Mississippi River and in the first tier of humid States lying west of that river is now about 47 percent of the United States total compared with only 32 percent in 1929. While numbers of turkeys have been increasing, the number of small farm flocks has continued to decrease in most of that area, but this year there is a definite increase in the number of flocks of all sizes in practically all areas. This increase was particularly marked in the West North Central States where a similar, though less pronounced, increase in number of producers occurred last year also. In Texas and throughout most of the South, the small farm flock of turkeys, numbering less than 100 birds and often only a dozen or two and generally handled in conjunction with chickens, is still the prevailing type. Considerable numbers of turkeys are still produced in such flocks in a number of Northern and Western States, particularly in North Dakota.

Many general farmers who produce their own grain still raise a small flock of turkeys as a side line and will probably continue to do so. Most of these producers allow their turkeys to roam and forage for seed and insects. Many of them feed little or nothing from the bin and give the birds relatively little attention after the poults have passed the early period of severe losses. In sections where losses of poults under such conditions are particularly great, most of these small producers have been eliminated, but in other sections large numbers of such turkey farmers continue to operate. It may be expected that substantial numbers of turkeys will continue to come from this source both from the South and from favored sections of the Grain Belt in the North and West. Many of these producers, by adopting modern methods to the extent that these are suitable to their situation and operations, may be able to reduce their losses of poults substantially and thereby increase their production and their income.

In the competition between different sections in large-scale production, each has its relative advantages and handicaps. Broadly speaking, the most important of these are: on the one hand, cheap feed and relatively low operating costs and equipment, but with the handicap of distant markets; and, on the other, higher costs for feed, equipment, and operation, but with nearby large markets and higher prices for local products. These differences may be less important in many cases than the element of personal management, but in the long run may result in definite shifts in future production between the different geographic areas.

The advantages of different types of birds continue to be a matter of debate. Demands for smaller birds for family use and large birds for hotels and restaurants appear to provide outlets for different types.

The rapid recovery in numbers of turkeys during recent years and the great increase in the number of large flocks have been made possible partly through the development of large-scale hatchery production of turkey poults. Although exact percentages are not known, hatcheries now provide a large proportion of all poults raised. Hatchery poults offer several advantages to growers of turkeys, such as large numbers available for expansion of flocks, early poults, and uniform age and size. They provide at least the possibility of rapid improvement in the average type of bird raised. All of these are factors that facilitate successful marketing of the birds when raised.

Supplemental to the development of this branch of the hatchery industry has been the related development of large flocks of improved strains of egg-laying turkeys which not only lay more eggs but begin to lay much earlier. This development has been particularly marked in California and to a lesser extent in Texas. In addition to the eggs from these important centers of supply, northern hatcheries have obtained considerable quantities of eggs from other southern and border States. At present there appears to be a strong movement in the North to produce locally more of its needed supply of turkey eggs. Many large flocks of breeding birds are being established there for that purpose.

In view of the rapid increase in turkey production during the last few years, it is difficult to determine what future production trends will be. An important factor in this problem, particularly as it applies to the restaurant demand, is the relative price of turkeys and other meats. The reduction in the cost of producing turkey meat, accomplished through improvement in type of bird and methods of growing and feeding, is placing turkeys more fully in competition with other meats and leading to greatly increased consumption of turkeys outside of the holiday season. The extent to which this trend continues will be an important factor affecting the future demand for turkeys.

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November 8, P.M.

THE OUTLOOK FOR MEAT ANIMALS AND MEATS FOR 1940

Summary

Livestock slaughter, and meat and lard production, in 1940 will be larger than in 1939; an increase of 8 or 9 percent in the total dressed weight of livestock slaughtered under Federal inspection seems probable. The increase in 1940 over 1939 will be mostly in pork and lard, as little change is expected in the production of beef and lamb. Total meat production has been increasing since 1937, following a period of short production from 1935 through 1937 resulting chiefly from the severe droughts of 1934 and 1936. Per capita production of federally inspected meats and lard in 1940 will be larger than in any recent year and may be about equal to the 1929-33 average. Marketings of poultry meat in the first half of 1940 are expected to be larger than in the first half of 1939, because of the large hatch of both chickens and turkeys in 1939. In the second half of 1940 poultry marketings probably will be less than a year earlier because of the prospective smaller 1940 hatch.

Consumer demand for meats in the United States in 1940 is expected to be stronger than in 1939, in view of the prospects for substantial increases in industrial activity and consumers' incomes. Foreign demand for pork and lard also is expected to be stronger in 1940 than in 1939.

Effects of the increase in demand upon the general level of livestock prices will be offset largely by the prospective increase in slaughter supplies. The increase in slaughter supplies of hogs will have an important influence upon prices of both cattle and hogs. The expansion in domestic consumer demand will be a much stronger price-supporting factor than the increase in foreign demand.

Supplies

Total meat production in the United States in 1940 will be materially larger than in 1939 and probably will be largest since 1924. All of the increase in 1940 over 1939 will be in pork, as little change is expected in the production of beef and lamb. The proportion of the better grades of beef in the total beef supply will continue large in 1940, perhaps larger than in 1939. Although some expansion in exports of pork and lard is expected in 1940, the absolute increase in production will be considerably greater than the increase in exports. Consequently, the total supply of meats and lard available for domestic consumption in the United States will be larger than in any recent year.

Following the drought of 1934, the production of pork and lard was sharply curtailed. Hog slaughter throughout the period from 1935 through 1939 was considerably smaller than the 1929-33 average, but the slaughter of cattle and calves was larger than average. The total dressed weight of livestock slaughtered under Federal inspection in 1935 was about 24 percent less than in

1934 and about 23 percent smaller than the 1929-33 average. In 1936, 1937, and 1938 the total dressed weight of livestock slaughter was considerably larger than in 1935, but it was below the 1929-33 average. In 1939 the dressed weight of inspected livestock slaughter was only about 1 percent less than the 1929-33 average.

The smaller-than-average livestock slaughter and meat production from 1935 through 1938 was not reflected in a corresponding decrease in meat and lard consumption. The decrease in consumption was less than the decrease in production because exports were reduced and imports of meats were increased to some extent.

On a per capita basis, the production of federally inspected meats, including lard, in 1940 probably will be about equal to the 1929-33 average, and will be larger than in any year since 1933. In 1935, the production of federally inspected meats and lard per capita was only about 81 pounds, compared with the 1929-33 average of 108 pounds. In 1939 production per capita is expected to be a little over 100 pounds.

Imports expected to be smaller

Domestic supplies of meats are expected to encounter less competition from imported supplies in 1940. Most of the reduction in imports will be in pork and live cattle. Pork imports in recent years have consisted largely of canned hams from Poland. Imports from that country have been practically discontinued following the outbreak of the European War. Imports of cattle from Mexico were unusually large in 1939 but they probably will not continue on so large a scale in 1940. More favorable feed conditions in Canada are expected to result in smaller shipments of cattle from that country to the United States and to encourage the rebuilding of herds that were reduced during recent drought years. Little change in the imports of canned beef is indicated. A considerable increase might occur if British takings of chilled beef from South America are reduced because of shipping difficulties but such developments are not anticipated.

Livestock production to continue at a high level

The increase in total meat production since 1937 reflects chiefly the large production of feed crops in 1937 and 1938. Total feed supplies for 1939-40 will be abundant, and the supply of both feed grains and hay per animal for 1940 will be larger than the 1929-33 average. With feed supplies continuing large a further increase in meat production is in prospect for 1940.

In view of the large feed supplies produced in 1939 and carried over from 1938, a further moderate increase in the number of pigs raised in 1940 is probable. This increase in the number of pigs raised will be reflected in pork and lard production in 1941. The number of cattle on farms has been increasing during the last 2 years, and the number at the beginning of 1940, while smaller than the peak reached in early 1934, will be larger than the average of the last 20 years. The increase in cattle numbers probably will continue during 1940 and 1941. Despite the prospects for further increases in numbers during the next 2 years, cattle slaughter may not be reduced much. Consequently, barring the recurrence of severe drought, total meat production in the next few years will be at a level somewhat higher than that of 1939.

Demand for Meats

Consumer demand for meats in 1940 probably will be stronger than in 1939. On the basis of the prospective increases in industrial activity and in incomes of consumers the level of the demand for meats in the coming year may be about equal to that of 1937. The improvement in demand may be most pronounced in the last half of next year.

Foreign demand for pork and lard also is expected to be better in 1940 than in 1939. But the effects of the improvement in foreign demand on prices of livestock will be much less important than the effects of increase in consumer demand in this country. This is due chiefly to the fact that, even with a rather substantial increase in exports, the total domestic consumption will be equal to 95 percent or more of the total domestic production.

During the first 8 months of 1939, consumer demand for meats, as measured by quantities sold to and retail prices paid by consumers, was stronger than in the corresponding months of 1938. The total domestic disappearance of federally inspected meats and lard from January through August 1939 was about 6 percent greater than in the corresponding period of 1938. All of this increase was in pork (including lard), as the disappearance of beef and veal and lamb and mutton was slightly less than a year earlier. Retail prices of hog products averaged lower in the first 8 months of 1939 compared with the corresponding months of 1938, but retail prices of beef averaged higher and retail prices of lamb averaged about the same for the two periods.

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November 8, P.M.

THE HOG OUTLOOK FOR 1940

Summary

Consumer demand for hog products in the United States in 1939-40 will be stronger than in 1938-39. Stronger foreign demand for pork and lard in 1939-40 also is in prospect as a result of the effects of the European war upon European supplies. The expansion in pork exports is expected to be greater than the increase in lard exports.

But the effects on hog prices of the improvement in domestic and foreign demand probably will be offset largely, if not wholly, by the increase in the supplies of hogs for slaughter during 1939-40. Present indications are that prices for hogs will average lower than a year earlier in the first half of the 1939-40 marketing year and higher than a year earlier in the last half of the year.

The number of hogs slaughtered under Federal inspection in the present hog-marketing year, October 1939-September 1940, probably will be about 20 percent greater than in the 1938-39 marketing year. Slaughter in the present year may be a little larger than the pre-drought (1929-33) average. Average weights of hogs marketed probably will continue relatively heavy.

In view of abundant feed supplies and the prospects for a hog-corn ratio about average or somewhat above average, a further increase in the number of pigs raised is expected in 1940. There is little likelihood, however, of an increase in the pig crop in 1940 anything like that in 1939. The fact that a considerable part of the 1939-40 corn supply will be held under loan or held by the Government will be an important factor tending to prevent a large increase in production in 1940.

The 1939 pig crop is as large as, or larger than, the pre-drought average in all regions, except in the area of the Corn Belt west of the Missouri River. Feed-crop production is again short in this area, and only a moderate increase in number of pigs raised there can be expected in 1940. In most other areas also it seems probable that only a moderate increase in hog production will occur in 1940, as production in these areas is already at a relatively high level.

Domestic Supplies

Larger hog slaughter expected in 1939-40

The number of hogs slaughtered under Federal inspection in the present marketing year (October 1939-September 1940) will be materially larger than in the 1938-39 marketing year and the largest in about 7 years. Slaughter during the current marketing year probably will be slightly larger than the average slaughter in the 5 years before the 1934 drought. Average weights of hogs probably will continue heavy and may not be greatly different from those of

1938-39, when the average weight was about 236 pounds.

The larger hog slaughter this year will be a reflection of the marked increases in the spring and fall pig crops of 1939 over those of 1938. According to the June pig-crop report, the 1939 spring-pig crop, totaling 52.3 million head, was 8.9 million head larger than the spring crop of 1938. It was also indicated that the number of sows to farrow in the fall of 1939 would be about 16 percent greater than the number farrowed in the fall season of 1938.

If the number of sows that farrow in the fall of 1939 is about as indicated and if the average number of pigs saved per litter this fall is about equal to the 1928-37 average, the combined spring and fall crops will total about 83 million head. This number would be about 17 percent larger than the total 1938 crop and it would be one of the 5 largest crops on record.

If the total pig crop for 1939 is about 83 million head, it seems probable that inspected hog slaughter in the 1939-40 marketing year will total around 47 million head. In 1931 and 1932 the total pig crops were not greatly different from the crop indicated for 1938; in both 1931-32 and 1932-33 inspected hog slaughter was about 47 million head. But with a much larger proportion of the pig crop in 1939 outside the Corn Belt than in 1931 and 1932, a somewhat smaller proportion of the total pig crop might enter inspected slaughter this year than in 1931-32 or 1932-33.

An inspected slaughter of 47 million head in 1939-40 would be the largest slaughter since 1932-33. In 1934-35 inspected slaughter of hogs was sharply reduced as a result of the effects of the A.A.A. corn-hog program and severe drought of 193- upon hog production. Another severe drought in 1936 prevented a marked increase in hog slaughter until 1938-39. It is expected that slaughter in 1939-40 will be about 7 million head larger than the slaughter of 1938-39 and 16 million head larger than the low level of 1934-35.

Seasonal changes in hog marketings

A fairly large seasonal increase in hog marketings is occurring during the fall of 1939. In the late winter and early spring of 1940 the seasonal decrease in marketings from the winter peak probably will be about average for this period.

In the past 2 years the proportion of total yearly slaughter in the first quarter (October-December) of the marketing year has been a little larger than average, and slaughter in the second quarter has been smaller than in the first quarter. In most other years, when feed supplies have been abundant and the hog-corn price ratio has been high, marketings in the first quarter of the marketing year have represented a relatively small proportion of the total because of the tendency to hold hogs for feeding to heavy weights. In such years, also, slaughter in the second quarter has been about the same as, or larger than, that in the first quarter. But hog production in 1937 and 1938 was relatively small in the western Corn Belt and relatively large in the eastern Corn Belt. The bulk of spring pigs from the eastern Corn Belt are marketed from October through December, whereas marketings from the western Corn Belt are relatively large from January through April.

The number of pigs raised in the Corn Belt area west of the Missouri River is still below the pre-drought average, but in the remainder of the western Corn Belt the number is about average. In the eastern Corn Belt the number of pigs raised this year will be larger than average. Consequently, it seems probable that the proportion that slaughter in the first quarter of 1939-40 is of the yearly total will be no larger and may be smaller than the comparable proportion in 1938-39. In view of the increase in the spring pig crop in part of the western Corn Belt, slaughter in the second quarter of 1939-40 may be about as large as slaughter in the first quarter of the year.

Marketings during the summer season (May-September) are mostly fall pigs and packing sows. In both 1937-38 and 1938-39 the percentage of the total yearly inspected slaughter in the summer season was larger than in most other years. In these years the fall pig crop represented a relatively large proportion of the total yearly crop. One reason for the increase may be that the number of early spring pigs marketed during the late summer has been larger than in previous years.

The percentage that the 1939 fall pig crop represents of the total crop for the year will be relatively large, although perhaps not so large as the percentage that the 1938 fall crop was of the total 1938 crop. It seems probable, therefore, that slaughter supplies of hogs in the summer season (May-September) of 1939-40 will represent a relatively large proportion of yearly total as was the case in 1938-39.

Storage supplies

At the beginning of September, storage stocks of pork were somewhat larger than a year earlier, while stocks of lard were slightly smaller. Stocks of both pork and lard on September 1 were somewhat smaller than the 1933-37 average stocks for that date.

At the beginning of the 1938-39 storage season in November, storage holdings of pork were the second smallest on record. They increased considerably during the winter months, but the accumulation of pork in storage in the winter season was small in relation to hog slaughter during that period. The relatively small accumulation probably was due to the fact that the prospective summer slaughter supply of hogs was considerably larger than that of a year earlier. Pork stocks were reduced only slightly during the late spring and early summer, but the out-of-storage movement was fairly large in July and August.

Stocks of lard at the beginning of the 1938-39 storage season were about average for that period. The seasonal increase in lard stocks from November through June was fairly large. Ordinarily the increase in stocks of lard continues through July, but such stocks were reduced slightly last July, and a further reduction occurred during August.

During the 1939-40 winter season, stocks of both pork and lard probably will increase more and reach a higher level than they did in the 1938-39 season. This will reflect partly the larger hog slaughter expected during the 1939-40 marketing year. In view of the prospects for some improvement in domestic

consumer demand and foreign demand for hog products, it may be that the storage demand for pork and lard will be somewhat stronger in 1939-40 than in 1938-39.

Exports and Imports of Hog Products

Exports of both pork and lard thus far in 1939 have been materially larger than in the corresponding periods in 1937 or 1938, and larger than at any time since 1934. The larger exports reflect chiefly the continued recovery of domestic production from the low levels induced by the droughts of 1934 and 1936. About 84,000,000 pounds of pork were exported from the United States in the first 7 months of 1939, an increase of 40 percent over the corresponding months of 1938. Lard exports in 1939, totaling 166,000,000 pounds, also were about 40 percent larger than those in 1938. Imports of pork thus far this year, amounting to about 32,000,000 pounds, have been smaller than the imports of the corresponding periods of 1937 and 1938. It is probable that the war in Europe will virtually stop imports, most of which have been coming from Poland.

Exports, imports and production of pork and lard, average 1926-30, annual 1931-38

Year	Exports 1/		Imports of pork 2/	Production 3/		Exports as a percentage of production		Imports of pork as a percentage of total domestic consumption
	Pork	Lard		Pork	Lard	Pork	Lard	
	Mil.lb.	Mil.lb.	Mil.lb.	Mil. lb.	Mil.lb.	Pct.	Pct.	Pct.
Average 1926-30	381	759	12.0	8,550	2,299	4.5	33.0	0.15
1931....	224	601	4.0	8,734	2,279	2.6	26.4	0.05
1932....	175	576	5.7	8,915	2,351	2.0	24.5	0.06
1933....	202	612	2.9	9,124	2,446	2.2	25.0	0.03
1934....	211	458	1.6	8,342	2,072	2.5	22.1	0.02
1935....	136	115	10.5	5,953	1,267	2.3	9.1	0.17
1936....	118	137	41.8	7,535	1,673	1.6	8.2	0.59
1937....	114	163	74.8	6,937	1,441	1.6	11.3	1.04
1938....	152	234	52.4	7,564	1,754	2.0	13.3	0.71

1/ U. S. Department of Commerce. Includes shipments to noncontiguous territories. Pork converted to a dressed weight basis.
2/ U. S. Department of Commerce. Imports for consumption.
3/ Estimated total production from all hog slaughter.

Further increase in exports expected

United States exports of hog products, especially pork, may increase materially as a result of the European war. In many respects the situation for exports of pork is similar to that which prevailed in the years 1914-18. At that time the United Kingdom was, as it is now, the principal outlet for the world's

pork-exporting countries. During the former war period, British imports of bacon and hams from the United States and Canada increased greatly whereas imports from Continental Europe were sharply reduced.

British imports of bacon and hams from Poland and probably from other Baltic countries already have been cut off by the war. In 1938 British imports from such countries amounted to about 89 million pounds, and the rate of imports from these countries in the first half of 1939 was larger than in the first half of 1938. Eventually, but not immediately, hog production in Denmark and the Netherlands probably will be reduced as imports of feed into those countries are curtailed by war conditions. This will result in a further reduction in British supplies of bacon from Continental Europe. In 1938 total imports of bacon and hams into Great Britain from Denmark and the Netherlands amounted to 438 million pounds, and the total from all countries, except the United States and Canada, was 566 million pounds. It is also probable that hog production in Great Britain and France will be curtailed to some extent as a result of the war.

Bacon and hams: Imports into the United Kingdom from specified countries, specified years, average 1909-13

Year	United States	Denmark	Canada	Chief Continental Europe	Total
	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.
Av. 1909-13...	292	233	54	35	614
1914.....	257	304	45	59	665
1915.....	548	231	110	7	896
1916.....	616	184	185	22	1,007
1917.....	514	126	204	24	868
1918.....	1,127	2	205	13	1,347
1919.....	853	1	243	34	1,131
1921.....	395	207	105	55	762
1924.....	371	446	150	31	998
1930.....	146	684	21	253	1,105
1937.....	36	384	190	184	794
1938.....	49	380	169	186	784

The United States is the only pork-exporting country outside Europe that has supplies sufficiently large to offset a substantial decrease in British imports from the Continent. Canada may increase its exports to the United Kingdom, but Canadian exports are already at a relatively high level. In early September the British quotas on imports of bacon and hams, in effect since late 1932, were suspended. United States pork exports to other countries, particularly France, Canada and Cuba also are likely to increase somewhat. Exports to these countries increased materially in the 1914-18 period, but total exports were much smaller than those to the United Kingdom. The extent of the increase in total United States pork exports in the coming year is, of course, very uncertain.

With respect to lard, some increase in exports may be expected. It is doubtful, however, that the increase will be as large as that in pork exports,

either percentage-wise or in absolute figures. United States lard exports, of which the United Kingdom is the chief foreign buyer, have been increasing steadily from the low point reached in 1935, following the drought of 1934.

The United States has geographic and strategic advantages over most other sources of fats and oils with respect to the British market. A large part of the vegetable oils imported into Great Britain is in the form of oilseeds from Netherlands East Indies, India, and Africa. Shipments of these products to Great Britain and other European countries may be reduced by shipping difficulties and blockade. But a reduction in the movement of vegetable oils to Europe, might result in an increase in the United States imports of such products.

Prices average lower in 1938-39

Larger slaughter supplies of hogs in the 1938-39 marketing year were reflected in lower hog prices than in 1937-38. For the entire year 1938-39 prices averaged about $1.00 less than in the preceding year. From early October 1938 to mid-December the average price of butcher hogs at Chicago declined from about $8.50 to $7.15. The seasonal advance in the late winter was small and of short duration. After a slight advance in February, prices declined almost steadily from early March until mid-August when the price of butcher hogs at Chicago dropped to about $5.00, the lowest in 5 years.

In late August, prices advanced moderately, and in early September following the outbreak of the European war, a marked advance occurred. For the week ended September 9, the average price of butcher hogs was about $8.30, approximately $2.40 higher than in mid-August. As speculative sentiment subsided and marketings increased during the remainder of the month, prices declined moderately. This was followed by a sharp decline in prices in early October, and at the close of that month prices were down about $1.50 from the average for the first week of September.

Prospects for prices in 1939-40

Consumer demand for hog products in the United States in 1939-40 probably will be stronger than in 1938-39, and it is also expected that foreign demand will be stronger. But the effects of the improvement in domestic and foreign demand may be offset largely, if not wholly, by the increase of from 15 to 20 percent in slaughter supplies of hogs which is expected in 1939-40. For the entire year 1938-39, the average price paid by packers for hogs slaughtered under Federal inspection was about $6.50.

In 1938-39, as already indicated, hog prices at the beginning of the year were high in relation to those of the remainder of the year. But in early October of this year prices were more than $1 lower than a year earlier. Thus, if the seasonal decline in hog prices from early October through December 1939 is about the same as the drop in that period last year, hog prices in the fall and winter months will average lower than a year earlier. And if a large part of the improvement in domestic and foreign demand occurs after the winter of 1939-40 as now seems probable, hog prices may average higher in the summer of 1940 than a year earlier.

Hog Production Outlook

The large increase in the 1939 pig crop has brought pig production in the United States back to the pre-drought level. The geographical distribution of production, however, is considerably different from that in the pre-drought period. The estimated total pig crop of 1939 is above the pre-drought (1929-33) average in all regions, except the West North Central, with the largest percentage increases over average in the South Atlantic and South Central regions. In these two regions the pig crop this year is the largest for any year of record going back to 1924, and is probably the largest for all years. The 1939 pig crop in the West North Central region is only about 80 percent of average. Nearly all of this decrease is in the 4 States west of the Missouri River, with the States east of the river about back to average.

Despite the relatively large 1939 pig crop it now seems probable that the 1940 crop will exceed it. There is little likelihood, however, that the increase in 1940 over 1939 will be anything like so large as the increase of 1939 over 1938. The sharp upturn in hog prices in early September, following the outbreak of the war, probably has put hog prices for the 1939 crop on a higher level than otherwise would have prevailed. For the next year a continuation of the war will be more of a strengthening factor on hog prices than on corn prices.

It is quite probable that the hog-corn ratio may continue for some months at least at a level that will encourage hog production.

For the country as a whole, corn production in 1939 is again fairly large and the carry-over of corn is of record proportions. But a large part of the carry-over from 1938 is held by farmers under loan or by the Government. In addition, a considerable quantity of 1939 corn probably will be placed under loan. It is expected that the total quantity of corn not under loan and not held by the Government will be smaller than the total quantity not under loan last year. The supply of corn not under loan per head of livestock in 1939-40 will be smaller than a year earlier and it may be a little smaller than the pre-drought average. The smaller supply of corn not under loan, along with the prospects for a less favorable hog-corn ratio than last year, will be an important factor tending to prevent any large increase in the number of pigs raised in 1940.

If the production of corn and other feed grains this year, in the Corn-Belt States west of the Missouri River, had been near the average of the pre-drought years, a further substantial increase in the pig crop next year probably would have taken place in that area. But with another short corn crop this year in these States, only a moderate increase in the number of pigs raised can be expected next year. In the remainder of the western Corn Belt (Minnesota, Iowa, and Missouri), feed supplies are abudant and it is possible that a substantial increase in the number of pigs raised in these States will occur in 1940. In the eastern Corn Belt, hog production is already at a high level and further expansion there may be only moderate.

In both of the Southern regions, the pig crop this year is unusually large. But with the outlook for the two main cash crops in these States not so favorable as the outlook for livestock, interest in greater livestock production may continue. Hence, some further increase in the pig crops of these regions is not unlikely.

Of all farm products, hogs are the only one for which a significant expansion in export outlets is probable for 1939-40 as a result of the war. But even in the case of hogs, prospective improvement in domestic demand, resulting from enlarged consumer incomes, is expected to be much more important as a price-supporting factor than the increase in foreign demand.

During the last 5 years when hog production has been at a low level and hog slaughter has been a much smaller-than-average proportion of total livestock slaughter, the relationship of hog prices to prices of other meat animals has changed. During the period from 1921 to 1933 the live weight of hogs slaughtered averaged about 49 percent of the total of all livestock slaughtered under Federal inspection. About 52 percent of the total money paid for all livestock went to hogs. During the 5 years, 1934 to 1938, hogs made up only about 40 percent of total live weight but 44.5 percent of total payments went to hogs, or 47.5 percent if the hog-processing taxes in 1934 and 1935 are included in hog and total payments.

Increased slaughter of hogs in 1939 and decreases in slaughter of other livestock will bring the hog percentage of total livestock slaughter up to 46 or 47 percent of the total, but the percentage of total payments going to hogs will be only about 42 to 43 percent. In other words, as the proportion of hog slaughter has increased toward the pre-drought average, the proportion of money going to hogs has actually declined. It may be that this situation is only temporary and that during the next few years after hog slaughter regains its former proportion of total slaughter, the payments for hogs will also return to their old proportion. If this happens and the total live weight of all livestock slaughtered reaches or exceeds the pre-drought average, the effect of these increased supplies upon prices will be less for hogs than for other classes of livestock, especially cattle.

Combined spring and fall pig crops, by regions, average 1929-33, annual 1935-39

Region	Average 1929-33	1935	1936	1937	1938	1939 1/	1939 as a percentage of average 1929-33
	Thousands	Thousands	Thousands	Thousands	Thousands	Thousands	Percent
E.N. Central.....	20,174	15,442	18,081	17,860	20,106	22,999	114.0
W.N. Central.....	41,012	22,646	26,376	23,581	27,860	33,714	80.2
All N. Central...	61,187	38,088	44,457	41,441	47,972	56,713	92.6
North Atlantic...	1,378	1,270	1,511	1,615	1,673	1,766	128.0
South Atlantic...	4,941	4,943	5,642	5,925	6,590	7,054	142.7
South Central....	9,349	8,779	10,595	10,206	12,061	14,147	151.0
Western.....	3,177	2,006	2,712	2,720	2,805	3,354	105.5
United States....	80,032	55,086	64,917	61,907	71,101	83,034	104.0

1/ Preliminary.

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THE BEEF CATTLE OUTLOOK FOR 1940

Summary

Total slaughter of cattle and calves in 1940 is expected to be somewhat smaller than in 1939. Steer slaughter probably will show little change. But marketings of breeding stock in the Western States, where cattle numbers have been sharply curtailed since 1934, are expected to be reduced if feed crop and range conditions are near average next year.

Cattle numbers are expected to be about 2 million head larger on January 1, 1940 than a year earlier. Most of the increase during 1939 has taken place in Minnesota, Iowa, and Missouri, and in States east of the Mississippi River. In the last-named area, numbers in early 1940 will be the largest on record.

Even if cattle slaughter in 1940 should be no smaller than in 1939, a further increase in cattle numbers is likely to take place, particularly in the Western Cattle States if feed conditions in that area show any marked improvement over the relatively poor conditions that prevailed in 1939. With a reduction in slaughter, the increase in cattle numbers probably would be marked, and although numbers on January 1, 1941 would still be below the peak of 1934 they probably would be among the 5 largest on record.

With abundant supplies of feed grains in the central and eastern Corn Belt and favorable returns from cattle feeding during the past season, the number of cattle fed in the Corn Belt this winter is expected to be larger than in 1938-39. Cattle feeding in the Western States probably will be on a smaller scale than last season, since the poor range and pasture conditions of last summer have resulted in a heavy movement of Western cattle eastward, and feed grain supplies in the West are smaller than a year earlier.

Marketings of fed cattle during the late winter and early spring in 1940 are likely to be larger than the relatively small marketings of that period in 1939. But the number of such cattle marketed during the summer and fall next year may not be greatly different from the number marketed in that period this year.

Cattle prices may average slightly higher in 1940 than in 1939, since the domestic demand for meats is expected to be stronger and the total live weight of cattle marketed probably will be slightly less than in 1939. Relatively high prices for hides also will be a factor tending to support cattle prices. On the other hand, total meat supplies in 1940 will be larger than in 1939 chiefly because of the increase in hog marketings in prospect. With relatively large supplies of fed cattle and some reduction in marketings of cows and heifers, the spread between the prices of the upper and lower grades of slaughter cattle probably will continue to be comparatively narrow in 1940.

Slaughter Supplies

The number of cattle slaughtered under Federal inspection in 1939 is expected to total about 5 percent less than in 1938, and to be the smallest since 1933. Inspected calf slaughter also will be down about 5 percent this year, and will be the smallest since 1933. But the average live weight of cattle slaughtered in 1939 has been about 2 percent heavier than in 1938, and the heaviest in 6 years, although still somewhat below the average for the pre-drought years 1924-33.

Steer slaughter during the first 5 months of 1939 was considerably smaller than in the same period a year earlier. But since May, with increased marketings of fed cattle, steer slaughter has been larger than in the same period of last year. The total for the year may be nearly the same as in 1938, when 4,517,000 steers were slaughtered under Federal inspection.

Except for one month, cow and heifer slaughter has been smaller in 1939 than in 1938, reflecting the tendency for producers to withhold breeding stock for herd-building purposes. Inspected slaughter for the year probably will total from 300,000 to 400,000 head less than in 1938, when the annual slaughter amounted to 4,861,000 head.

The combined slaughter of cattle and calves under Federal inspection in 1939 may total about 14,400,000 head compared with 15,268,000 head in 1938, 17,042,000 head in 1936, and 13,669,000 head, the average for the 1924-33 period.

Some further reduction in cattle slaughter expected in 1940

Present indications are that steer slaughter in 1940 may not be greatly different from that in 1939. But cow and heifer slaughter, and calf slaughter, may be reduced somewhat further. Most of the reduction in cattle marketings next year would be likely to occur in the Western Cattle States (west of the line extending from the eastern border of the Dakotas to the eastern border of Texas), where cattle numbers were reduced sharply as a result of the severe droughts of 1934 and 1936. Some expansion of herds is likely to take place in this region if grazing and feed conditions are near average next year.

The number of cattle on farms in States east of the Mississippi River on January 1, 1940, is expected to be the largest on record, totaling perhaps 2 million head more than on January 1, 1934, when the cattle population for the country as a whole was the largest on record. Unless a further expansion in cattle herds is to take place in States east of the Mississippi River in 1940, the number of cattle marketed from that region next year would have to be considerably larger than the number marketed in 1939. But any increase in marketings in this region probably would not offset entirely the decrease in marketings expected in the Western States.

Cattle-Feeding Situation

The number of cattle to be fed for market during the winter and spring of 1939-40 is expected to be somewhat larger than the number fed in the winter and spring of 1938-39. The increase will be in the Corn Belt States, as the number fed in other areas will be reduced.

Shipments of stocker and feeder cattle into the Corn Belt States inspected at stockyards during the 3 months July through September were 12 percent larger this year than last and were the largest for those months in 12 years. Direct shipments of feeder cattle into six of the Corn Belt States for the same period were about 60 percent larger than a year earlier; information from other Corn Belt States indicates that direct shipments into those States also were materially larger than last year. It is probable, however, that the rate of increase in feeder shipments into the Corn Belt from July through September will not be maintained during the last 3 months of this year. Shipments of cattle from a number of the Western States this year were earlier than usual because of drought conditions, and it is probable that a larger than usual proportion of feeder shipments were made in August and September.

Most of the increase in cattle feeding in the Corn Belt this year is expected to be in the States east of the Missouri River, with the largest increase in the central Corn Belt. Because of the small corn production this year in the Corn Belt States west of the Missouri River, any increase in cattle feeding in these States is likely to be small.

Records from four leading livestock markets show that total shipments of feeder and stocker steers for the 7 months July - September were somewhat larger this year than last, with an increase in the number weighing over 800 pounds and a decrease in the number under 800 pounds. Shipments of calves and cows and heifers also were larger than a year earlier. These figures and other information indicate that a larger proportion of the cattle fed in the 1939-40 feeding season will be marketed during the winter months than was the case in the 1938-39 season. Hence, the percentage increase in the market supply of fed cattle during the coming year over a year earlier may be greatest during the winter months.

Prices of feeder cattle have risen more since late August than prices of slaughter cattle. The spread between prices of feeder cattle and slaughter cattle in recent weeks has been relatively narrow. In September, the average price of stocker and feeder steers, all weights, at Kansas City was $8.02 compared with $7.42 a year earlier and $6.75, the average price for September in the 10 years 1928-37. The average price of good grade slaughter steers at Chicago in September this year was $10.20 compared with $10.03 a year earlier and $10.55, the 10-year average for September. Thus the margin between prices of stocker and feeder steers and good grade slaughter steers in September 1939 was only $2.18 compared with $2.61 in September 1938 and $3.80, the average margin for September in the 10 years 1928-37.

The relatively high prices for feeder cattle indicate that the margin between prices of feeder cattle purchased in the past 3 months and the price of finished cattle next year will be small unless a substantial advance in prices of slaughter cattle occurs. Ordinarily, prices of finished cattle are no higher in the late winter and spring months than in the fall. Although feed supplies in the Corn Belt are abundant, the cost of feeds for cattle probably will be no cheaper this year than last.

Imported Supplies

Cattle imports larger in 1939

Average prices received by farmers for beef cattle in the period from January through September 1939 were at or above parity; the prices averaged about 10 percent higher than those of a year earlier. Partly because of the relatively high prices, and partly for other reasons, imports of cattle and beef during the first 9 months of 1939 were materially larger than during the corresponding period of 1938. The combined imports of cattle and calves and of beef in terms of dressed weight amounted to 353,000,000 pounds, an increase of about 55 percent over the comparable figure for 1938. The combined imports of cattle and beef were equivalent to about 6 percent of the total dressed weight of cattle and calves slaughtered in the United States compared with about 4 percent in 1938.

Total imports of dutiable cattle during the first 9 months of 1939 reached 604,000 head, more than twice the total in the corresponding period of 1938, and the largest number for any year since 1919, when cattle were imported free of duty. The increase in total live weight was relatively greater than the increase in numbers imported since imports this year included a larger proportion of heavy cattle than in the previous year. Imports from Canada from January through September totaled about 225,000 head, while imports from Mexico numbered about 378,000 head. A large part of the imports from Mexico consisted of non-quota cattle weighing between 200 and 700 pounds, the duty on which is 2.5 cents per pound.

Total imports of non-quota cattle in the first 9 months of 1939, at 311,000 head, were about 72 percent larger than imports of that class of cattle in the comparable period in 1938. The relatively high prices for cattle in the United States during the first half of 1939 and the unsettled economic conditions and poor feed outlook in Mexico were the factors chiefly responsible for the increase in imports in 1939. Total imports of quota cattle weighing 700 pounds or more, not intended for dairy purposes, reached about 182,000 head in the 1939 period - more than double the relatively small imports of such cattle in the first 9 months of 1938.

The second trade agreement with Canada, effective January 1, 1939, provides for a total annual import quota of 225,000 head of heavy cattle at a reduced duty of 1.5 cents per pound. (The quota in the first agreement was 155,799 head at 2 cents per pound.) But not more than 60,000 head of quota cattle may be imported in any calendar quarter. Since the first quarter of 1939, the quarterly quota of imports has been allocated by countries, with Canada being allotted about 86 percent of the total.

CATTLE: Dutiable imports from Canada, Mexico, and all countries, by weight groups, 1936 to 1938, and January-September 1938 and 1939

Year and Period	175 lb. (200 lb. in 1939) to 699 lb.			700 lb. and over, not for dairy purposes			All dutiable cattle including dairy		
	Canada	Mexico	All countries	Canada	Mexico	All countries	Canada	Mexico	All countries
	Number	Number	Number	Number	Number	Number	Number	Number	Number
1936	35,149	140,439	176,455	136,533	21,992	158,675	234,063	164,046	399,113
1937	50,355	172,717	223,837	157,468	24,792	182,333	295,333	138,768	494,946
1938	9,147	233,752	243,553	75,529	49,740	125,315	137,773	285,554	434,022
Jan-Sept:									
1938	4,727	175,437	180,670	39,543	29,850	69,430	88,044	207,160	295,753
1939	7,831	303,070	311,194	137,180	44,562	181,748	225,237	378,442	604,015

United States Department of Commerce

Present indications are that total imports of live cattle in 1940 will be smaller than the 1939 imports. It is probable that, barring another season of poor range conditions, there will be a tendency to hold back cattle in Mexico for replacement purposes. The movement of cattle out of northern Mexico this year was the largest since 1915.

Imports of quota cattle from Mexico were relatively large during the first quarter of 1939, but with the allocation of quotas beginning April 1, imports of heavy cattle from Mexico were sharply reduced. If the quota is allocated among countries in 1940, imports of quota cattle from Mexico could not amount to more than a relatively small part of the annual quota of 225,000 head, even though imports from Canada were reduced, since quota allocations are not transferable. There is no limitation on imports of heavy cattle in excess of quota allotments at the full duty of 3 cents per pound.

In Canada, there are indications of a tendency to rebuild the drought-reduced herds in the western Provinces, and of a reduction in the numbers of cattle available for export in 1940. Shipments of stocker and feeder cattle from western markets to country points have been larger this year than in 1938. The movement from western points to eastern feedlots, moreover, has been smaller in 1939 than in 1938, indicating a tendency to retain cattle in the West. Most of the Canadian cattle entering the United States originate in the western Provinces. Relatively favorable prices in the United States compared with those in Canada would continue to attract a large volume of Canadian cattle to the United States, but indications are that reduced market supplies of cattle in Canada may tend to cause the export movement to the United States to be reduced.

Beef imports also increase

Imports of canned beef into the United States during the first 9 months of 1939, mostly from Argentina, Uruguay, and Brazil, totaled about 70,000,000 pounds against 58,000,000 pounds in the same period of 1938. Imports of fresh, cured, and pickled beef and veal also were larger than in 1938, but totaled only about 3,600,000 pounds.

Effects of war on the cattle situation

Present indications are that the direct effects of the European war on the domestic cattle situation probably will be of only minor significance. No considerable volume of beef exports from the United States is probable, although much beef was exported during the period of the World War. The marked increase in exports in that period occurred chiefly because war-time shipping difficulties resulted in a marked decrease in European imports of beef from South American countries and Australia. Some difficulties in shipping may be encountered in the present war, but a significant decrease in European imports of beef from Southern Hemisphere countries does not appear probable. Should any material reduction in this movement occur, it might be accompanied by an increase in United States imports of canned beef from South America.

The chief effects of the war on the United States cattle industry probably will be through: (1) Improvement in domestic demand for meats as a result of general increases in industrial activity and consumer income, only part of which, however, will be an outgrowth of the war; (2) an increase in the foreign demand for hides; and (3) increased exports of pork, causing total domestic supplies of meats to be smaller than they would otherwise be.

Prices

Prices of the better grades of slaughter cattle rose gradually from February 1938 through March 1939. During this period the average price of Good grade steers at Chicago advanced from about $7.55 in early February 1938 to around $10.75 in mid-March 1939. Except for the usual seasonal weakening in the fall months, prices of the lower grades of cattle also advanced during this period.

From mid-March until the first week of September 1939 the trend in slaughter cattle prices was downward. Prices of Choice and Prime grade steers at Chicago declined over $3.00 during the 5 months, while prices of steers of other grades fell from $1.50 to $2.00. Following the outbreak of war in Europe in early September, however, a sharp rise in prices occurred. As speculative demand subsided and marketings increased during the remainder of September and in October prices of most kinds of cattle declined, although a part of the early September rise was retained.

The average price of Good grade steers at Chicago in late October was about $9.80, which was slightly lower than that of a year earlier. Prices of Choice and Prime grades were more than $1 under a year earlier, but prices for Common grade steers were about 35 cents higher than in late October last year.

Price prospects for 1940

Present indications are that the general level of cattle prices in 1940 may average slightly higher than in 1939. Total slaughter supplies of cattle may be slightly smaller than in 1939, but a material increase in total meat production is in prospect because of the increase in hog slaughter. On the other hand, consumer demand for meats in 1940 is expected to be stronger than in 1939. The probable improvement in export demand for pork and the higher level of hide prices in 1940 than in 1939 also will be strengthening factors to cattle prices.

Prices of slaughter cattle, especially of the better grades, were relatively high in the first 4 months of 1939. The average price of Choice and Prime grade steers at Chicago from January through April was about $12.20 compared with about $9.40 for the corresponding period of 1938. In late October this year the average price of such steers was about $10.40.

With prospects for relatively large marketings of grain-fed cattle in the next 6 months, a material increase in prices of the better grades of slaughter cattle does not seem probable, even though there may be some improvement in the consumer demand for meats. Hence it is possible that prices of the better grades of slaughter cattle in the first quarter, and perhaps the first half of 1940, may average lower than a year earlier. But in the summer and fall of 1940 prices of such cattle may average considerably higher than in the summer and fall of 1939. A considerable part of the prospective improvement in the demand for meats is likely to take place after the spring of 1940.

With prospects for relatively large supplies of grain-fed cattle in 1940, together with reduced marketings of cows and heifers, prices of the lower grades of slaughter cattle and of stocker and feeder cattle are expected to continue high in relation to prices of fed cattle.

Production Outlook

Cattle numbers on January 1, 1940 are expected to show a substantial increase over numbers on January 1, 1939, continuing at an accelerating rate the upward swing in the cattle cycle that began during 1938. Present indications (based upon tentative estimates of calf crop and imports, slaughter and death losses) point to an increase in numbers during 1939 of around 3 percent or about 2,000,000 head. This would give a total cattle population on January 1, 1940, of about 68,800,000 head, which, while materially below the peak numbers of 1934, would be much above the average of the past 20 years.

The calf crop of 1939 apparently is a little larger than the crop of 1938, and imports of cattle are much larger. Inspected slaughter of cattle and calves in 1939 is estimated at about 14,400,000 head or about 800,000 head smaller than in 1938, and total slaughter will hardly reach 23,000,000 head. Death losses of cattle and calves in 1939 will be little different from a year earlier.

Because of the drought condition that prevailed during most of the summer over much of the country west of a line from the eastern Dakotas to eastern Texas, and the resulting short production of feed grains and forage, and short pastures and ranges, any increase in cattle numbers in this area during the current year is likely to be small. Much of the increase will be in the States east of the Mississippi River, with a substantial increase in the States bordering the river on the west.

If cattle numbers make a further increase during 1939 in the area east of the Mississippi, the number in that area on January 1, 1940 will reach another new record, since the number on January 1, 1939 was the largest up to that time. Although much of the 1939 increase in this area will be in the East North Central States, it is not unlikely that numbers in both the South Atlantic and East South Central States will reach new record totals.

If 1939 had been a fairly favorable year for feed and forage production and for range growth in the Western area (as defined above), undoubtedly a substantial increase in cattle numbers would have occurred there this year. This is the area where the decline in cattle numbers has been the greatest during the past 6 years, and where present numbers are below the average of the past 20 years.

If feed conditions in the Western Cattle States next year should be average or better, a considerable increase in cattle in these States probably will take place regardless of the price situation. If cattle prices next year are as high as or higher than those this year, the tendency to expand cattle numbers in the Western States will be strengthened. While total cattle numbers would be increased next year even though slaughter should be no smaller than in 1939, they would be increased further if slaughter is reduced by withholding more cows and heifers to build up breeding herds and calves to increase stock cattle.

With cattle numbers at present levels, a total yearly slaughter of 25,000,000 head of cattle and calves can take place without reducing cattle numbers. Such a slaughter is much above the average of the 15 years 1920 to 1934.

Cattle prices during the past few years have been maintained at considerably higher levels than would have prevailed except for the marked shortage in hogs. Hog production is now back to the pre-drought level and total production of meats in 1940 will be above average, and may approach record proportions. Under these conditions it would seem that cattle producers might well utilize the coming period of improved demand to market fairly heavily rather than to increase numbers and potential production by building up herds in a period of high prices.

Number of cattle on farms, by regions, January 1
specified years

Year	North Atlantic	East North Central	South Atlantic	East South Central	West North Central	West South Central	Western States	East of Miss. River	West of Miss. River	Total United States	Percentage of total: East of Miss.	Percentage of total: West of Miss.
	Thous.	Thous.	Thous.	Thous.	Thous.	Thous.	Thous.	Thous.	Thous.	Thous.	Pct.	Pct.
1920	5,190	10,898	4,943	4,549	20,213	11,897	12,710	25,580	44,820	70,400	36.3	63.7
1925	4,472	9,721	4,241	3,777	19,464	10,503	11,195	22,211	41,162	63,373	35.0	65.0
1928	4,383	9,161	3,773	3,649	17,055	9,249	10,053	20,965	36,357	57,322	36.6	63.4
1930	4,647	9,659	3,855	3,782	18,784	10,091	10,185	21,943	39,060	61,003	36.0	64.0
1932	4,759	10,393	4,207	4,275	20,372	11,025	10,739	23,634	42,136	65,770	35.9	64.1
1934	4,879	11,101	4,732	4,831	22,938	13,510	12,271	25,543	48,719	74,262	34.4	65.6
1935	4,750	10,819	4,799	4,971	19,749	12,167	11,274	25,339	43,190	68,529	37.0	63.0
1936	4,789	11,120	4,670	4,705	20,213	11,351	11,081	25,284	42,645	67,929	37.2	62.8
1937	4,888	11,063	4,562	4,519	18,621	11,898	11,246	25,038	41,765	66,803	37.7	62.3
1938	4,962	11,133	4,517	4,566	18,409	11,535	10,961	25,178	40,905	66,083	38.0	62.0
1939	5,050	11,376	4,664	4,680	18,856	11,353	10,842	25,770	41,051	66,821	38.6	61.4

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OUTLOOK FOR SHEEP, LAMBS AND WOOL FOR 1940

Summary

The number of stock sheep on farms and ranches at the beginning of 1940 probably will not be much different from the number at the beginning of 1939. The trend in sheep numbers during the next few years may be moderately upward, especially if range conditions in the western sheep States are favorable. In the native sheep States and in Texas, the number of stock sheep on January 1, 1940 is expected to be the largest for recent years, and some further increase in these two regions may occur after 1939.

Present indications are that the number of lambs fed in the Corn Belt in the 1939-40 feeding season will be materially larger than in the 1938-39 season. The increase in the Corn Belt, however, will be partly offset by some reduction in the number fed in the Western States. In the Corn Belt area east of the Missouri River, abundant feed supplies will be an important factor in the increase in lamb feeding. But feed production in the western region is considerably less in 1939 than it was in 1938.

Prices of lambs in the 1939-40 fed-lamb marketing season (December--April) may average higher than in the 1938-39 season. Slaughter supplies of lambs in the 1939-40 season (December - April) are expected to be somewhat larger than in 1938-39. But the effects of the increase in supplies upon prices will be offset or more than offset by improvement in consumer demand for meats and by higher prices for wool obtained from slaughter lambs.

The prospective improvement in consumer demand and increase in foreign demand for wool brought about by the war will be important supporting factors to prices of domestic wool in 1940. But wool prices have risen nearly 50 percent since August, and it may be that much of the influence of the stronger domestic and foreign demand already has been reflected in wool prices. Change in wool prices during the coming year will depend to some extent upon prices fixed by the British Government for Empire wools and upon the quantity of such wools released for export to neutral countries.

Mill consumption of wool in the United States thus far in 1939 has been larger than the average of recent years. Prospects are favorable for a continuation of a relatively high level of mill consumption in 1940. Stocks of wool in this country are relatively small, and a considerable increase in imports is probable before the 1940 domestic clip becomes available.

Total Southern Hemisphere supplies of wool for the 1939-40 season are expected to be about equal to the average of the last 5 years. Mill consumption of wool probably will be increased considerably in Great Britain and France, but a decrease in consumption is probable for Germany and perhaps

some other European countries. The effects of the war will be greater on medium and coarse wools than on fine wools.

The strong demand and increased prices of wool brought about by the war may give considerable stimulus to the use of rayon staple fiber as a substitute for wool in this country and abroad. Production of rayon staple fiber has increased greatly during the last decade, especially in Germany, Italy, and Japan.

Sheep and Lambs

Supplies for 1939-40

The lamb crop in 1939 was about 1 percent smaller than the record crop of 1938 but larger than in any other year. The decrease from last year was largely the result of the marked reduction in the Texas crop.

Judging from the size of the lamb crop and assuming there will not be much change from last year in the number of stock sheep held on farms January 1, 1940, slaughter supplies of sheep and lambs in the 1939-40 marketing year, which began last May, may not be greatly different from those of the 1938-39 marketing year, when inspected slaughter totaled 17,765,000 head. Slaughter during the May-August period of 1939 was 350,000 head smaller than in corresponding months of 1938, but slaughter is expected to be larger than a year earlier during the 1939-40 fed-lamb marketing season.

Lamb feeding situation

The number of lambs to be fed during the 1939-40 feeding season probably will be larger than the number fed in the 1938-39 season. The number fed in the Corn Belt States will be considerably larger this season than last, but the increase in the Corn Belt will be partly offset by a decrease in the Western States.

The total shipments of feeder sheep and lambs into the Corn Belt States during the 3 months, July through September, probably were between 600,000 and 700,000 head larger than in the corresponding period last year. Shipments into the Corn Belt during the last 3 months of 1939, however, are not expected to show as much increase over a year earlier as they did from July through September. The larger movement in recent months reflects the poor range conditions in the Western States which resulted in a large movement of feeder lambs in July and August from early lambing areas and a large movement in September from late lambing areas.

Developments to the middle of October indicated that the number of lambs fed in the Western States will be smaller in the coming feeding season than a year earlier. Feed production in the Western States is much smaller this year than last. A large part of the decrease in lamb feeding is expected to be in Colorado, the most important feeding State. A rather sharp decrease also is expected in the Scotts Bluffs feeding area in Nebraska and Wyoming. California is the only Western State where any increase in lamb feeding this year seems probable.

Little winter wheat pasture will be available this fall and winter in the Great Plains area from Nebraska to Texas. After October 1 last year there was a rather heavy movement of lambs into this area for feeding on wheat pastures, with a large part of the movement being Texas and New Mexico lambs. A considerable number of lambs from these States would have been moved to wheat pastures this fall if such pastures had been available. Lacking this pasture, these lambs will be shipped to feed lots either in the Corn Belt or in feeding areas in the Western States.

Prices

In the 1938-39 fed-lamb marketing season (December-April), prices of lambs did not fluctuate much, except for a moderate seasonal advance in late March and April. Throughout the season prices were higher than in the 1937-38 season, a reflection of the reduction in slaughter supplies as well as of somewhat better consumer demand for meats.

Prices of spring lambs in April, the beginning of the new crop season, ranged from $1.50 to $2.00 higher than a year earlier. The weekly average price of Good and Choice spring lambs at Chicago in early May was about $10.85 compared with $8.30 in the corresponding week of 1938. In early June, prices of spring lambs weakened slightly, and this was followed by a rather marked decline from early July to late August. For the last full week in August, the average price of Good and Choice spring lambs at Chicago was about $8.15 compared with $10.85 in early May and about $8.50 a year earlier. Prices of lambs rose sharply along with prices of other livestock in early September. During the first week of September prices of Good and Choice slaughter lambs at Chicago averaged about $10.20, but this average was about $9.50 during the third week of October. In late October last year, the average was about $8.10.

Market prices of feeder lambs advanced materially from late August to late September. Prices of lambs sold on contract for fall delivery in the Western States also rose sharply during early September. Up to late August, contract prices for western lambs were reported as ranging mostly from $6.50 to $7.50, and relatively few lambs had been bought on contract up to that time. In early September, however, the range of contract prices reported was from $7.50 to $8.50, and a considerable increase in volume of contract sales occurred.

Prospects for prices in 1939-40

Slaughter supplies of lambs during the 1939-40 fed-lamb marketing season (December-April) are expected to be larger than in the 1938-39 season. Most of the increase over a year earlier probably will occur in the first 3 months of the season, as the increase in the number of lambs fed will be mainly in the Corn Belt, where fed lambs are usually marketed before March 1.

Effects of the increase in slaughter supplies upon prices, however, will be offset or more than offset by the improvement in consumer demand for meats and by materially higher prices for wool. Prices of pulled wools rose about 50 percent from mid-August to late September. Thus, prices of

lambs in the 1939-40 fed-lamb season may average higher than a year earlier. The seasonal increase in prices during the late winter and early spring probably will be greater than in the corresponding period of 1939, as marketings in the late months of the fed-lamb season probably will reflect the decrease in the number of lambs fed in the Western States.

Production outlook

The number of stock sheep on January 1 in the United States has changed relatively little during the last 9 years. The difference between the high and low years during this period has been only about 2,000,000 head or less than 5 percent. The high year was 1934 and the low year was 1936. Since 1936, numbers increased until on January 1, 1939 they were about back to the 1934 peak.

On January 1, 1931 the total number of stock sheep was 47,720,000 and on January 1, 1939 it was 48,062,000. But there was a considerable shift in regional distribution of sheep from 1931 to 1939. The number of native sheep had increased about 5 percent whereas the number of western sheep had declined about 1 percent. The greatest shift in distribution was in the western sheep States. The number of stock sheep in Texas had increased about 3,000,000 head or over 40 percent. The total for the other Western States had decreased by over 3,000,000 head, with numbers down in all States, except California.

Indications early in October were that there would be more sheep on January 1, 1940 than a year earlier. Although the 1939 lamb crop was about 300,000 head smaller than in 1938, the slaughter of sheep and lambs during the first 9 months of the year was 735,000 head smaller than in the same period last year, and during the 5 months, May to September, it was 450,000 head smaller. Slaughter during the 3 months, October to December, is not expected to differ much from the slaughter of the same period last year. It is as yet uncertain whether the increase in sheep numbers this year will be in stock sheep or in sheep and lambs on feed.

Before the sharp advance in prices for wool in September, a decrease in both stock sheep and lambs on feed seemed probable in the western sheep States, excluding Texas. The feed situation over much of this region is quite unfavorable with the condition of ranges on September 1 the third lowest for the month since 1922. Winter sheep ranges in many of these States are particularly poor and sheep will be in rather poor condition at the beginning of the winter. Heavy supplemental feeding of sheep will be necessary to avoid heavy winter losses, unless the coming winter should be unusually mild. In view of this situation it seemed highly probable in August that a much smaller number of ewe lambs would be kept for breeding than were kept last year and that marketings of ewes would be rather heavy. But with a sharp rise in prices of wool and the advances in prices of feeder lambs since late August, prospects for the sheep business seem much rosier than they did late in August. Hence, it is not unlikely that enough western sheepmen have changed their marketing and production plans so that there may be no reduction in stock sheep numbers this year.

But if the number of lambs on feed in the Western States on January 1, 1940 is materially smaller than a year earlier, as now seems probable, the total number of all sheep in this region may be smaller on January 1, 1940 than on January 1, 1939.

Some decrease in sheep numbers in Texas may take place this year. If the feed situation were more favorable the higher prices of wool would encourage the carrying over of relatively large numbers of 1939 wether lambs to be shorn next spring and marketed as grass fat yearlings. But the poor feed prospects and the higher prices for feeder lambs in September resulted in heavy shipments in September and it is probable that total shipments for this year may at least equal the record shipments of 1938.

Another moderate increase in stock sheep in the native sheep States this year also is expected. This would bring the number in this area to a new record for recent years. This increase is expected to be rather general over the more important native sheep States, except in the Corn Belt States west of the Missouri River.

The outlook for the sheep industry during the next few years appears to be relatively more favorable than the outlook for either cattle or hogs.

There is little evidence pointing to any material increase in stock sheep during the next few years. Numbers in the western sheep States, exclusive of Texas, are dependent to a considerable extent upon the numbers that are permitted on the grazing districts of the public domain and on the national forests. The tendency of such permits is more likely to be downward than upward in the next few years. But some increase in numbers in Montana and South Dakota is probable. Further expansion in Texas may take place, but with nearly 10 million sheep in that State, any further increase will probably be moderate. Numbers in the native sheep States may also increase moderately during the next few years, especially in districts where the acreage of pasture and hay land is expanding, but an increase in total numbers of more than 1 percent a year for the next few years hardly seems probable.

Number of stock sheep and lambs on farms in the United States and specified regions, January 1, 1923 and January 1, 1931-39

Year	Western sheep States, excluding Texas	Texas	All western	Native sheep States	United States
	Thousands	Thousands	Thousands	Thousands	Thousands
1923	19,320	3,490	22,810	9,787	32,597
1931	27,252	6,749	34,001	13,719	47,720
1932	26,774	6,952	33,726	14,028	47,754
1933	25,878	7,444	33,322	14,002	47,324
1934	26,211	8,059	34,270	14,184	48,454
1935	25,265	7,092	32,357	14,277	46,634
1936	24,757	7,234	31,991	14,400	46,391
1937	24,100	8,750	32,850	14,102	46,952
1938	23,387	9,100	32,487	14,198	46,685
1939	23,995	9,646	33,641	14,421	48,062

The price outlook for both wool and lambs seems relatively favorable compared with that for cattle and hogs. The war situation is expected to be more of a price strengthening factor for wool than for any other agricultural product. This arises from the fact that the country is a regular importer of wool, and domestic prices tend to follow world prices, and that world wool prices are likely to be high under war conditions; then, too, shipping difficulties, insurance rates and other factors that are likely to raise the costs of importing wool, tend to support prices in this country.

During the last few years the short supply of hogs has apparently been less of a strengthening factor for lamb prices than for those of other classes of livestock. Hence, increased supplies of hogs during the next few years is expected to be less of a weakening factor on lamb prices than on those of other livestock.

Wool

Supplies

Domestic supplies below 5-year average

Stocks of apparel wool in the United States at the beginning of the 1939 marketing season on April 1 were much smaller than a year earlier. Imports of wool from April through August 1939 were larger than in 1938, but the increase in mill consumption was greater than the increase in imports. On September 1, 1939, total stocks of wool in this country, including the unshorn portion of the 1939 clip, were much smaller than a year earlier and below the 5-year (1933-37) average.

Carry-over into 1940 season may be small

In the first 5 months (April-August) of the 1939 season, domestic mill consumption of apparel wool averaged nearly 50 million pounds a month. If this rate of consumption is maintained during the remainder of 1939, as now appears probable, the consumption for the first 9 months (April-December) will be about equal to the estimated production of shorn and pulled wool for 1939. Consequently, the carry-over into the new season, beginning April 1, 1940, will be small, unless imports in the current season exceed mill requirements for the first quarter of 1940.

Production, imports and mill consumption of apparel wool, grease basis, in the United States, annual 1935-38 and April through August 1938 and 1939

Year beginning April 1	Production	General imports 1/	Mill consumption
	Million pounds	Million pounds	Million pounds
1935-36	431	83	2/ 673
1936-37	427	164	582
1937-38	433	60	407
1938-39	436	49	3/ 544
Apr.-Aug. 1938	4/ 436	7	189
1939	4/ 440	30	247

Continued -

Imports from the Bureau of Foreign and Domestic Commerce. Consumption from the Bureau of the Census.

1/ Weight as reported - greasy, scoured and skin wool added together.
2/ Stocks of apparel wool in the United States were large at the beginning of 1935.
3/ Bureau of the Census figure adjusted to 52 week basis.
4/ Production for entire year. Figure for 1939 includes pulled wool estimate equal to 1938 production of pulled wool.

Southern Hemisphere supplies for 1940 about average

The carry-over of wool into the 1939-40 season in the principal exporting countries of the Southern Hemisphere was much smaller than a year earlier and was estimated to be smaller than the average carry-over in the 5 years, 1933-37. No marked change in wool production is in prospect for the new season, and total supplies for the 1939-40 season probably will be smaller than those of 1938-39 but will be equal to, or slightly larger than, average supplies for the 5 years, 1933-34 to 1937-38.

Australian and New Zealand wool clips purchased by Government

According to official announcements the British Government will purchase the Australian and New Zealand wool clips for the duration of the war and one clip thereafter. The purchase of the Australian and New Zealand clips will give the British Government control of approximately 65 percent of the wool clip of the Southern Hemisphere, where most of the supply of wool for international trade is produced. The British Government has not acquired the wool clip of the Union of South Africa but British purchases of wool in South Africa will be made in sufficient quantity to assure that the price for South African wool will be as high as the fixed price for Australian wool.

British Empire production exceeds requirements

The total production of wool in Australia, New Zealand, and the Union of South Africa in 1939 probably will be a little more than 1.5 billion pounds. In 1938 the total retained imports of wool into the United Kingdom and France was about one billion pounds. Imports were relatively large in 1938. Such figures indicate that, even with the increase in requirements as a result of the war, the production of wool in the three British Empire countries of the Southern Hemisphere in 1939-40 probably will exceed the import requirements of the United Kingdom and France.

Most of the production in Australia and the Union of South Africa is fine wools, whereas the production in New Zealand is largely medium and coarse wools, the grades used for military purposes. Argentina and Uruguay also produce mostly medium and coarse wools. Great Britain, therefore, may buy considerable quantities of South American wools and may release some Australian wools for export to neutral countries.

Wool production in principal producing countries, average, 1933-37, and annual 1938

Country	1933-37 average	1938
	Mil. lb.	Mil. lb.
Southern Hemisphere		
Australia	998	985
New Zealand	292	328
Union of South Africa	244	248
3 British Empire countries	1,534	1,561
Argentina	363	375
Uruguay	114	121
Other South America	104	---
South America	581	
United States	432	436
Other countries - partly carpet wool	849	---
World total, excluding Russia and China	3,396	1/ 3,500

Compiled from official publications and reliable commercial sources.

1/ Preliminary estimate.

Retained imports of raw wool, principal importing countries, average 1933-37, annual 1938

Country	1933-37 average	1938
	Mil. lb.	Mil. lb.
United Kingdom	576	613
France 1/	401	413
Total 2 countries	977	1,026
Belgium	108	141
Italy	115	76
Poland	41	50
Germany	273	306
Czechoslovakia	35	---
U.S.S.R.	62	---
Japan	228	117
United States 2/	207	103

Compiled from official sources and "Wool Intelligence Notes".

1/ Includes wool pulled from imported skins, estimated at 60 percent of weight of retained imports of wooled skins.
2/ Imports for consumption, apparel and carpet class.

Consumption and Trade

Domestic mill consumption large in 1939

Domestic mill consumption of apparel wool, on a grease basis, in the first 8 months of 1939 was 50 percent larger than in the same months last year and was about 20 percent larger than the January-August average for the 10 years 1928-37. While mill consumption has been large in the last year, consumption had declined to a low level in late 1937 and the first half of 1938 and stocks of semi-manufactured and manufactured goods were greatly reduced. The building up of inventories of manufactured and semi-manufactured goods probably has been an important factor in maintaining mill consumption at recent high levels.

In view of prospects for a further improvement in business conditions in the fall and winter months, mill consumption of wool is likely to continue at a fairly high level during the remaining months of 1939. Even if consumption for the last 4 months of the year is no larger than in the same months of 1938, consumption for the entire year is likely to be larger than in any recent year, except 1935.

Consumption expected to continue large in 1940

Mill consumption of apparel wool in the United States in 1940 probably will be at a level somewhat higher than the average consumption in recent years. The higher rate of activity is likely to result from improvement in domestic consumer demand and a decrease in imports of wool products. In view of the relatively large consumption in 1939, however, domestic mill consumption for 1940 may not show much change from the 1939 total.

Foreign consumption

A considerable expansion in the total consumption of wool in the United Kingdom and France seems probable because of the war. The use of wool for military purposes will increase materially but the use for civilian purposes and for exports of wool textiles probably will be reduced somewhat.

Consumption of wool in Germany and perhaps in some of the neutral countries of Europe probably will be reduced. The volume of Southern Hemisphere wools going to these countries will be relatively small. In 1938 total German imports of raw wool amounted to about 300 million pounds. Probably a large part of the wool that ordinarily would be exported to Germany will be shipped to other countries.

Larger imports probable

The increase in domestic mill consumption of wool thus far in 1939 has been accompanied by an increase in imports into the United States. Imports for consumption, of apparel wool, totaled 49 million pounds in the first 8 months of 1939 compared with 15 million pounds in the same months of 1938 and an average of about 57 million pounds for those months in the 5 years 1933-37.

Because stocks of apparel wool in the United States are now relatively small and mill consumption is expected to continue at a fairly high level, a considerable increase in wool imports may occur before the 1940 domestic clip is available.

Prices

In June 1938 domestic wool prices reached the lowest level since the spring of 1935. The increase in domestic mill consumption after June 1938 was accompanied by a gradual increase in prices for wool in this country. On August 15, 1939 the United States average farm price of wool was 20 percent above that of the low months of 1938, but prices were about 35 percent lower than in the spring of 1937.

Domestic wool prices advanced sharply in September following the outbreak of the European war. The relatively small supplies of wool on hand in this country, the continued high level of domestic-mill consumption, and the uncertainty of obtaining supplies from Southern Hemisphere countries in the near future were the chief factors in the rise in prices during September.

The price of fine staple combing territory wool at Boston averaged $1.09 a pound, scoured basis, in the third week of October 1939 compared with 74 cents in August and a high of $1.14 a pound in the early months of 1937. Territory 3/8 blood combing wool averaged 94 cents a pound, scoured basis, in the third week of October compared with 61 cents in August and $1 a pound in early 1937.

Foreign-wool prices did not change materially in the latter part of 1938 and early months of 1939. But the decline in the exchange value of the British pound tended to lower quotations for foreign wool in terms of United States currency. As domestic prices advanced and foreign prices declined the spread between domestic and foreign prices widened sufficiently to attract larger imports of wool in the latter part of 1938 and early months of 1939. Foreign prices of medium and coarse grades of wool advanced after February 1939, but prices of fine wools did not show much change during the remainder of the 1938-39 selling season.

Prospects for wool prices in 1940

The prospective improvement in consumer demand in the United States along with the increased foreign demand for wools brought about by the European war will be strong supporting influences to prices for domestic wool in 1940. Relatively short supplies in this country also will be a strengthening factor, but wool prices have risen approximately 50 percent since August, and it may be that much of the influence of the stronger domestic and foreign demand has already been reflected in wool prices. Changes in prices for wool during the coming year will depend to some extent upon prices fixed by the British Government for British Empire wools and upon the quantity of such wools released for export to neutral countries.

The relatively marked increase in wool prices may give considerable stimulus to the use of rayon staple fiber as a substitute for wool in this country and abroad. Production of rayon staple fiber has increased greatly during the last decade. The increase has been especially large in Germany,

Italy, and Japan, because of the shortage of natural textile fibers in those countries.

Carpet Wool

Mill consumption of carpet wool during the first 8 months of 1939 was much larger than the relatively small consumption of the corresponding months of 1938. For the entire year 1938, total mill consumption was about 93 million pounds, or slightly less than in January-August period of 1939. For the 5 years 1933-37, mill consumption of carpet wool averaged 127 million pounds per year. Mill consumption of carpet wool in the United States is supplied entirely by imports, as the domestic production is practically all apparel wool.

Imports of carpet wool totaled 97 million pounds in the first 8 months of 1939 compared with only 72 million pounds for the entire year 1938. United States imports of carpet wools in 1938 and thus far in 1939 were chiefly from Argentina, British India, and the United Kingdom. Before 1938, these three countries and China were the principal sources of carpet-wool imports. Control of the supplies of wool in North China by Japan, since early 1938, however, has largely closed the Chinese market to United States importers. In the period 1933-37 imports from China represented about one-fourth of the total imports of carpet wool. Imports thus far in 1939 have been at a rate slightly higher than the 1933-37 average, but practically no carpet wool has been imported from China this year. Imports from British India, however, have been considerably above the 1933-37 average.

Release Date
November 13, A. M.

THE MOHAIR OUTLOOK FOR 1940

Summary

The mohair situation has improved considerably in 1939 and probably will improve further in 1940. Prices this year have been substantially higher than in 1938, and most of the 1939 mohair clip had been sold by the end of October. Mohair production in the United States in 1939 probably was slightly larger than in 1938, and present indications are that production in 1940 will be at least as large as in 1939. The demand for mohair in 1940 will be strengthened by the probable increase in the output of automobiles. Because of the war situation and the small domestic stocks, prices of coarse wools have risen sharply, and as mohair is frequently used for the same purpose as coarse wools the higher prices for such wools are an important strengthening influence on mohair prices.

Supplies

No data are available on stocks or consumption of mohair in the United States. Trade reports generally indicate that stocks of hair in early September were relatively small. On the basis of the indicated production in Texas, where more than 80 percent of the mohair is produced, total domestic production of mohair in 1939 will be slightly larger than the 16.8 million pounds produced in 1938. The 1933-37 average production of mohair was 16.1 million pounds. As a result of rains in the late summer, range conditions are favorable in most of the goat-producing area of Texas, and it is probable that mohair production in 1940 will be at least as large as in 1939.

Imports of mohair have been decreasing for a number of years. For the period January through July 1939, mohair imports for consumption totaled only about 35,000 pounds. For the calendar year 1938 they totaled 106,000 pounds, and for 1937 they were 894,000 pounds. Domestic consumption of mohair in recent years, therefore, has been only slightly larger than the quantity produced in this country.

Prices and Consumption

Mohair prices thus far in 1939 have been substantially higher than in 1938. The spring clip and much of the fall clip were sold in Texas at about 40 cents per pound for adult hair and 50 cents per pound for kid hair. With the sharp rise in prices of wool and mohair in September, prices in Texas were reported at 50 cents and over for adult hair and 60 cents and over for kid hair. In the spring of 1938 prices as low as 25 cents per pound for adult hair were reported in Texas, and in the fall of 1938 adult hair sold at from 35 to 40 cents per pound. Quotations for sorted kid hair on the Boston market advanced sharply during September, and late in that month were at the highest level since April 1937.

A considerable part of the mohair consumed in this country is used in connection with the manufacture of woolen goods. On the basis of mill

consumption of wool, it would appear that mill consumption of mohair has been larger thus far in 1939 than a year earlier. Automobile output in 1939 was somewhat greater than in 1938, and as a result the use of mohair in plush fabrics may have increased.

The marked advance in prices of medium and coarse wools and the strong demand for such wools for military purposes indicate that the demand for mohair for woolen goods in 1940 will be strong, perhaps stronger than for several years. A substantial increase in automobile output is also expected in 1940, and this may tend to strengthen the demand for mohair for plush fabrics.

Release Date
November 6, P.M.

THE OUTLOOK FOR HORSES AND MULES 1940

Summary

The probability of increased tractor competition, the declining prices for horses, the inroads of disease in some sections plus the old-age toll, and a decreased colt crop, all point to a further decrease in the number of horses on farms.

The length of time this decline continues will depend largely upon the trend in colt production during the next few years. This trend will be determined by a number of factors - such as the price of work animals relative to prices of other livestock and to tractor prices and prices of feed grains and hay - which will influence farmers' decisions as to the relative returns from colt raising compared with other livestock production.

Exports of horses at present are too small to be a factor in reducing horse numbers; but a prolonged war in Europe might create some export demand for horses and mules.

Numbers of Work Stock on Farms Decreasing

The number of work stock on farms has decreased steadily since 1913. The increase in colt production from 1932 through 1937 slowed up the rate of decrease, but was not large enough to check the downward trend in horse and mule numbers.

The number of horse and mule colts under 1 year of age on hand January 1, 1939 of 778,000 was 6.5 percent below the number on hand January 1, 1938. The number of horse colts, which had been increasing steadily since 1932, was checked in 1938 and on January 1 of this year showed a decline of 8.3 percent from last year, with the heaviest decreases occurring in the North Central States. The smaller number of colts in the North Central States can be attributed mainly to the competition of the smaller tractors and the retarding effects of sleeping sickness on colt production. In contrast to the reduction in horse colts, the production of mule colts continued to increase and numbers on January 1 were 15.5 percent above last year. The combined numbers of horse and mule colts produced in 1938 were not large enough to offset the disappearance of work animals caused by ordinary death losses of older animals and rather heavy disease losses of younger animals.

Estimated horses and mules on farms by geographic divisions

Geographic Divisions	Number on farms Jan. 1, 1939 (000) head				Percentage change during 1938			
	Total		Colts under 1 year of age				Colts under 1 year	
	Horses	Mules	Horse	Mule	All Horses	All Mules	Horse Colts	Mule Colts
N. A.	791	61	14	-	- 1.1	- 1.6	- 6.7	-
E. N. C.	2,404	219	139	10	- 3.0	- 1.4	- 8.6	+ 25.0
W. N. C.	3,612	432	241	33	- 4.6	- 2.9	-13.9	+ 17.9
S. A.	501	1,017	24	4	+ .8	+ .3	-	+ 33.3
S. C.	1,856	2,536	106	67	- 2.3	- 1.2	- 7.8	+ 13.6
West.	1,636	117	135	5	- 1.9	- .8	+ 2.3	-
U. S.	10,800	4,382	659	119	- 2.9	- 1.0	- 8.3	+ 15.5

There was a decrease in total horse numbers in 1938, but, as in 1937, the South Atlantic States continue to show a slight increase. The decrease in numbers in the West North Central States continued heavy. Mules showed a decrease in all sections of the country except the South Atlantic States where a slight increase in numbers occurred.

Tractor Competition Increasing

The competition of the tractor, automobile, and improved machinery, and the changing cultural methods have brought about a reduction in work stock. The small, high-speed, single-plow type of tractor is now invading the small farms, which a few years ago were considered the stronghold of the horse. Increasingly large numbers of farmers and farm help are becoming mechanically minded and expect to perform their farm operations more quickly and with less manual labor than heretofore. Tractor production for the last 3 years has been around 200,000 per year. Of this number 172,614 in 1936, 216,169 in 1937, and 163,934 in 1938 were sold in the United States. Tractors for farm use make up the bulk of the tractor sales in this country. The trend in recent years toward the larger production of rubber-mounted general-purpose tractors has contributed to the decrease in the use of work stock.

Estimated number of horses and mules on farms and manufacture and United States sales of wheel-type tractors

Year	Horses and mules on farms Jan. 1 (000) head: Total	2 yrs. old & over	1-2 years	Under 1 yr.	Percentage change during the year: All horses & mules	All horse & mule colts under 1 yr.	Tractors manufactured 1/	Tractors sold by manufacturers for use in U. S. 1/
1920	25,742	22,386	1,750	1,606	- 2.4	- 17.9	-	-
1925	25,569	21,038	772	759	- 2.6	- 1.2	158,037	114,160
1930	19,124	17,981	569	574	- 3.4	- 9.1	176,075	113,160
1931	18,468	17,375	571	522	- 3.6	- 11.1	2/61,940	80,895
1932	17,812	16,822	526	464	- 2.7	+ .2	(Not available)	
1933	17,337	16,404	468	465	- 2.0	+ 17.4	(" ")	
1934	16,997	15,984	467	546	- 1.8	+ 22.3	(" ")	
1935	16,683	15,471	544	668	- 2.2	+ 9.9	138,084	118,667
1936	16,319	14,926	659	734	- 1.9	+ 6.3	193,947	158,444
1937	16,013	14,526	707	780	- 2.9	+ 5.6	237,837	216,169
1938	15,556	13,968	764	824	- 2.4	- 5.6	172,437	143,703
1939	15,182	13,602	802	778	-	-	-	-

1/ Manufacture and Sale of Farm Equipment and Related Products - Bureau of the Census.

2/ Manufactured column covers tractors produced during the year; sales column covers sales made during the year regardless of when items were manufactured. Sales during 1930 did not account for 19,249 tractors produced during 1930; these were probably sold in 1931.

Tractor production dropped off sharply during the period 1931 to 1935, but from 1935 through 1938 the production increased rapidly, 237,837 tractors (a record number) being produced in 1937. A large proportion of the machines made in 1937 and 1938 were of the all-purpose type and a large percentage of them were equipped with rubber tires. Of the 216,169 tractors sold in 1937 in the United States, 92,366 or 43 percent were equipped with rubber tires, and 97,954 or 68 percent were rubber mounted in 1938.

Prices

Prices of horses and mules began to show a downward trend in the latter part of 1937 and since then have continued to decline. This followed a sharp upward trend from 1933 through 1936, with prices reaching the highest peak in 17 years during the early part of 1937. Receipts at the main horse and mule markets during the first 9 months of 1939 were about 30 percent smaller than those for the corresponding period of 1938, but prices failed to respond to the reduced supplies. However, any considerable demand for horses for war purposes would probably result in stronger prices.

Price per head of horses and mules
April 15 and September 15

Year	Horses		Mules	
	March 15	September 15	March 15	September 15
	Dollars	Dollars	Dollars	Dollars
1930	69	61	87	72
1931	61	52	72	62
1932	55	53	64	62
1933	58	62	66	70
1934	75	71	88	84
1935	88	88	105	103
1936	98	90	115	107
1937	102	93	120	113
1938	89	82	108	100
1939	83	80	102	99

Production Outlook

The number of work stock probably will continue to decline for several years to come. Colt production is well below the number of animals needed to replace old work stock. Moreover, tractors are being made in sizes to meet the needs of more farmers, and the modern all-purpose type of tractor displaces more work stock than did the older types that were not designed for work in row crops. Both of these factors tend to reduce the needs for work stock on farms.

Exports of horses have been very low, only 1,508 head during the year 1938-39 and 2,482 head during 1937-38. The war in Europe may possibly increase exports of horses and mules, but because of the greater use of mechanical units in warfare, the demand for horses and mules is not likely to be so great as in the last war period.

Release Date
November 15, A.M.

THE OUTLOOK FOR FATS, OILS, AND OILSEEDS FOR 1940

Summary

Production of fats and oils from domestic materials in 1939-40 is expected to be the largest on record, with increased production of lard, soybean oil, linseed oil, and grease much more than offsetting decreased production of cottonseed oil. Stocks of fats and oils on July 1, 1939, were unusually large. With record supplies of domestically produced fats, import requirements for vegetable oils and oilseeds are considerably less this year than those of a year earlier.

Prices of practically all fats, oils, and oilseeds, with the exception of flaxseed and the paint oils, were the lowest in August 1939 in more than 5 years. But with the outbreak of war in Europe in September, prices advanced fairly sharply. In late September and in October prices receded somewhat, but a part of the advances was maintained. The advances in early September apparently were due largely to speculative sentiment, but in part to increased costs of ocean freight shipments for imported materials and to some improvement in domestic demand.

Present indications are that both domestic and foreign demand for food and soap fats will be strengthened somewhat during the next year as a result of increases in industrial activity and in consumer purchasing power. Increased demand for glycerin for war purposes also may tend to strengthen prices of soap fats. Domestic prices of edible fats and oils in 1940 may be somewhat higher than in 1939, despite the relatively large supplies of such fats and oils available.

The United States has imported fats, oils, and oilseeds on balance since 1915, but lard continues to be exported, and during the past few years a surplus of soybeans has been available for export. Present conditions indicate that the United Kingdom will increase to some extent its takings of American lard. This will tend to restore to lard its former premium over prices of cottonseed and other vegetable oils, lost in recent months as a result of the large surplus of lard.

Domestic supplies of cottonseed for the 1939-40 marketing season are indicated to be slightly smaller than those of a year earlier and less than average. Although supplies of competing oils and feeds are large, the demand for cottonseed oil, hulls, and meal is expected to be somewhat stronger this season than last. And the demand for linters may be considerably stronger because of their usefulness for war purposes.

With the continuation of the peanut-diversion program, returns per acre from the 1939 peanut crop are expected to compare favorably with those from cotton and other competing crops. The peanut crop in 1939 was slightly smaller than the record crop of 1938. At least 250 million pounds of peanuts are expected to be available for crushing in the 1939-40 season.

Soybean production for 1939 is the largest on record. Although large supplies of soybean and linseed meal will be available, the demand for high-protein feeds is expected to be stronger than a year earlier. The demand for soybean oil also is expected to be stronger. It is probable that more soybeans will be exported in 1939-40 than a year earlier.

World supplies of flaxseed are about the same as in late 1938. But an increase in the Argentine crop to be harvested in late 1939 and early 1940 is indicated. The acreage of flax seeded in the United States in 1939 was the largest since 1932, and a further expansion in domestic flax acreage seems probable for 1940. The European demand for flaxseed is expected to be weaker in 1939-40 than a year earlier, but demand in the United States probably will be well maintained. Continued difficulties in securing shipments of tung oil from China because of military operations in that country will tend to support the demand for flaxseed and linseed oil in the United States. With larger world supplies and a somewhat weaker world demand, however, flaxseed prices in 1940 may average lower than in 1939 unless commodity prices generally score a sharp advance.

The Fats and Oils Situation

With the exception of the paint oils, domestic supplies of fats and oils for 1939-40 are the largest on record. Hence the need for imports of vegetable oils and oilseeds is considerably less than a year earlier, when net imports of fats, oils, and oilseeds in terms of crude oil totaled about 1.5 billion pounds

Production of fats and oils from domestic materials in 1939-40 probably will amount to more than 8.5 billion pounds, or at least 5 percent more than the large production of 1938-39. Stocks of fats, oils, and oilseeds in terms of crude oil on July 1, 1939, totaling about 2.5 billion pounds, were 3 percent larger than a year earlier. Most of the increase in the domestic output in 1939-40 will take place in the production of lard, soybean oil, linseed oil, and grease. Production of cottonseed oil may be slightly less than in 1938-39.

Chiefly because of the large supplies of fats, oils, and oilseeds, both in this country and abroad, domestic prices of fats and oils (except for the drying oils) were the lowest in August 1939 for all the months since early 1934. With the outbreak of the European War, however, prices advanced sharply. This was largely a result of speculative anticipation of wartime demand from Europe, but also reflected increased costs for ocean shipments for imported materials, and some strengthening in domestic demand with improvement in industrial activity and consumers' incomes.

Fats and oils and the war of 1914-18

Domestic prices of fats and oils remained comparatively stable during the first 2 years of the World War. But from July 1916 to November 1919, the

index of prices of 8 domestically produced fats and oils more than doubled. Several factors contributed to this sharp rise, among which were the heavy European purchases of supplies of many kinds in the United States, the strong domestic demand for food fats and soap resulting from increased industrial activity and consumers' incomes, the demand for glycerin for war purposes, and the general rise in commodity prices that accompanied the wartime expansion in bank credit. With the collapse of the war boom in 1920 and 1921, prices of fats and oils declined to about their pre-war level.

Production of animal fats in this country, except for a slight upward trend, remained fairly stable throughout the period of the World War. But production of vegetable oils from domestic materials declined considerably from 1914 to 1920, with reduced output of both cottonseed and flaxseed. To make up the deficiencies in the domestic production of oilseeds, and to provide for the growing demand for fats and oils, imports of coconut oil and copra, soybean oil, and peanut oil were increased sharply from 1914 to 1918. Imports of flaxseed, chiefly for the paint, varnish, and linoleum industries, also were increased. In 1916, the United States changed from a net exporting to a net importing basis for fats and oils.

Although the United States became a net importer of fats and oils, exports of animal fats continued. Exports and shipments of butter increased slightly after 1914, but with the loss of the German market exports of lard were considerably smaller from 1915 through 1917 than in the years 1912-14. Lard exports increased fairly sharply after 1917 with increased takings by the United Kingdom and several other countries of western Europe. Tallow, usually exported, was imported on balance in 1917 and 1918, apparently because of the increased demand for soap and glycerin in those years.

Export outlook for 1940

Since 1918, consumption of fats and oils in the United States has increased at a greater rate than domestic production, with the result that import requirements for vegetable oils and oilseeds are considerably larger now than in the early years of the World War. Nevertheless, lard continues to be exported, and with the marked increase in production of soybeans since 1934, a surplus of soybeans also is available for export. Present indications are that the United Kingdom will increase its takings of American lard in the next 1 or 2 years. With improved prospects for exports, prices for lard may regain their former premium over prices for cottonseed and other vegetable oils, lost in recent months because of the large surplus in domestic lard supplies.

Since 1933, the United States has exported very little lard to Germany. Hence the present British blockade of Germany can have no serious effects in reducing our export trade in lard. The demand for American lard in the United Kingdom probably will be increased because of reduced lard production in western Europe and the difficulties that will be experienced in importing oilseeds and vegetable oils from distant colonial possessions and the Far East; the production of whale oil by the United Kingdom, moreover, may be suspended for the duration of the war.

In 1938, the United States exported 234 million pounds of lard (including shipments to noncontiguous territories) more than half of which was taken

by the United Kingdom. In August 1939, before the outbreak of war, it was estimated that about 330 million pounds of lard would be exported from this country in 1939.

Assuming that imports of vegetable oils and oilseeds into the United States from South America and trans-Pacific sources will not be restricted by the present war, and that import prices will be comparatively low, it is probable that at least 600 million pounds of American lard will be available for export in 1940. The principal market for this lard would be the United Kingdom.

Price outlook for fats, oils, and oilseeds

Domestic and European demand for food and soap fats and oils is likely to increase fairly sharply with increased industrial and war activities during the next year or two. Despite large domestic supplies, prices of edible fats and oils in 1940 are expected to be somewhat higher than in 1939. Demand for drying oils probably will be reduced in Europe in 1940, although such demand may be well maintained in the United States. Present indications are that world supplies of flaxseed and linseed oil in 1940 will be larger than in 1939. And prices of flaxseed and linseed oil may average lower than in 1939 unless commodity prices generally score a sharp advance.

With reduced European imports of products from Southern Hemisphere and Far Eastern countries, resulting from the blockade of Germany and the restricted movement of Allied shipping, it is probable that prices of vegetable oils and oilseeds in the Southern Hemisphere and the Far East, in 1940, will be depressed. Prices in the importing markets of Europe, however, may be increased. The United States is in a relatively favorable geographic position with regard to imported supplies of vegetable oils and oilseeds, and prices of such products may not be raised materially in this country despite increased shipping costs. But any general rise in commodity prices probably would be reflected in increased prices of all fats, oils, and oilseeds in the United States.

The Cottonseed Outlook for 1940

The supply of cottonseed for the 1939-40 season is estimated at about 5.4 million tons. This quantity is slightly smaller than the supply of the 1938-39 season, and about 13 percent less than the 1928-37 average supply. Of the products of cottonseed, supplies of linters for the 1939-40 season are indicated to be relatively large, while supplies of cottonseed oil are about the same as a year earlier and the 10-year average. On the other hand, supplies of cottonseed cake and meal and hulls are below average, and are less than the supplies of the 1938-39 season.

Reflecting the low prices of cottonseed products, with large supplies of edible fats and oils and of high-protein feeds available, prices paid to farmers for cottonseed in August were below the average price of any season since 1933-34. But with the outbreak of war in Europe, sharp advances occurred in prices of cottonseed products. Prices of oil and meal declined somewhat in late September and early October, but a considerable part of the earlier advances was maintained. The price advances apparently were due largely to speculative activity, but they also reflected some improvement in consumer income and higher delivered prices for imported oils and fats due to increased ocean transportation costs. The farm price of cottonseed in mid-October at $22.88 was about $6.60 per ton higher than in mid-August, and was slightly higher than a year earlier.

Farm returns from the 1938 crop of cottonseed amounted to about $80,600,000, 31 percent less than returns from the large crop of 1937, and 20 percent less than the 10-year (1928-37) average. They were the smallest since 1933. Should cottonseed prices continue at about the October level during the remainder of the 1939-40 marketing season, returns from the current crop would be somewhat larger than those from the 1938 crop.

Cotton acreage in 1940 probably will not be greatly different from that in 1939. With an acreage equal to that of 1939 and a yield about equal to the average for the 5 years 1934-38, the production of cottonseed in the 1940 season would be smaller than in the 1939 season, and considerably smaller than the average for the 10 years 1928-37. The demand for edible oils and feeds in 1940 is expected to be stronger than in 1939, but supplies of products competing with cottonseed oil, meal, and hulls probably will continue large.

Supplies of cottonseed oil above average; demand expected to improve

Cottonseed oil is the principal product of cottonseed when crushed, and on the average it contributes over 50 percent of the total value of all cottonseed products. The indicated domestic supply of cottonseed oil for the 1939-40 season is about the same as the average for the 1928-37 period. Stocks of cottonseed oil on August 1 were considerably above average, but production of cottonseed oil in 1939-40 is expected to be slightly smaller than a year earlier, and also below average. Supplies of other edible oils and fats, notably lard and soybean oil, are considerably larger than a year earlier, and larger than average.

Despite increasing lard and soybean-oil production, cottonseed oil continues to be imported, although at a declining rate. Before 1935 the

United States was a net exporter of cottonseed oil. But with the lard shortage which resulted from reduced hog production, the reduction in cotton acreage, and the imposition of excise taxes on a number of foreign oils, more cottonseed oil was imported beginning in 1935 than was exported. Net imports totaled 173 million pounds in 1935 and 199 million pounds in 1937, but fell off to 78 million pounds in 1938. During the first half of 1939, net imports totaled only 23 million pounds, about 30 percent less than in the corresponding period of 1938. It is possible that cottonseed oil may be exported on balance in 1940, although such exports may not be large. The duty on cottonseed oil has been 3 cents per pound since 1922.

Reflecting the large supplies of competing fats and oils, prices of crude cottonseed oil in August 1939 were about 30 percent lower than the 1928-37 average, and were considerably lower than those of a year earlier. But with the outbreak of war in Europe, prices of cottonseed oil advanced materially from the low August levels. Both the domestic and the foreign demand for edible fats and oils is expected to be stronger in 1940 than in 1939, and prices of cottonseed oil in 1940 may average somewhat higher than the relatively low prices of 1939.

Supplies of cottonseed meal and hulls below average

According to October 1 indications, supplies of cottonseed cake and meal, and hulls, in 1939-40, will be less than in either of the 2 preceding seasons and below the 1928-37 average supplies. Chiefly because supplies of competing feeds were at high levels, prices of cottonseed meal and cake in August were slightly lower than the low prices of the two preceding seasons, and were the lowest since 1932-33. The price of cottonseed hulls in August also was low, being only slightly above 1932-33 prices. However, prices of cottonseed meal and hulls advanced fairly sharply in September, although part of the gains were lost in October.

The demand for cottonseed cake, meal, and hulls in the 1939-40 season, together with that for all feeds, is likely to be somewhat stronger than a year earlier. Utilization of cottonseed feeds in the Southwest is likely to be relatively large in the current season because of the shortage of other feeds in that area resulting from the dry weather of the past summer. Stocks of cottonseed feeds at the beginning of the 1940 marketing season may be even smaller than such stocks this year.

Demand for linters affected by war use

The supply of linters, which has been usually large since the 1937-38 season, probably will again be large in 1939-40. The indicated 1939-40 supply is about 5 percent greater than the large supply of 1938-39, and is about 50 percent above the 1928-37 average. Prices of linters at the beginning of the current season were the lowest since the 1932-33 season. The average price of No. 2 linters in October, however, at 4.37 cents per pound, was 29 percent higher than a year earlier, while the price of No. 6 linters, used for cellulose, at 1.97 cents was 43 percent higher than a year earlier. The demand for linters for cellulose is likely to be increased more than the demand for other cottonseed products as a result of the European War.

Cottonseed and cottonseed oil: Stocks production, total supply, and price, United States, average 1928-37, annual 1935-39

Year beginning August 1	Cottonseed: Mill stocks August 1	Cottonseed: Production	Cottonseed: Total supply	Cottonseed: Farm price per ton	Cottonseed oil, crude basis: Total stocks August 1	Cottonseed oil, crude basis: Production	Cottonseed oil, crude basis: Total supply 1/	Cottonseed oil, crude basis: Price per pound, prime summer yellow, New York
	1,000 tons	1,000 tons	1,000 tons	Dollars	Million pounds	Million pounds	Million pounds	Cents
Average 1928-37	103	6,136	6,239	24.04	498	1,466	1,964	7.71
1935	90	4,729	4,819	31.19	506	1,164	1,670	9.82
1936	22	5,511	5,533	33.27	362	1,364	1,726	10.42
1937	42	8,426	8,468	19.50	485	1,962	2,447	7.78
1938	337	5,310	5,647	21.78	559	1,409	1,968	7.07
1939 2/	120	5,300	5,420	21.72	674	1,300	1,974	7.00

Compiled as follows:
Mill stocks of cottonseed and stocks and production of cottonseed oil from reports of the Bureau of the Census.
Production and farm price of cottonseed from Agricultural Marketing Service.
Price of cottonseed oil from Oil, Paint, and Drug Reporter.
1/ Not including imports. 2/ Preliminary estimates of production and supply. Prices are averages for September and October only.

Supplies and prices of cottonseed hulls, meal, and linters in the United States, average 1928-37, annual 1935-39

Year beginning August 1	Hulls: Supply 1/	Hulls: Price per ton at Atlanta	Cake and meal: Supply 1/	Cake and meal: Price per ton of meal - 41% protein at Memphis	Linters: Supply 2/	Linters: Average price per pound, No. 2	Linters: Average price per pound, No. 6
	1,000 tons	Dollars	1,000 tons	Dollars	1,000 bales	Cents	Cents
Average 1928-37	1,324	9.82	2,229	26.73	1,356	3/ 4.40	3/ 2.39
1935	1,064	10.04	1,937	22.40	1,171	5.49	3.43
1936	1,168	11.43	2,097	34.34	1,393	5.80	3.79
1937	1,669	7.20	2,872	22.36	1,833	3.59	1.66
1938	1,294	8.41	2,238	22.19	1,981	3.37	1.28
1939 4/	1,125	9.05	2,000	25.65	2,070	4.10	1.74

Compiled as follows:
Supply - computed from production and stocks as reported by the Bureau of the Census.
Prices - Agricultural Marketing Service.
1/ Mill stocks on hand August 1 plus production.
2/ Total stocks on August 1 plus production.
3/ 1929-37 average.
4/ Preliminary estimate of supply. Prices are averages for September and October only.

The Peanut Outlook for 1940

Peanut acreage, which has been increasing during recent years, is likely to continue large in 1940. Chiefly because of the marketing diversion program of the Agricultural Adjustment Administration, returns per acre from the 1939 peanut crop, picked and threshed, are expected to be relatively favorable as compared with returns from cotton and other competing crops. Peanut production in 1939 was slightly less than the record crop of 1938.

The quantity of peanuts available for crushing in 1939-40 probably will be at least 250 million pounds. Peanut crushings from 1934 to 1938 averaged about 265 million pounds annually compared with about 70 million pounds in the period 1929-33. The increase in crushings in the past 5 years resulted largely from the peanut-diversion program, which caused peanut prices as well as crushings to be comparatively high.

The amount of peanut-diversion payments made in 1939-40 will depend largely on prices of peanut oil. Total supplies of edible fats and oils are unusually large, but the demand for and prices of such fats and oils in 1939-40 are expected to be somewhat stronger than a year earlier.

Peanut prices supported by diversion program

Peanut production has been at high levels in recent years and the 1939 acreage is the largest of record. But yield per acre this year is somewhat below average, and the current crop, according to October indications, is slightly below the large 1938 crop. Peanut production since 1934 has been in excess of utilization by the usual trade outlets, but prices to growers have been maintained at relatively high levels by means of the diversion program of the Agricultural Adjustment Administration. Under the diversion program payments have been made for diverting peanuts to crushers each year since 1934, except in the 1936-37 crop year when high prices for peanut oil and peanut meal made it possible for crushers to use large quantities of peanuts without diversion payments.

Supplies of edible oils and fats for the 1939-40 marketing season are unusually large. Supplies of feed stuffs also are large. Reflecting these large supplies, peanut-oil prices in August were the lowest since the 1933 marketing season, and peanut-meal prices were the lowest since the 1932 season. But since the European conflict began, prices of peanut oil have advanced markedly and there have been some advances in prices for peanut meal. Even so, the price advances by early October had not been sufficient to enable crushers to use peanuts without subsidy payments. However, another diversion program has been inaugurated for the 1939-40 marketing season. The program enables grower cooperatives to purchase farmers' stock peanuts of the various types and grades as follows:

Schedule of prices to be paid under the 1939 peanut diversion program

Virginias			Southeastern Runners		Southeastern Spanish		Southwestern Spanish	
Grade	Class	Price per ton	Grade	Price per ton	Grade	Price per ton	Grade	Price per ton
		Dol.		Dol.		Dol.		Dol.
No. 1	A	70.00	No. 1	57.00	No. 1	65.00	No. 1	63.00
" "	B	66.00	" 2	53.00	" 2	61.00	" 2	59.00
" "	C	61.00	" 3	48.00	" 3	56.00	" 3	54.00
No. 2	A	67.00	-	-	-	-	-	-
" "	B	63.00	-	-	-	-	-	-
" "	C	61.00	-	-	-	-	-	-
No. 3	A	65.00	-	-	-	-	-	-
" "	B	61.00	-	-	-	-	-	-
" "	C	56.00	-	-	-	-	-	-
Sample	D	51.00	-	-	-	-	-	-

Agricultural Adjustment Administration

The prices paid by the cooperatives to growers are the same as those paid for the 1938 crop. The cooperatives may sell either to the edible peanut trade or to crushers. The specified prices are somewhat higher than those that could be paid by crushers on the basis of present prices for peanut oil and meal. Unless prices for peanut products advance from present levels, sales of peanuts by the cooperatives to crushers will be below the purchase prices. But the cooperatives will be reimbursed for any losses by funds made available under the Agricultural Appropriation Act for surplus removal.

Before 1934, except in the World War period, crushings of peanuts had been confined largely to the lower grades which are not suited to the trade for edible peanuts.

Effect of World War on peanut production and crushings

The World War apparently had but little effect on the peanut-marketing situation until the 1916-17 season. At that time marked advances in prices of oils and fats resulted in a greatly improved demand for peanuts for crushing. Crushings amounted to about 140 million pounds of peanuts in the shell in the calendar year 1916, 250 million pounds in 1917, about 470 million pounds in 1918, and about 430 million pounds in 1919.

Prices for peanuts showed little change from pre-war levels until the late months of 1916; then they advanced sharply. But in the war years peanut prices did not rise so much as prices of most other agricultural products, although the prices were sufficiently high to bring about a marked expansion in peanut acreage in 1917. Acreage also was large in 1918, but declined in 1919.

With large supplies of other edible fats and oils available, the demand for peanut oil probably will not increase sufficiently within the next year to bring about any such marked increase in peanut crushings as occurred during the period of the World War.

Increased use of peanuts for edible purposes

The acreage of peanuts picked and threshed in 1939, according to October indications, will be 6 percent above the 1938 record acreage, and about 32 percent above the 1928-37 average. The estimated yield per acre is somewhat lower than average and also lower than in 1938. The October indicated production of 1,232,520,000 pounds is about 6 percent less than the record 1938 production but 25 percent above the 1928-37 average production. Stocks of old-crop peanuts at the beginning of the 1939-40 season were relatively small.

Along with the high production of peanuts picked and threshed in recent years there has been an increase in the consumption of peanuts for edible purposes. Annual utilization of peanuts through this outlet averaged around 700 million pounds from 1928-37, but in more recent seasons such utilization has averaged about 800 million pounds annually. With higher consumer incomes in prospect, takings by the edible trade in 1939-40 may increase somewhat over the average of recent years, and utilization for seed, home consumption, etc., on farms where grown, may amount to about 170 million pounds. But at least 250 million pounds of the 1939 crop will remain available for crushing.

Peanuts: Acreage, production, crushings, and price of peanuts, peanut oil, and peanut meal, average 1928-37, annual 1933-39

Crop marketing season	Peanuts: Acres picked and threshed	Peanuts: Production	Peanuts: Crushed 1/	Farm price per pound 2/	Price f.o.b. SE mills 3/: Peanut oil, crude, per pound	Price f.o.b. SE mills 3/: Peanut meal, 34% protein, per ton
	1,000 acres	1,000 pounds	1,000 pounds	Cents	Cents	Dollars
Average 1928-37	1,377	989,014	141,556	3.2	7.1	28.71
1933	1,217	819,620	45,000	2.8	4.8	27.92
1934	1,486	1,009,950	220,282	3.3	9.3	28.08
1935	1,473	1,147,225	240,223	3.1	9.0	24.16
1936	1,606	1,253,090	295,199	3.7	9.2	35.69
1937	1,500	1,224,190	251,523	3.2	7.1	24.98
1938	1,713	1,309,400	306,252	4/ 3.3	6.1	21.64
1939	4/ 1,820	4/ 1,232,520		5/ 3.4	5/ 6.8	5/ 30.25

1/ In terms of peanuts in the shell, year beginning October; Bureau of Census. 2/ Farmer-stock peanuts, crop-year average prices, by States, weighted by production to obtain weighted average for the United States. 3/ Year beginning October. 4/ Preliminary. 5/ Average for October only.

Peanuts: Acreage and production by production areas, average 1928-37, annual 1933-39

Year	Production region: Virginia, North Carolina, Tennessee: Acreage	Virginia, North Carolina, Tennessee: Production	Southeastern States 1/: Acreage	Southeastern States 1/: Production	Southwestern States 2/: Acreage	Southwestern States 2/: Production
	1,000 acres	1,000 pounds	1,000 acres	1,000 pounds	1,000 acres	1,000 pounds
Average 1928-37	383	396,412	774	487,236	221	105,366
1933	320	301,400	694	597,205	203	121,015
1934	398	415,570	819	506,355	271	88,025
1935	381	417,975	845	592,270	247	136,980
1936	379	418,425	953	724,355	274	110,310
1937	405	439,750	842	610,190	253	114,250
1938	408	401,285	972	754,565	333	153,550
1939 3/	420	474,550	1,033	597,600	367	160,370

1/ Includes South Carolina, Georgia, Florida, Alabama, and Mississippi.
2/ Includes Texas, Oklahoma, Arkansas, and Louisiana.
3/ Indicated October 1.

The Soybean Outlook for 1940

The soybean production for 1939 is placed at about 76,000,000 bushels, or about 30 percent above last year's record harvest. All the important producing States have shared in this year's increase except North Carolina.

Since the outbreak of the European War, the domestic demand for soybean products has improved. This has been reflected in a rise in prices despite the large supplies of soybeans and competing products available. Exports of soybeans from the 1939 crop probably will exceed the 1938-39 record of 4,400,000 bushels.

As a result of recent advances, farmers are receiving somewhat higher prices for their soybeans this fall than last. If present farm price relationships are maintained, a further expansion in soybean acreage is expected in 1940.

Soybean production largest on record

The 1939 acreage of soybeans grown alone for all purposes in the United States is estimated at 8,119,000 acres, compared with 6,858,000 in 1938. This is the largest acreage of soybeans ever planted in this country and is the third consecutive year in which an increase has taken place over the preceding year. Most of the increase this year is in the North Central States, where the acreage is 26 percent above that of a year earlier. Acreage in the Southern States was increased only about 5 percent.

Based on October 1 condition, the 1939 harvest of soybeans as beans in the six important commercial States - Ohio, Indiana, Illinois, Iowa, Missouri, and North Carolina - will be about 72,000,000 bushels compared with the previous record in 1938 of 53,940,000 bushels for these States. An estimate of the 1939 production in other States will be available when the November Crop Report is released. Such production may be about 4,000,000 bushels, making the total production in the United States approximately 76,000,000 bushels compared with 58,000,000 bushels in 1938.

About 48,900,000 bushels of soybeans, or 85 percent of total production, were crushed or exported in the 1938-39 marketing year. Assuming that seed requirements for soybeans in 1940 will not greatly exceed those of 1939, the available supply for crushing and export during the 1939-40 season will be about 65,000,000 bushels. The crushing capacity of mills located in the commercial soybean area of the United States has recently been increased, and now is reported to be around 80,000,000 bushels annually.

Some improvement in domestic demand expected

Prices paid to growers for soybeans depend largely on the prevailing prices of soybean meal and soybean oil, which in turn depend on general supply and demand conditions in their respective fields. Consequently, the feed outlook and the fats and oils outlook are the important elements in the outlook for soybeans.

Total supplies of high-protein feeds available for domestic utilization in 1939-40 are expected to be larger than last year and possibly the largest

on record. Unless a very marked increase in exports of soybeans should occur, the production of soybean cake and meal is expected to reach a new record high of about 1,300,000 tons compared with approximately 1,050,000 tons in 1938-39.

Supplies of feed grains for 1939-40 are expected to be slightly larger than a year earlier. But the number of livestock to be fed is considerably larger this year than last. And the demand for feedstuffs generally is likely to be somewhat stronger than in 1938-39. Prices of soybean meal at Chicago in August 1939 averaged $25.70 per ton but for September the average was $33.70, nearly $7 per ton higher than a year earlier.

As food products account for about four-fifths of the total consumption of soybean oil, the outlook for soybean oil will be similar to the general outlook for edible oils. Soybean-oil production for the 1938-39 season amounted to approximately 415,000,000 pounds, a record high. Production in 1939-40 is expected to total about 500,000,000 pounds.

The quantity of soybean oil used as a drying oil may not show any appreciable increase in 1939-40. Recent experiments have shown that soybean oil is suitable for paints when mixed with oils of higher drying properties, but with ample supplies of linseed oil available, little increase, if any, is expected in this field.

Prices of soybean oil in 1938-39 averaged 4.9 cents per pound in tank carlots at midwestern mills compared with an average of 5.7 cents for the 1937-38 season. In August 1939 the prices of soybean oil averaged 4.2 cents per pound, but in September the prices rose fairly sharply, averaging 5.1 cents for the month.

Foreign demand for soybeans uncertain

Soybean production in Manchuria, the source of more than 90 percent of the soybeans entering international trade in recent years, has been increasing since 1934. In spite of increased acreage, however, unfavorable weather conditions this year apparently have resulted in a crop smaller than the 170,000,000 bushels produced in 1938. Production in the Danube Basin is expected to exceed 3,600,000 bushels compared with about 2,300,000 bushels last year.

Total European takings of Manchurian soybeans during the 1939-40 season may be somewhat reduced. Germany, which has taken from 20,000,000 to 30,000,000 bushels of Manchurian beans annually, and usually accounts for more than half the total European imports, probably will take a much smaller volume this year. It is possible that some beans may be shipped by rail from Manchuria through the Soviet Union. Imports by other European countries are uncertain, but in view of abundant supplies of other oilseeds available in countries closer to Europe than Manchuria, and relatively large supplies of lard and soybeans available for export in the United States, European imports of Manchurian soybeans probably will decline.

Exports of soybeans from the United States in past years have been small relative to domestic production and have depended on sufficiently large supplies and low prices in this country to enable American exporters to compete successfully with Manchurian soybeans in European markets. United

States exports of soybeans from the 1938 crop amounted to approximately 4,400,000 bushels, the largest on record.

Although the foreign demand is somewhat uncertain, present conditions indicate that exports of soybeans from the United States in 1939-40 will exceed those of the past season. Because of the relatively high prices of Manchurian beans in the summer of 1939 European countries were buying the new crop of American beans for October-November shipment. It is believed that about 4,500,000 bushels of the 1939 crop had been bought by September 1 for export.

Soybean situation during the World War

Soybean production in the United States during 1914-18 was commercially insignificant. Imports of soybean oil rose rapidly during that period, increasing from 13,000,000 pounds in 1914 to 336,000,000 pounds in 1918; then they declined. Since the application of duties on soybeans and soybean oil in 1921, imports have become negligible. Manchurian soybean production during the 1914-18 period was less than half that of the present time. Manchurian exports of both beans and oil to Europe decreased during the World War.

Further expansion in soybean acreage probable

The average farm price of soybeans in the United States for the 1938 crop was about 70 cents per bushel compared with 85 cents for the 1937 crop and $1.28 for the 1936 crop. In October 1939 the farm price of soybeans was 73 cents compared with 64 cents in August and in October a year earlier.

Despite the low prices, returns for soybeans are still favorable compared with returns from competing crops, especially oats, and it seems probable that the soybean acreage in 1940 will show further expansion. The small combine has come into extensive use in many soybean districts and has contributed toward lower costs of production.

Soybeans: Production, exports, quantity crushed, quantity used for feed or seed, and average farm price, averages 1924-28, 1929-33, annual 1934-39

Year beginning Oct.	Production	Crushed 1/	Exported 2/	Total crushed and exported: Amount	Total crushed and exported: Percent of production	Used for feed or seed 3/	Average farm price per bushel
	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.	Percent	1,000 bu.	Cents
Average:							
1924-28	5,976	487	-	487	8.1	5,489	211
1929-33	13,545	3,397	922	4,319	31.9	9,226	104
1934	23,095	9,105	19	9,124	39.5	13,971	101
1935	44,378	25,181	3,490	28,671	64.6	15,707	79
1936	29,983	20,619	--	20,619	68.8	9,364	128
1937	45,272	30,310	1,368	31,678	70.0	13,594	85
1938 4/	57,665	44,470	4,416	48,886	84.8	8,779	5/ 68
1939							

1/ From Animal and Vegetable Fats and Oils, Bureau of the Census.
2/ From reports of the Bureau of Foreign and Domestic Commerce.
3/ Production minus quantity crushed and exported.
4/ Preliminary.
5/ Average for first 6 months.

Soybean production in specified States, average 1928-37, annual 1937-39

State	Average 1928-37	1937	1938 1/	1939 2/	Percentage change 1939 from 1938
	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.	Percent
Ohio	1,173	3,249	5,313	7,161	+ 34.8
Indiana	3,162	5,797	8,404	12,422	+ 47.8
Illinois	11,678	27,040	31,866	41,235	+ 29.6
Iowa	2,075	4,236	5,733	9,093	+ 58.6
Missouri	757	513	609	650	+ 6.7
North Carolina	1,247	1,560	2,015	1,444	- 28.3
Total six States	20,092	42,395	53,940	72,055	+ 33.6

1/ Preliminary.
2/ Indicated October 1.

The Flaxseed Outlook for 1940

A further expansion in the acreage of flax in the United States seems probable for 1940. Returns per acre from flax were larger than those from wheat in 1939, current prices for flaxseed are relatively much higher than for wheat, and the AAA program for 1940 is as favorable to the production of flax as the program for 1939. Production in excess of domestic consumption is not anticipated, however, unless abnormally high yields are obtained.

World supplies of flaxseed for the remainder of 1939 are about the same as a year earlier. But present indications are that the 1939-40 Argentine crop may be considerably larger than last year. And with a relatively large crop in the United States in 1939 and a possible further increase in 1940, world supplies of flaxseed in 1940 probably will exceed those of 1939.

Because of the war in Europe, a decrease in European demand for flaxseed is expected in 1940. United States demand probably will be maintained near present levels, or improved, but with a decline in European demand and increased world supplies of flaxseed, it is likely that world flaxseed prices in 1940 will be lower than in 1939 unless commodity prices generally make a substantial advance. On the other hand, shipping costs from Argentina to the United States will be higher in 1940 than in 1939, which will tend to increase the spread between flaxseed prices in Argentina and the United States.

Further expansion in flax acreage in prospect

The acreage of flax seeded in the United States in 1939 was more than double the abnormally low seedings in 1938. More than four-fifths of the increase in the spring-wheat area (comprising Minnesota, North Dakota, South Dakota, and Montana), but considerable expansion was made in such States as Kansas and California. Flaxseed production has now approached or attained commercial proportions in southern Texas, Arizona, Oregon, Washington, and Idaho. It is estimated that about 43,000 acres were harvested in the last-named States with a production of 500,000 to 600,000 bushels in 1939. As in previous years, production in these States has not been included in the United States production estimates of the Crop Reporting Board.

Many of the factors that contributed to the expansion of flax acreage in the spring-wheat area in 1939 still prevail. Larger per-acre returns from flaxseed than from wheat were received in 1939, as they were in 1938; the September price of flaxseed was more than double that of wheat; and the AAA program for 1940 is as favorable to the production of flaxseed compared with wheat as it was in 1939. These factors are likely to encourage a further expansion of flax acreage in the spring-wheat area in 1940 unless the price of wheat in relation to that of flaxseed advances materially by seeding time.

It is not anticipated that domestic flaxseed production in 1940 will exceed domestic utilization unless abnormally high yields are obtained. Little expansion in acreage is anticipated in the Pacific Northwest, but in the new producing areas of Texas and Arizona it is expected that the 1940

flax acreage may approximate 115,000 acres as compared with less than 25,000 acres in 1939. If this expansion in the Southwest is realized, and if average yields are obtained in all producing areas, flax acreage in the older producing areas could still be increased 70 percent above the 1939 acreage before production would equal average United States crushings during the 5-year period 1934-38. But if yields should equal those obtained in 1938 and 1939, the older producing areas could expand their acreage only 50 percent before domestic production would approximate domestic consumption.

Any expansion in domestic flaxseed production that would result in a crop near or equal to domestic utilization would mean that much of the spread between domestic and foreign prices maintained in past years by a 65-cent tariff would be lost to domestic producers; such an expansion, moreover, would tend to lower world prices of flaxseed by increasing world supplies.

World flaxseed supplies relatively large

World supplies of flaxseed for the remainder of 1939 apparently are about the same as a year ago, with an increase in North American production of about 10 million bushels being offset by a decrease in remaining stocks in the Southern Hemisphere. The Argentine flax acreage for harvest beginning December 1939 has been officially estimated at 7,413,000 acres, an increase of about 12 percent over 1938-39. Growing conditions are reported to be favorable and suggest a new crop supply of Argentine flaxseed for 1940 considerably larger than that for 1939. The Argentine crop normally supplies about four-fifths of the flaxseed entering world trade.

European demand for flaxseed likely to decline

Since flaxseed is not a basic war commodity, a decline in European demand is expected for 1940. During the World War the demand for food crops in European countries increased, whereas the demand for flaxseed declined. Imports of flaxseed by the Allied countries, France, Italy, and the United Kingdom, declined almost one-third between 1913 and 1914. They declined another one-fourth in 1915, and, while they increased somewhat in 1916, they reached new lows for the war period in 1917 and 1918, when world supplies were extremely low because of reduced world acreage and short crops in South America. Imports by neutral countries, such as the Netherlands, Norway, and Sweden, declined in 1914, increased in 1915, and then declined to the point where they were almost abandoned by 1918. The belligerent nations in the present conflict have been the largest European importers of flaxseed in recent years, but because of the war it is probable that their imports of flaxseed will decline in 1940.

The United States demand for flaxseed probably will not be greatly different from that in 1939. The total volume of building construction is not expected to change greatly, but general business activity and the commodity price level probably will be higher. The increase in building construction in 1939 has been reflected in some improvement in the demand for linseed and other drying oils. The demand for linseed oil also has been sustained by the sharp curtailment in shipments of tung oil from China as a result of military operations in that country. It seems probable that shipments

of tung oil will continue small for the next several months at least. Although oiticica oil from Brazil and dehydrated castor oil may be substituted to some extent for tung oil, chiefly in the varnish field, it is probable that, on the basis of supply and price, linseed oil will continue in increased demand in this country as a result of the shortage in domestic supplies of tung oil.

Supplies of linseed meal for domestic utilization in 1939-40 will be larger than those of a year earlier because of the larger domestic crop of flaxseed. But the domestic demand for linseed meal probably will be well maintained or improved despite increased competition from soybean meal, since total livestock feeding requirements are expected to be larger than a year earlier.

With increased world supplies and reduced European demand, flaxseed prices in 1940 are likely to average lower than in 1939 unless commodity prices generally score a sharp advance. Increased shipping costs, however, will tend to widen the spread between prices in Argentina and the United States.

Flaxseed: Acreage, production, yield per acre, seed requirements, net trade, stocks, and crushings, United States, 1930-39

Year	Acreage: Seeded	Acreage: Harvested	Production	Average yield per acre harvested	Seed requirements for following year	Net imports	Year beginning July 1: Stocks, July 1: Factory or crushers	Stocks, July 1: Market or commercial	Stocks, July 1: Farm	Stocks, July 1: Total	Crushings	Total supply	Total accounted for 1/	Balance 2/
	1,000 acres	1,000 acres	1,000 bu.	Bu.	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.
1930	4,466	3,780	21,673	5.7	1,959	7,813	2,328	433	461	3,222	27,054	32,708	31,496	1,212
1931	3,724	2,431	11,755	4.8	1,422	13,849	1,198	802	483	2,483	23,700	28,087	28,022	65
1932	2,691	1,988	11,511	5.8	990	6,213	1,459	901	540	2,900	17,370	20,624	20,460	164
1933	1,812	1,341	6,904	5.1	871	17,901	854	960	286	2,100	23,006	26,905	26,390	515
1934	1,588	995	5,661	5.7	1,278	15,332	1,421	646	446	2,513	20,720	23,506	24,179	- 673
1935	2,392	2,096	14,520	6.9	1,369	15,388	1,464	344	373	2,181	26,544	32,089	31,244	845
1936	2,548	1,126	5,273	4.7	731	26,096	2,222	743	366	3,331	30,340	34,700	34,410	290
1937	1,346	934	7,089	7.6	602	17,860	2,484	630	225	3,339	25,870	29,288	28,671	- 383
1938 3/	1,096	954	8,171	8.6	1,302	18,744	1,472	552	175	2,199	25,568	29,114	29,166	- 52
1939 3/	4/2,324	4/2,034	4/17,439	8.6			1,958	285	53	2,296				

Acreage, production, yield per acre, and seed requirements from the Agricultural Marketing Service.

Trade figures from Bureau of Foreign and Domestic Commerce, Foreign Commerce and Navigation of the United States and June issues of the Monthly Summary of Foreign and Domestic Commerce of the United States.

Crushings from Bureau of the Census, Animal and Vegetable Fats and Oils.

1/ As crushings, seed for following year, and stocks at end of year.
2/ Balance unaccounted for at end of year.
3/ Preliminary.
4/ Does not include production in new areas in Texas, Arizona, Oregon, Washington, and Idaho.

Supplies of specified fats and oils, high-protein feeds, and feed grains, United States, average 1928-37, annual 1935-39
(Stocks at beginning of marketing year plus factory production)

Marketing year	Fat or oil					Cake and meal					Feed grain 3/
	Cottonseed oil	Peanut oil	Soybean oil	Lard incl. neutral 1/	Total	Cottonseed	Peanut 2/	Soybean 2/	Linseed 2/	Total	
	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	Mil. tons
Average 1928-37	1,964	49	108	1,464	3,585	2,229	29	246	506	3,010	108
1935	1,670	97	223	890	2,880	1,937	48	600	480	3,065	97
1936	1,726	95	223	996	3,040	2,097	59	492	616	3,264	71
1937	2,447	103	315	1,088	3,953	2,872	50	716	433	4,071	105
1938 4/	1,968	107	471	1,325	3,871	2,238	65	1,050	485	3,838	111
1939 5/	1,974	105	550	1,640	4,269	2,000	60	1,300	550	3,910	115

Compiled from reports of the Bureau of the Census except as otherwise stated. Year beginning August for cottonseed oil, lard, and cottonseed cake and meal; year beginning October for peanut and soybean oils, peanut, soybean and linseed cake and meal. For feed grains, stocks on June 1, July 1, or October 1 (depending upon kind of grain) plus production.

1/ Agricultural Marketing Service. Stocks on August 1 plus production under Federal inspection year beginning August.
2/ Production only.
3/ Computed from reports of the Agricultural Marketing Service.
4/ Preliminary.
5/ Estimates.

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THE RICE OUTLOOK FOR 1940

Summary

Supplies of rice for the 1939-40 season will be fully as large as for last season if the October 1 prospects are realized. Supplies of southern rice may slightly exceed the unusually large stocks of the previous two seasons and California supplies will also be larger than they were last year. Demand for rice from present indications is not likely to be materially increased. Some increase in domestic utilization and possibly in shipments to insular possessions may result from increased employment and a broadening in domestic demand. Export trade, however, upon which the American rice industry must depend as an outlet for surplus stocks, may be no greater than in 1938-39.

As another large supply is in prospect, relatively large stocks may again remain at the close of the 1939-40 season unless domestic utilization increases as a result of relatively low prices or export movement is larger than is now indicated.

Continued large supplies with little change in demand in prospect for 1939-40

Supplies of rice for the 1939-40 season will be fully as large as for last season if October 1 prospects are realized. Supplies of southern rice may slightly exceed the unusually large stocks of the previous two seasons with a slightly smaller crop offset by a record carry-over of old rice. California supplies will be nearly as large as they were last year when a special program was inaugurated to market the surplus. The disappearance or distribution of southern rice in 1938-39 fell nearly 650,000 pockets or bags short of that of the previous season while the distribution of California rice was only a little larger than a year earlier despite relatively low prices. Exports during the 1938-39 season, reflecting the increased takings by Cuba, were the largest in several years. Shipments to insular possessions and domestic utilization were smaller than in either of the previous two seasons. Prices averaged about 50 cents per hundred below those for the 1937 crop.

Rice markets advanced sharply early in September under the influence of speculative activity following the outbreak of the war in Europe but later declined as a result of a slack demand at the higher prices. At the middle of October there was little indication of any material increase in the demand for American rice during the 1939-40 season. Increased employment and a broadening in domestic demand may result in some increase in domestic utilization and possibly in shipments to insular possessions. Export demand, however, upon which the American rice industry must depend as an outlet for surplus stocks, may be no greater than in 1938-39. While higher ocean freights and increased rates for war risk insurance place United States

exporters in a more favorable position than Oriental shippers for exports to Cuba and Central and South American countries, this advantage may be offset nevertheless by increased competition from Oriental rice as a result of a more limited market for this commodity in Europe.

At the outbreak of the World War in 1914, the United States was a net importer of rice and little change occurred in exports, imports, shipments to insular possessions, or in domestic utilization during that or the next 2 years. Prices to United States growers averaged about $2.05 per barrel in 1914, $2.00 in 1915, and $1.98 in 1916. Prices advanced sharply during the next 3 years and production increased from 34,714,000 bushels in 1917 to 51,648,000 bushels in 1920, when prices again dropped to relatively low levels.

Rice Acreage Further Reduced in 1939

Rice acreage, which increased steadily from 1933 to 1937, was further reduced in 1939, when 1,042,000 acres were harvested compared with 1,068,000 in 1938 and 1,093,000 in 1937. If prices for rice remain near the relatively high levels to which they advanced immediately following the outbreak of war in Europe, acreage may again be increased.

The Southern situation

Disappearance or utilization of southern milled rice during the 1938-39 season, including domestic use, shipments to insular possessions, and exports, totaled 11,769,678 pockets and was about 640,000 pockets smaller than the distribution in 1937-38. Exports were materially larger as a result of a large movement to Cuba, but shipments to insular possessions were about 375,000 pockets short of those of the previous season while domestic disappearance was about 560,000 pockets under that of 1937-38. Exports of 2,334,488 pockets to Cuba accounted for over two-thirds of the 1938-39 exports of southern rice.

Shipments of southern milled rice to Puerto Rico and Hawaii totaled 1,730,648 pockets compared with 2,103,543 pockets in 1937-38. Deduction of shipments and exports from the total supply would indicate a domestic utilization of milled rice including heads, second heads, and screenings, of 6,932,460 pockets in 1938-39 compared with a disappearance of 7,494,765 pockets in 1937-38.

The relatively large supplies of southern rice in 1938-39 and the slow movement into trade and consuming channels were reflected in relatively low prices. Milled rice prices as measured by sales at New Orleans averaged about 50 cents per hundred lower during 1938-39 than in 1937-38. Prices at the beginning of the season averaged higher than a year earlier but tended steadily downward from an average of $4.02 per hundred for the leading varieties in August 1938 to $3.20 per hundred for July 1939.

The 1939-40 season opened at a lower price level than prevailed a year earlier. The average farm price of rough rice in Arkansas and Louisiana the middle of August was $2.09 and in Texas $2.23 per barrel. These prices compare with $2.23 in Arkansas and $2.30 in Louisiana and Texas in mid-August

1938. Extra Fancy Blue Rose milled rice at New Orleans averaged only $2.86 per hundred in August 1939 against $3.05 in August 1938. Early Prolific averaged about $2.70 at New Orleans at the beginning of the current season compared with $2.85 per hundred a year earlier. Large carry-over supplies, prospects for another large crop, and slow domestic and export trade largely accounted for the lower prices. With the outbreak of hostilities in Europe, however, prices of both rough and milled rice advanced sharply after the first of September with growers holding rough rice firmly and mills offering only small quantities of milled rice. At the middle of October more than half of the September gain had been lost and prices were still on a downward trend since both domestic and export demand slackened at the higher levels.

The rise in the average price of rice for the month of September brought the price above the maximum price at which it could be retained as a surplus food under the food stamp plan. This does not preclude its redesignation, however, nor is it a bar to the purchase of rice for relief purposes if prices fall later in the season.

Rice acreage, United States, Southern States, and California
1924-39

Year	Acreage harvested					
	Ark.	La.	Tex.	Southern States	Calif.	U. S. (4 States)
	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres
1924	166	430	151	747	90	837
1925	176	414	156	746	103	849
1926	196	492	169	857	149	1,006
1927	179	520	165	864	160	1,024
1928	173	495	162	830	132	962
1929	156	465	144	765	95	860
1930	173	491	192	856	110	966
1931	177	458	205	840	125	965
1932	163	415	186	764	110	874
1933	147	395	148	690	108	798
1934	141	415	148	704	108	812
1935	138	412	167	717	99	816
1936	160	479	204	843	126-	969
1937	173	525	250	948	145	1,093
1938	189	494	255	938	130	1,068
1939	180	484	258	922	120	1,042

Supplies of southern rice for the 1939-40 season will total about 13,573,000 barrels or pockets if September 1 prospects are realized. This compares with 13,059,000 barrels in 1938-39 and 13,725,000 barrels in 1937-38. Crop conditions at the first of September indicated a production in the Southern States of 11,873,000 barrels, or about 125,000 barrels under the 1938 production. This decrease, however, is more than offset by the increase in the carry-over of old rice. Stocks of rough rice carried over in mills,

in country warehouses, and on farms were slightly larger than for last season and were placed at 380,000 barrels. Stocks of milled rice at mills were the largest on record and were equivalent to 1,321,000 barrels compared with about 695,000 barrels August 1, 1938.

Seasonal rice supplies, including carry-over and crop in terms of rough rice

Crop year	Stocks at beginning of season: Rough: On farms and in country warehouses	Stocks at beginning of season: Rough: At mills	Stocks at beginning of season: Milled: At mills 1/	Total rough and milled 1/	Crop	Total supply 1/
	Barrels	Barrels	Barrels	Barrels	Barrels	Barrels
	Southern States (year beginning Aug. 1)					
1935-36	39,583	51,384	331,816	422,783	8,903,333	9,326,116
1936-37	143,766	71,369	271,010	486,145	11,232,222	11,718,367
1937-38	157,900	199,354	1,071,726	1,428,980	12,295,555	13,724,535
1938-39	89,666	273,590	694,604	1,057,860	12,001,000	13,058,860
1939-40	148,000	231,685	1,320,743	1,700,428	2/11,873,000	2/13,573,428
	Bags 100 pounds	Bags 100 pounds	Bags 100 pounds	Bags 100 pounds	Bags 100 pounds	Bags 100 pounds
	California (year beginning Oct. 1)					
1935	4,450	5,268	182,974	192,692	3,330,000	3,522,692
1936	415,033	69,146	25,544	509,723	4,222,800	4,732,523
1937	200,051	20,885	62,164	283,100	4,098,600	4,381,700
1938	477,390	69,474	127,382	674,246	4,095,000	4,769,246
1939	244,249	291,342	461,664	997,255	2/3,780,000	2/4,777,255

1/ Milled rice converted to rough on the basis that one pocket milled equals one barrel rough for southern rice and 50 pounds milled equals 100 pounds rough for California. 2/ Preliminary.

The California situation

Supplies of rice in California for the 1939-40 season from present indications will be somewhat larger than last season when a special program was inaugurated toward the close of the year to market supplies in excess of domestic requirements and shipments to Hawaii and Puerto Rico. The carry-over of old rice at the beginning of the season October 1, 1939, was materially larger than a year earlier but the 1939 crop, according to October 1 estimate, is about 315,000 bags short of the 1938 harvest so that total supplies will only slightly exceed those of 1938-39. Distribution of the 1938 California rice crop, stimulated by relatively low prices, was somewhat above that of the previous season. Prices of California Japan milled rice averaged the lowest since 1932-33 and were about 50 cents per hundred under the 1938-39 average.

The October 1 estimate placed the 1939 rice crop in California at 8,400,000 bushels or the equivalent of 3,780,000 bags. This compares with 4,095,000 bags in 1938. The carry-over of rough rice in California at the

first of October 1939 was the largest for the 6 years for which carry-over statistics are available and totaled approximately 536,000 bags. Stocks of milled head rice in mills were equivalent to about 462,000 bags. This indicates a total supply for the 1939-40 season of 4,777,000 bags compared with 4,769,000 bags in 1938-39, when supplies were the largest on record.

Aided by relatively low prices the distribution of California rice in 1938-39 exceeded that of any other year for which statistics are available. Exports totaled only about 68,901 bags. Shipments in Puerto Rico and Hawaii, however, were well above those of the previous season and approximated 1,279,000 bags, indicating a domestic disappearance of about 335,000 bags and leaving 231,000 bags of milled rice on hand at mills at the close of the season.

Supply and distribution of milled rice 1/

Crop year	Mill stocks	Production	Total supply	Exports	Shipments to insular possessions	Disappearance within U. S.	Stocks carried over
	100 lb.	100 lb.	100 lb.	100 lb.	100 lb.	100 lb.	100 lb.
	Southern States (year beginning Aug. 1)						
1934-35:	999,298	8,658,264	9,657,562	1,147,045	1,778,126	6,400,575	331,816
1935-36:	331,816	8,496,133	8,827,954	751,499	1,690,694	6,114,751	271,010
1936-37:	271,010	10,585,800	10,856,810	619,228	1,995,905	7,159,951	1,071,726
1937-38:	1,071,726	12,035,736	13,107,462	2,814,550	2,103,543	7,494,765	694,604
1938-39:	694,604	12,395,817	13,090,421	3,106,570	1,730,648	6,932,460	1,320,743
	California (year beginning Oct. 1)						
1933-34:	57,343	2/1,480,856	1,538,209	10,963	1,225,190	85,154	216,902
1934-35:	216,902	1,630,652	1,847,554	29,944	1,348,720	377,403	91,487
1935-36:	91,487	1,439,982	1,531,469	7,425	1,246,670	264,602	12,772
1936-37:	12,772	1,483,784	1,496,556	260,230	932,339	272,905	31,082
1937-38:	31,082	1,649,475	1,680,557	83,405	1,273,365	260,096	63,691
1938-39:	63,691	1,850,449	1,914,140	2/ 68,901	2/1,279,101	2/335,306	230,832

1/ Includes heads, second heads, and screenings for Southern States and head rice only for California. 2/ Preliminary.

Foreign Prospects Obscured by European War

Foreign demand for rice during 1939-40 is uncertain because of the disturbed political situation in Europe. Supplies of rice from the 1938 crop in the surplus countries of Asia are mostly larger than a year ago. On the first of September, supplies of Oriental rice in Burma, Siam, and Indo-China were apparently around 500,000 tons larger than a year earlier but these supplies have been moving out in good volume. Increased exports have gone mostly to India, where a short crop was harvested last season, and to continental European countries.

Information on production in foreign countries for 1939 is rather meager. Egypt and Italy have reported slight increases in acreage this season, and reports from the Japanese Empire indicate a crop materially below that of last year. The Brazilian crop harvested in the spring of 1939 was unofficially estimated at about 15 percent below last year's record crop; but with an increased carry-over, large supplies are still available for export. Several South American countries have increased production, and so have reduced their demand for imported rice.

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November 10, A.M.

THE DRY EDIBLE BEAN OUTLOOK FOR 1940

Summary

The United States supply of dry edible beans for the 1939-40 season is indicated to be only about 5 percent smaller than last year's large supply and approximately 15 percent larger than the average for the 5-year period, 1933-37. Production for 1939 is estimated to be 11 percent smaller than for last year, but carry-over stocks of beans on September 1, 1939, are the largest on record and are approximately one-third larger than the previous record-large stocks of 1938.

Under normal conditions the acreage planted to beans in 1940 would be expected to decrease slightly. With a somewhat broader demand and an upward trend in prices as a result of war conditions in Europe and increased industrial activity in the United States, growers may be inclined to increase their acreage. Inasmuch as present supply apparently is 3,500,000 bags more than normally would be used in the 1939-40 season an increased production in 1940 might be a depressing price factor.

A total United States harvested acreage in 1940 approximately the same as that harvested in 1939 with a yield equal to average would produce approximately 12 million bags of beans of 100 pounds each. Such a crop combined with the probable carry-over from the 1939-40 season only slightly smaller than that from 1938-39 would provide a supply of beans of about 2 million bags in excess of average disappearance. But if production is average, and if consumer incomes increase to higher levels, prices for beans in the 1940-41 season probably will be higher than the average for the two preceding seasons.

General Situation

Production of dry edible beans in the United States on October 1, 1939, was indicated to be 13,575,000 bags of 100 pounds each. With a record carry-over estimated at approximately 3,000,000 bags, the total 1939-40 United States supply is 16,600,000 bags. The supply is slightly smaller than the record large supply of a year ago but about 15 percent larger than the 5-year, 1933-37, average. The total supply available this season exceeds average domestic disappearance by more than 3,500,000 bags. This large supply is due to the record carry-over and to a yield per acre in 1939 about 15 percent higher than the 5-year average.

The annual supply and carry-over figures indicate an average annual domestic disappearance of slightly less than 13 million bags. Domestic disappearance exceeded 14 million bags in the 1935-36 season and was more than 13,800,000 bags in both the 1937-38 and the 1938-39 seasons. However, the large disappearance of the 1935-36 season came between 2 years of severe drought when there was an unusual demand for staple food commodities. Also the Federal Surplus Commodities Corporation purchased nearly 600,000 bags of beans in the 1937-38 season and nearly 800,000 bags in the 1938-39 season for relief distribution.

There appears to be some inclination on the part of bean growers to reduce acreage in years following seasons of relatively low prices for beans and to increase acreage in years following seasons of relatively high bean prices. Counteracting this tendency at present is the realization that beans are usually used in large quantities by military forces, and the demand for beans by belligerent nations may be increased. With such an increased demand the quantity exported from the United States would be much larger than normal. The war situation may have an indirect influence on the domestic demand for beans, also, as a result of greater industrial activity. Therefore, it is probable that an increase in price over the corresponding level of last year will occur. These higher prices probably will result in a tendency to expand bean acreage planted in 1940.

The total acreage of dry edible beans for harvest in 1939 is indicated to be 1,562,000 acres, which compares with an acreage of 1,671,000 acres harvested in 1938 and an average of 1,674,000 acres harvested during the 5 seasons, 1933-37. With yield equal to average, the 1939 acreage would have produced approximately 12,000,000 bags, which, with the record-large carry-over from the 1938-39 season, would have been more than sufficient to provide for average disappearance.

The United States average farm price of beans during the 1938-39 season was $2.58 per 100 pounds, as compared with a price of $3.05 per 100 pounds for the 1937-38 season and a 5-year average price of $3.53. During the 1938-39 season, prices ranged from a low of $2.47 in November 1938, to a high of $2.77 in May 1939.

Prices to growers advanced sharply the first half of September and averaged $3.80 per 100 pounds on September 15. A month earlier they averaged $2.63 and a year earlier $2.68. Since September prices have declined materially.

Imports were unusually small during the current season and were exceeded by exports for the first time in many years. Shipments to non-contiguous United States territories were slightly larger than during last season. In view of the large supply and relatively low prices of domestic beans, imports probably will be smaller than usual but exports to foreign countries and shipments to non-contiguous United States territories likely will be equal to or even larger than those of the 1938-39 season.

Pea Beans

Carry-over of Pea beans on September 1, 1939, based largely on trade estimates, was apparently larger than that of a year earlier. Production of Pea beans in 1939 is indicated to be 10 percent smaller than in 1938 but slightly larger than the 1933-37 average. Thus, the total supply of Pea beans for the 1939-40 season probably will exceed the average annual disappearance in recent years by about 15 percent. Carry-over at the beginning of the 1940-41 season probably will be smaller than that of the current season but substantially larger than average; therefore, a crop slightly smaller than average should meet all normal requirements. Such a crop would require, with average yield, an acreage about 10 percent smaller than that available for harvest in 1939. On the other hand, if an unusual demand develops and prices continue to advance, a net increase in acreage planted to Pea beans probably would occur.

Great Northern Beans

Stocks of Great Northern beans in producing sections on September 1, 1939, apparently were the largest on record. However, production in 1939 is indicated to be about 10 percent smaller than in 1938 and 3 percent smaller than the average for the 5-year period, 1933-37. The total supply for the current marketing season is slightly smaller than that of last season but about 40 percent above the average annual disappearance for the 5-year period, 1933-37. Consequently, the carry-over of Great Northern beans at the beginning of the 1940-41 season probably will not be smaller than that of 1939-40 unless there is a greatly increased demand. Normally, a reduction in the planted acreage of Great Northern beans would be expected in 1940. But an actual or potential war demand resulting in a relatively high level of prices at planting time in 1940 probably will encourage an increase in acreage planted.

Pinto Beans

Carry-over of Pinto beans on September 1, 1939, is indicated to be the largest since 1932. Production is indicated to be about 10 percent smaller than in 1938 but about one-third larger than the average for the 5-year period, 1933-37. Thus, the 1939-40 supply appears to be slightly smaller than that for the 1938-39 season, but 40 percent larger than the 5-year average disappearance. The fact that Pinto bean prices have held up comparatively well during each of the last two seasons in relation to prices of most other varieties of beans makes it improbable that planted acreage in the Pinto bean area will be decreased in 1940 below the average of the previous two seasons. If disappearance in the 1939-40 season is approximately equal to average, carry-over stocks at the end of the season probably will be substantially larger than average. Hence, a crop in 1940 smaller than that indicated for 1939 would be needed.

Lima Beans

The 1939 production of all Lima beans is indicated to be 1,944,000 bags, as compared with 2,259,000 bags in 1938 and an average of 1,887,000 bags for the 5 years, 1933-37. The supply of Standard Lima beans is estimated at 1,536,000 bags, or only 6,000 bags smaller than last year, but about 430,000 bags larger than the 10-year (1928-37) average. Hence, the Standard Lima 1939-40 supply is 311,000 bags larger than the 1938-39 disappearance.

The Baby Lima supply for the 1939-40 season is approximately 6 percent less than the 1938-39 supply. Although production for 1939 is indicated to be approximately 15 percent less than for last year, carry-over as of September 1, 1939, is about 20 percent larger than a year earlier. Disappearance of this variety has been gaining steadily in recent years, but the prospective supply is about 370,000 bags more than last season's apparent distribution. Carry-over of Baby Lima stocks at the beginning of the 1940-41 season will be somewhat smaller than a year earlier but will still be relatively large.

In view of the continued heavy supply of all Lima beans, and the relatively low prices received in the past season, a net reduction in acreage planted to them may be expected in 1940 unless demand is much larger than now expected.

Dry edible beans: Acreage and production, 5 year average 1933-37 and for 1935-39 seasons

State	Average 1933-37	1935	1936	1937	1938	1939
	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres
Acreage:						
Me., Vt., N.Y., Mich., Wis., Minn. /1	708	736	624	638	646	601
Nebr., Mont., Idaho, Wyo., Oreg. /2	187	195	171	239	193	179
Kans., Colo., N. Mex., Ariz. /3	450	615	452	437	489	453
Calif. /4	329	339	347	386	343	329
Total	1,674	1,885	1,594	1,700	1,671	1,562
	1,000 bags	1,000 bags	1,000 bags	1,000 bags	1,000 bags	1,000 bags
Production:						
Me., Vt., N.Y., Mich., Wis., Minn. /1	5,306	6,365	3,612	5,724	6,158	5,470
Nebr., Mont., Idaho, Wyo., Oreg. /2	2,210	2,097	2,127	2,982	2,454	2,185
Kans., Colo., N. Mex., Ariz. /3	1,455	1,896	1,585	1,507	2,093	1,920
Calif. /4	4,124	3,965	4,081	5,369	4,563	4,000
Total	13,095	14,323	11,405	15,582	15,268	13,575

/1. Largely Pea beans, but most important source of supply of Red Kidney, Yelloweyes, and Cranberry.
/2. Largely Great Northern, but Idaho most important source of supply of Small Red.
/3. Largely Pinto.
/4. Miscellaneous varieties - mostly Standard Lima, Baby Lima, Blackeye, Small White, and Pink.

Dry edible beans: Supply and disposition, 5 year average 1933-37, and for 1935-39 seasons.

Item	Average 1933-37	1935-36	1936-37	1937-38	1938-39	1939-40
	1,000 bags	1,000 bags	1,000 bags	1,000 bags	1,000 bags	1,000 bags
Production	13,095	14,323	11,495	15,582	15,268	13,575
Carry-over /1	1,274	1,150	1,120	850	2,250	3,000
Imports	279	152	587	106	65	
Total supply	14,648	15,625	13,112	16,538	17,583	
Exports	65	87	26	88	298	
Shipments to noncontiguous U. S. territories	334	387	323	384	391	
Carry-over /2	1,474	1,120	850	2,250	3,000	
Domestic disappearance	12,775	14,061	11,913	13,816/3	13,891/3	

/1. Stocks in warehouses and elevators in main producing sections at beginning of crop marketing season September 1.
/2. Stocks at end of season.
/3. Includes purchases for relief distribution by the Federal Surplus Commodities Corporation of 568,000 bags in 1937-38, and 764,000 bags in 1938-39.

Dry edible beans: Average price per 100 pounds received by farmers, by months, 5 year average 1933-37, and for 1935-39 seasons.

Month	Average 1933-37	1935-36	1936-37	1937-38	1938-39	1939-40
	dollars	dollars	dollars	dollars	dollars	dollars
September	3.61	3.08	4.35	3.52	2.68	3.80
October	3.51	2.89	4.83	3.37	2.54	
November	3.43	2.67	5.30	2.77	2.47	
December	3.38	2.44	5.49	2.68	2.48	
January	3.54	2.61	5.87	3.02	2.58	
February	3.72	2.85	6.43	2.97	2.55	
March	3.69	2.86	6.32	2.92	2.54	
April	3.64	3.00	6.10	2.84	2.54	
May	3.61	3.02	5.85	2.93	2.77	
June	3.58	2.96	5.66	3.00	2.66	
July	3.72	3.76	5.35	3.30	2.62	
August	3.64	4.33	4.46	2.94	2.63	
Weighted Average	3.53	2.93	5.38	3.05	2.58	

Release Date
November 15, P.M.

THE CLOVER SEED AND ALFALFA SEED OUTLOOK FOR 1940

Summary

Supplies of clover and alfalfa seed are somewhat smaller than in the fall of 1938, but are a little larger than usual. Prices of red and alsike clover seed are, respectively, about 10 and 40 percent higher than in 1938 but about 25 and 15 percent lower than the 5-year (1933-37) average. Prices of sweetclover seed are about the same as last year but about 30 percent below average. Prices of alfalfa seed are slightly below last year, but slightly above average. Relatively greater increases in prices of grain than of clover and alfalfa seed would tend to decrease the acreage of clover and alfalfa not only for seed production but also for hay. An acreage for the production of these seeds in 1940 equal to that harvested for seed this year would appear to be fully ample for the expected sowing requirements in 1940-41.

General Situation

Production of red and alsike clover seed in 1939 was about one-fourth smaller than the near-record production in 1938. Acreage of these seeds was smaller than in 1938, but larger than average. Yields per acre in 1939 were, in general, a little larger than the below-average yields of 1938. Losses in cleaning these seeds will average close to 3 percent less this year than last. In general, fields from which seed was harvested were cleaner in 1939 than in 1938.

Although drought and grasshoppers did much damage in some sections, the condition of clover and alfalfa meadows generally appears to be fully average. New spring seedings went through the spring and summer in fairly good shape. Present acreage appears to be adequate, provided damage from winterkilling is not severe and yield per acre is about average in 1940.

Imports of red and alsike clover seed were small during the fiscal year ended June 30, while those of alfalfa and sweetclover were much above average. Imports of red-clover seed are expected to be small during the present fiscal year, but imports of alfalfa seed may be above average because of the large crop in Canada. Alsike-clover seed imports already have exceeded those of last year, and may be above average despite the small crop in Canada, offset in part by a small carry-over. Imports of sweetclover seed this fiscal year are expected to be much smaller than during the last two years.

Red-Clover Seed Crop Above Average

Production of red-clover seed in 1939, estimated at approximately 80,600,000 pounds of thresher-run seed, is about 27 percent smaller than the large crop of 1938, but about 36 percent larger than the 10-year (1928-37) average. Decreased production this year is attributed to a reduction in acreage from that of last year, which was next to the largest on record. Decreases in production are most marked in the eastern portion of the red-clover seed producing area.

Carry-over of this seed, exclusive of that held by the smaller country shippers, is estimated at 22,400,000 pounds, of which about 17,400,000 pounds were

on farms and about 5,000,000 pounds were held by seedsmen and the larger country shippers, who reported in the July 1 seed-stocks survey.

Prices to growers in surplus producing districts the latter part of October averaged about $14.00 per 100 pounds, basis clean seed, compared with about $13 last year and $19.20, the 5-year (1933-37) average.

Alsike-Clover Seed Crop Smaller This Year

The 1939 production of alsike-clover seed, estimated at 19,500,000 pounds, is about 24 percent smaller than the 1938 crop, but is about average. Decreased production in 1939 is attributed to the dry weather in the summer and fall of 1938 in a number of important districts.

Carry-over of alsike-clover seed is estimated at 3,900,000 pounds, of which about 2,400,000 pounds were on farms and about 1,500,000 pounds were held by seedsmen and country shippers.

At the end of October, growers were receiving about $15.50 per 100 pounds for clean seed, compared with $10.85 last year and $18.25, the 5-year average.

Sweetclover-Seed Crop May Be Slightly Larger

Production of sweetclover seed in 1939, estimated at about 63,200,000 pounds, is expected to be about 10 percent larger than in 1938. Drought and grasshoppers again reduced the crop in some sections, but yields per acre were expected to average a little above those of 1938.

Farm carry-over of this seed is approximately 4,000,000 pounds. In addition, about 5,000,000 pounds were carried over by seedsmen and country shippers.

Prices to growers in surplus-producing areas the latter part of October averaged about $3.90 per 100 pounds for clean seed, compared with $3.90 last year and $5.45, the 5-year average.

Imports of sweetclover seed during the fiscal year ended June 30, 1939 were the largest on record. They totaled 10,292,500 pounds, compared with 9,411,500 pounds in the preceding year and 1,194,800 pounds, the 5-year average.

Alfalfa-Seed Crop Above Last Year and Average

Production of alfalfa seed in 1939, estimated at 74,100,000 pounds, is about 24 percent larger than in 1938 and 31 percent larger than the 10-year average. The increase over the 1938 production is most marked in the northern group of States.

Carry-over of alfalfa seed on farms is estimated at about 1,500,000 pounds. Seedsmen and country shippers reported that they were carrying over approximately 4,200,000 pounds.

Late October prices to growers for common alfalfa seed averaged about $16.50 per 100 pounds, basis clean seed, compared with about $17 last year and $15.90, the 5-year average for corresponding dates.

Imports of alfalfa seed during the last fiscal year were 3,263,600 pounds, compared with 4,589,600 pounds in the preceding year and 782,500 pounds, the 5-year average.

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November 10, A.M.

THE POTATO OUTLOOK FOR 1940

Summary

An increase of 100,000 acres of potatoes can be expected in 1940 if growers respond to prices received as they have in the past. Such an increase would result in the planting of about 3,175,000 acres. There has been an upward trend in yield per acre since 1900. A yield equal to the average of the last three seasons (121 bushels) would produce 384,000,000 bushels. There may be, however, considerable variation from this figure depending largely on weather conditions.

Demand for potatoes is relatively inelastic but prices for a given quantity will vary with changes in consumer purchasing power. There has been a decline in per capita consumption and under average demand conditions the production most likely to result in parity prices is about 360,000,000 bushels.

Severe drought in the intermediate States materially reduced the crop in 1939. Average growing conditions in 1940 would materially increase production in these States even though acreage remains the same. It is expected that the commercial acreage in the early and intermediate States will be increased about 10 percent, or 30,000 acres. Growers in the 30 late States will probably increase the acreage about 3 percent, or 70,000 acres. In view of past history, there would probably be more violent fluctuations in acreage except that a large percentage of the growers have cooperated in the Agricultural Conservation Program. This has tended to stabilize acreage. The acreage goal in 1939 was 3,100,000 to 3,300,000 acres and will probably be unchanged for the 1940 season.

The 1939 Crop

The general Crop Report of October 1, 1939, indicated total United States production of potatoes as 359,000,000 bushels, which is 13,000,000 bushels less than the 1938 crop and the 10-year (1928-37) average. There was an increase of only 55,000 acres and there was a 6.4 bushel per acre decrease in yield from that of 1938. Although the acreage during the 1938 and 1939 seasons was slightly below the goals set in the Agricultural Conservation Program, the crop was about equal to normal production expected from the goal acreage.

Indicated Production by Regions

In the 30 late States (excluding the early commercial crop in California) the October 1 condition indicates a crop of 284,500,000 bushels, or about 1 percent less than in 1938 and 5 percent less than the 1928-37 average. Indications are for a crop in the eight Eastern late States about 1 percent smaller than that of last year. In the 10 Central late States the harvest is indicated to be 4 percent smaller, while in the 12 Western late States production,

exclusive of the early commercial crop in California, is indicated to be 3 percent larger than the 1938 crop. In the seven intermediate States, the total crop was estimated at 27,794,000 bushels, which is 26 percent below the 1938 crop and 21 percent below the 10-year average. The total crop in the 11 early States, plus the early commercial crop in California, was estimated at 46,395,000 bushels, which is practically the same as last year and 28 percent larger than the 10-year average. Most of this increase occurred in the early commercial crop of California.

Prices

Relatively low consumer purchasing power in the spring and summer of 1939 and potatoes of poor quality in several of the early commercial areas caused prices in midsummer to remain at low levels. Prices were higher early in the season and after July 1 than during the same period in 1938. On September 15 the United States farm price of potatoes averaged 69.4 cents per bushel, compared with 47.4 cents a year earlier and 53.6 cents in 1937. Consumer purchasing power during the remainder of the 1939-40 marketing season is expected to show marked improvement which should result in higher prices in the 30 late States than the prevailing prices during the 1938-39 season.

Probable Production in 1940

The acreage planted to potatoes in 1940 is expected to be about 3 percent or 100,000 acres larger than that planted in 1939. Although prices for potatoes have not been high, they have remained at levels not conducive to much change in acreage. With higher prices at planting time acreage probably will be increased, but a retarding influence probably will be relatively higher prices for other commodities that compete for land suitable to potato production. Seed potatoes probably will be higher this winter and spring than in 1939.

If the upward trend in yield per acre continues, the production in 1940 will probably be about 384,000,000 bushels. Weather conditions may cause variations from this expected yield. If this production materializes, production will be 12,000,000 bushels above average. There has been an upward trend in yield per acre accompanied by cyclical fluctuations during the last 40 years. There were high levels in yields about 1910, 1926, and 1937, and low levels in 1902, 1918, and 1933. If the length of the present cycle is not upset, high yield may be expected in 1940. If these cycles are caused by changes in the relationship of prices of potatoes to costs of production and other marketing and handling costs, then yields would decrease as these costs increase.

Demand

Demand for potatoes is relatively inelastic but prices for a given quantity will vary with changes in consumer purchasing power. There has been a decline in per capita consumption and under average demand conditions the production most likely to result in parity prices is about 360,000,000 bushels. The possible production of 384,000,000 bushels would be 24,000,000 bushels larger than the quantity expected to result in parity prices.

Outlook by Regions

Growers in the 11 early States received relatively low prices in 1937 and 1938. Prices during the 1939 season in most of these States were more favorable. Potato prices during the planting season for early potatoes are likely to be higher. Higher prices of seed potatoes may tend to check acreage expansion somewhat. On the basis of normal marketings, storage stocks on January 1 are likely to be about the same as last year. Because of these conditions growers in this area may increase the commercial acreage about 10 percent.

With income to growers in the intermediate States in 1939 somewhat higher than last season and with higher potato prices in prospect at planting time, increased plantings in the commercial area are likely to occur. The commercial acreage on the Eastern Shore of Maryland and Virginia in recent years has been greatly reduced and potato prices were relatively favorable. Prices in New Jersey were also higher during most of the marketing season. So it is expected that most of the increase in this area will be in these States. Because of drought conditions in 1939, yields in the intermediate States were 35 bushels per acre below the 1938 yield and 11 bushels below the 10-year average. If the yields are as high as those of 1938, production would increase 10,000,000 bushels even though no change in acreage occurs.

Yields in the 30 late States were above average, therefore higher prices will result in high returns per acre. It is expected that growers will increase their acreage in this area about 70,000 acres or 3 percent. Growers have been reluctant to exceed their goal in the Agricultural Conservation Program which will tend to check expansion. Seed prices will be higher but probably not sufficiently high to check acreage expansion.

Potatoes: Acreage, yield per acre, and production average 1928-37, annual 1938, and indicated 1939

Group of States and classification	Acreage			Yield per acre			Production		
	Average 1928-37	1938	Prelim. 1939	Average 1928-37	1938	Indicated 1939	Average 1928-37	1938	Indicated 1939
	1,000 acres	1,000 acres	1,000 acres	Bushels	Bushels	Bushels	1,000 bushels	1,000 bushels	1,000 bushels
Early									
Total 1/	419.0	455.0	457.2	86.9	102.1	101.5	36,415	46,478	46,395
Early Comm. Calif.	16.6	34.0	33.3	214.0	270.0	333.0	3,739	9,180	11,089
Comm. Southern	153.2	166.4	161.0	107.2	115.8	107.2	16,417	19,275	17,262
Other Southern	249.2	254.6	262.9	65.2	70.8	68.6	16,259	18,023	18,044
Intermediate									
Total	329.0	291.0	292.0	106.8	130.3	95.2	35,284	37,923	27,794
Commercial	135.2	117.5	119.3	150.0	178.7	123.6	20,278	20,996	14,746
Other	193.8	173.5	172.7	77.4	97.6	75.6	15,006	16,927	13,048
18 Surplus late									
Total	2,175.0	1,903.7	1,959.9	120.8	132.9	129.2	260,658	257,614	257,518
3 Eastern	617.6	578.0	568.0	161.1	153.0	152.0	99,557	88,442	86,361
5 Central	1,052.7	863.0	894.0	82.4	96.7	90.4	87,023	83,474	80,804
10 Western 2/	504.7	362.7	498.6	146.8	211.0	159.0	74,078	76,516	79,264
12 Other Late									
Total	420.3	369.9	365.4	95.1	104.8	104.2	39,900	38,782	38,071
5 Eastern	59.9	61.4	63.2	143.8	132.8	149.8	8,630	8,155	9,466
5 Central	352.6	299.0	294.0	87.1	99.6	95.3	30,688	29,792	28,020
2 Western	7.8	9.5	8.2	74.6	87.9	71.3	582	835	585
30 Late 2/	2,595.3	2,273.6	2,326.0	115.8	126.3	122.3	300,559	287,216	284,500
37 Late & Inter. 2/	2,924.4	2,564.6	2,618.0	114.8	126.8	119.3	335,843	325,139	312,294
U. S. Total	3,343.4	3,019.6	3,074.3	111.4	123.1	116.7	372,258	371,617	358,689
30 Late States									
8 Eastern	677.5	639.4	631.2	159.7	151.1	151.8	108,187	96,597	95,827
10 Central	1,405.3	1,162.0	1,188.0	83.8	97.5	91.6	117,711	113,266	108,824
12 Western 2/	512.5	472.2	506.3	145.7	163.8	157.7	74,660	77,353	79,849
Total 2/	2,595.3	2,273.6	2,325.3	115.8	128.3	122.3	300,559	287,216	284,500

1/ Includes California early commercial.
2/ Excludes California early commercial.

Potatoes: Season average price per bushel received by producers, average 1928-32 and annual 1936-39

Group	Average 1928-32	1936	1937	1938	1939 1/
	Dollars	Dollars	Dollars	Dollars	Dollars
Farm price per bushel:					
Early-					
Total	1.02	1.44	.82	.67	.92
Commercial 2/	1.03	1.46	.80	.61	.66
Other	1.01	1.42	.82	---	---
Intermediate-					
Total	.80	1.21	.59	.54	.86
Commercial	.72	1.20	.51	.48	.77
Other	.91	1.22	.70	---	---
18 Surplus Late States	.63	1.08	.45	.52	.58
12 Other Late States	.89	1.27	.75	.71	.86
30 Late States Combined	.66	1.10	.49	.54	.62
37 Late & Intermediate	.68	1.10	.50	.54	.76
United States average	.71	1.14	.53	.56	.66

1/ October 15 averages except commercial early and intermediate which are season averages.
2/ Includes early commercial in California.

Release Date
November 10, A.M.

THE SWEETPOTATO OUTLOOK FOR 1940

Summary

The acreage of sweetpotatoes in 1940 probably will be decreased slightly from the 887,000 acres indicated for harvest in 1939. With average yields, the smaller acreage would result in a total crop of about 75 million bushels or a reduction of 1 percent from the relatively large production in 1939, but an increase of 6 percent over the 1928-37 average. Most of the reduction in 1940 is expected to occur in those areas that normally produce sweetpotatoes for the commercial market. Prices in eastern markets in the fall of 1939 averaged somewhat lower than those prevailing a year earlier while those in the Middle West were somewhat higher.

A large portion of the sweetpotato crop is produced in the southern cotton States where sweetpotatoes are used principally for food in the locality where grown. The recent tendency to increase the production of home-produced foods in these States has served to maintain the acreage of sweetpotatoes at a relatively high level. About as large a quantity of sweetpotatoes is consumed on farms where grown as is sold or marketed.

Large Crop in 1939 and Low Prices

The acreage planted to sweetpotatoes in 1939 totaled 887,000 acres, or only slightly more than in the previous season. As of October 1, yields per acre were indicated to be slightly lower than in 1938 but slightly higher than the recent 10-year average, and promised a crop of 76,122,000 bushels. This production is slightly smaller than the relatively large crop of 1938 but exceeds the average production by 5.5 million bushels. As compared with 1938 production, most of the decrease occurred in the South Central States where large quantities of sweetpotatoes are grown for home consumption. Production is indicated to be larger than a year earlier in the Atlantic Coast States. As a result of the large supplies available, prices in eastern markets during the late summer and early fall months averaged somewhat lower than a year earlier. Prices to growers for the country as a whole on September 15, however, were slightly higher than on the corresponding date in 1938.

For many years the annual acreage of sweetpotatoes in the South has varied indirectly with the general welfare of cotton producers, the acreage being reduced after a year of improvement in income and increased after a year of declining income. In this analysis, season-average cotton prices were taken as an index of income or welfare of the cotton growers. In recent years this relationship has been disturbed somewhat by the conditions developed under the cotton-adjustment program and the efforts being made to produce more food for home use in these States. It is probable, therefore, that although prices for cotton this season are slightly higher than in 1938, the acreage of sweetpotatoes in the cotton States will show little change from last year.

Approximately three-fifths of the market supply of sweetpotatoes is produced in New Jersey, Delaware, Maryland, Virginia, Kentucky, Tennessee, and Louisiana. The relatively low prices being received for the 1939 crop in these areas probably will result in decreased plantings in 1940. This is particularly true of those areas where white potatoes are commonly grown on the same farm, since it is probable that the white-potato acreage in these States will be increased in 1940.

Sweetpotatoes: Acreage, production, and price, by regions

Group	10-year average 1928-37	1938	1939
		Acreage	
	Acres	Acres	Acres 1/
Four Central Atlantic States: (N.J., Del., Md., and Va.)	67	61	62
Four Lower Atlantic States: (N.C., S.C., Ga., and Fla.)	275	290	293
Eight South Central States: (Ky., Tenn., Ala., Miss., Ark., La., Okla., and Tex.)	453	492	493
Other States: (Ind., Ill., Ia., Mo., Kans., Cal.)	40	40	39
Total United States	835	883	887
		Production	
	1,000 bushels	1,000 bushels	1,000 bushels 2/
Four Central Atlantic States: (N.J., Del., Md., and Va.)	8,382	6,580	8,039
Four Lower Atlantic States: (N.C., S.C., Ga., and Fla.)	22,461	25,841	26,647
Eight South Central States: (Ky., Tenn., Ala., Miss., Ark., La., Okla., and Tex.)	36,239	40,017	37,587
Other States: (Ind., Ill., Ia., Mo., Kans., Cal.)	3,607	4,209	3,849
Total United States	70,690	76,647	76,122
		Price per bushel	
	Dollars	Dollars	Dollars 3/
Four Central Atlantic States: (N.J., Del., Md., and Va.)	.85	.80	.70
Four Lower Atlantic States: (N.C., S.C., Ga., and Fla.)	.85	.71	.85
Eight South Central States: (Ky., Tenn., Ala., Miss., Ark., La., Okla., and Tex.)	.86	.72	.76
Other States: (Ind., Ill., Ia., Mo., Kans., Cal.)	1.12	.84	.79
Total United States	.87	.73	.78

1/ July estimate. 2/ October 1 estimate. 3/ September 15 price.

Release Date
November 14, A.M.

THE OUTLOOK FOR TRUCK CROPS FOR MARKET FOR 1940

Summary

Production of all commercial truck crops for fresh-market shipment as a whole in 1940 probably will be slightly larger than the record large supply produced in 1939. Improvement in demand conditions in 1940 over 1939, however, probably will result in slightly higher prices of these crops as a group and a larger total cash income to producers.

The total acreage planted to these crops probably will be increased slightly and continue the upward trend that has been in progress during the last 2 decades. Because of somewhat higher prices received in 1939 for such crops as snap beans, beets, cabbage, cantaloups, carrots, cauliflower, celery, cucumbers, eggplant, peppers, tomatoes, and watermelons, it is probable that the United States acreage of these crops in 1940 will be increased slightly over that harvested in 1939. It is probable, however, that decreases will occur in the acreage of lima beans, lettuce, and green peas. The onion acreage probably will be about the same.

The agricultural conservation program provides for a national acreage goal for these products, together with the acreage of those grown for processing, not to exceed the average for 1936-37. The 1939 acreage was well within the goal because of the sharp reductions in the acreage of the canning crops. In 1940 the acreage of most of the canning crops probably will be increased substantially and, therefore, will allow for less expansion in the market crops, provided the total acreage goal is not to be exceeded. Nevertheless, it is probable that some expansion of the acreage of the market crops as a group will occur.

Although the total acreage planted to fall truck crops is usually small relative to the total for the country as a whole, it is noteworthy that, according to early October reports, the fall plantings this season are increased 6 percent over 1939. Increases in the South are indicated for fall and early cabbage of 14 percent, cauliflower, 5 percent, kale, 27 percent, and green peppers, 20 percent. No definite reports are yet available on the fall tomato crops in Florida and Texas, but indications are that plantings in these areas, particularly in Texas, are substantially increased over last year. The fall snap bean acreage is indicated to be decreased 10 percent and fall celery acreage is down 3 percent while the acreage of fall carrots, cucumbers and spinach is the same as a year earlier.

The United States acreage of asparagus available for harvest in the 1940 season, for both market and processing combined, is indicated to be about 6 percent greater than in 1939. It is increased nearly 5 percent in the early States and nearly 10 percent in the late group.

The winter tomato crop in Cuba is expected to about equal that of last year with exports probably totaling close to 1,200,000 lugs. All other vegetables are indicated to be about the same as last year except lima beans which probably will be 25 percent less.

Winter production of tomatoes and cucumbers in Puerto Rica, much of which is expected to be shipped to the United States, is likely to be increased sharply over last year. No information is available concerning winter vegetable production in Mexico this season.

Review of 1939 Season

The total United States acreage of commercial truck crops for fresh-market shipment increased by less than 1 percent in 1939 over 1938 and is indicated to be only slightly smaller than the record high acreage harvested in 1936. Although yields in 1939 of most crops were relatively low in some of the early, second early, and intermediate States, the index of yield per acre for all crops for the United States as a whole was about the same as in 1938. With the acreage slightly higher, production also shows a slight increase. Larger United States crops of asparagus, snap beans, cantaloups, eggplant, lettuce, onions, green peas, and spinach, more than offset smaller crops of beets, cabbage, carrots, cauliflower, celery, cucumbers, peppers, tomatoes, and watermelons.

Despite the slightly larger supply, prices of truck crops for fresh-market shipment averaged somewhat higher in 1939 than in 1938. These higher prices were due largely to improved consumer demand, and they resulted in a total cash income to growers somewhat higher than received in the previous year.

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November 14

THE CABBAGE OUTLOOK FOR 1940

Summary

During the 1939 season, cabbage yields have been somewhat below average in all areas. Probable increased plantings together with average yields would indicate an increase in total production in 1940. The intended acreage of fall cabbage, the first crop to be marketed in the 1940 season, is reported to be 2,300 acres as compared with 2,700 in the previous season. This reduction is due partially to a substantial decrease in the average price received by South Carolina growers for the fall crop of a year ago. Prices received by growers for the 1939 early crop, according to preliminary reports, are averaging somewhat lower than those received in 1938. But in view of the prospects for increased demand in 1940, and the probability of lighter storage stocks of late Danish cabbage, early plantings probably will tend to increase in 1940. Prices to growers of second early and intermediate cabbage were higher this season than in 1938, apparently as a result of decreased production. On the basis of higher 1939 prices and probable more favorable buying power, plantings are likely to increase in these two areas in 1940. As of October 1, no complete price information for the late domestic and late Danish areas is available. Production has dropped off considerably in the late areas, and it is indicated that prices are improved over the 1938 season. From these indications, a substantial increase in acreage planted is probable in the late areas.

Review of 1939 Season

Because of lower yields per acre throughout all producing areas and decreased acreage in all but the fall and early areas, the total 1939 United States production of cabbage, including cabbage for kraut, is estimated to be substantially less than the 1938 production. The total current crop is indicated to be 1,039,600 tons, or approximately 30 percent smaller than the 1938 crop of 1,495,800 tons. The largest decrease in production occurred in the late areas. The indicated 1939 late domestic crop is 243,300 tons as compared with 511,500 tons in 1938. The indicated 1939 late Danish crop is 208,500 tons as compared with 370,300 tons in 1938. The intermediate, second early, and fall crops also decreased, while early cabbage production was increased somewhat over 1938.

General Price Comments

The price of cabbage in each group area is influenced by a number of factors. Heavy production in a group area during a given year tends to depress prices. However, if this heavy production in a particular local area comes on the market at a time when competitive supplies are scarce the price received will be relatively high. Nonagricultural incomes also influence grower prices to some extent. As a large crop in an area does not necessarily mean poor prices, acreage will not alwdys decline so much as might be expected after a low-price year. However, extremely low prices in a given year usually result in reduced plantings the following year. Conversely, exceptionally high prices usually result in increased plantings for the next year.

Outlook by Regions

Fall States: Growers in North Carolina and South Carolina, and in the Norfolk area of Virginia, received lower prices for the 1938-39 crop in spite of a decrease in production resulting from lower yields per acre. Apparently this is the main reason for reducing plantings from the 2,700 acres harvested this past year to an indicated 2,330 acres. This reduction took place entirely in South Carolina, where the growers received substantially lower prices in 1939 than growers in the other two States of the group. Storage supplies of late Danish cabbage are expected to be smaller. Therefore, it is probable that marketing conditions for the 1939-40 crop to be marketed early in 1940 will be comparatively favorable.

Early States: Acreage in the early States of California, Florida, Louisiana and Texas, increased from the 46,100 acres harvested in 1938 to 54,400 acres in 1939. Nearly all of the acreage increase occurred in Texas. The resulting production amounted to 266,300 tons as compared with 237,400 tons in 1938. The indicated production for this year is 14.5 percent larger than the average production for the 10-year (1927-38) period. The average price received by growers in this group for the 1939 crop was $14.50 per ton. This compares favorably with the $15.59 that growers obtained in 1938, considering that Texas growers averaged only $8.30 per ton for their 1939 early crop. The 1939 price in each of the other three States, where production had decreased, was higher than prices received in 1938. In view of the prospects of improved demand conditions, and inasmuch as growers in Florida, Louisiana, and California received higher prices for their 1939 crop, the intended plantings for 1940 are 57,600 acres as compared with 49,800 acres in 1939.

Second early States: Harvested acreage in the second early States of Alabama, Georgia, Mississippi, North Carolina, South Carolina, and in the Norfolk and Eastern Shore districts of Virginia amounted to 18,800 acres, a reduction of 3,400 acres from 1938, but 2,620 acres more than the 10-year average acreage. This reduced acreage, coupled with a lower than average yield, resulted in a production of 92,600 tons of cabbage, which is approximately 33 percent less than that produced in 1938, but is 6.7 percent larger than the 10-year average production. Average prices received by the growers in this group, according to preliminary reports, were substantially higher than those of last year. These higher prices to growers together with an expected increase in buying power indicate an increase of plantings from 10 to 15 percent throughout the group area as a whole.

Intermediate States: The cabbage production in the intermediate States, (Arkansas, Illinois, Iowa, Kentucky, Maryland, Missouri, New Jersey, New Mexico, the Long Island section of New York, North Carolina, southeastern Ohio, Tennessee, southwestern Virginia, and Washington), decreased from 222,400 tons produced in 1938 to 209,600 tons in 1939. This production represents a decrease of about 6 percent, but is 12 percent greater than the 10-year (1928-37) average. Acreage harvested in 1939 was 2 percent smaller than in 1938, but 13 percent greater than the average acreage for the 10-year (1928-37) period. The average price to growers in the area is indicated to be about $20 a ton as compared to an average price of $12 received last year. On the basis of higher 1939 prices and continued increase in consumer buying power, an 8 to 10 percent increase in acreage for 1940 probably would maintain favorable marketing conditions for the intermediate cabbage crop.

Late domestic States: The number of acres of late domestic type cabbage to be harvested, including acreage planted for kraut, in Colorado, Indiana, Michigan, Minnesota, New York, Ohio, Oregon, Pennsylvania, Utah, and Wisconsin, total 38,260 acres according to the latest reports. Of this total acreage about 50 percent is planted to cabbage used for the manufacture of kraut. This acreage represents a reduction of 18 percent from the 46,570 acres produced in 1938, and is slightly less than the 1928-37 average acreage. In 1938 increased plantings combined with well above average yields per acre to produce a record breaking crop of 511,500 tons. This is to be compared with the present indicated production of 248,300 tons, representing a decrease of 51 percent. The indicated 1939 production is 18 percent less than the 10-year (1928-37) average production. Current production is relatively low, buying power strong, and terminal market prices substantially higher than last season. Available data indicate that 1939 average grower prices are well above those received in 1938. This indicated price improvement, together with the continued strengthening of consumer demand, points to a substantial increase in acreage for the 1940 season.

Late Danish States: Growers in the late Danish area, (Colorado, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin), have reduced their 1939 acreage to 31,500 acres as compared with 35,180 acres harvested in 1938. The yield per acre for 1939 in this group is expected to be below average, and a production totaling 208,500 tons is indicated, a decrease of 44 percent from the 370,300 tons produced a year ago, and 26 percent less than the 10-year (1928-37) average production. A portion of the late Danish crop is stored for late winter market. It is probable that the quantity going into storage this season will be close to 50 percent less than the relatively large quantity stored in 1938. It is likely that prospective demand, favorable terminal market price conditions, and relatively good grower prices for the cabbage crop in earlier areas will result in a 15 to 20 percent expansion in acreage for the 1940 season.

Cabbage for kraut: Most of the cabbage for kraut is grown in the late domestic States. In 1938, 17,740 acres of cabbage for kraut were harvested. Average yield per acre amounted to 11.01 tons, resulting in a production of 195,400 tons. The indicated plantings for 1939 are 17,070 acres. On the average, about 500 acres of cabbage for kraut is abandoned each year. Yield is indicated to be below average and production is estimated at 185,200 tons. In 1938 growers received an average price of $5.27 per ton. On the average, about 50 percent of the acreage for kraut is contracted to canners. Available data indicate that the contract prices for kraut are slightly lower than the 1938 contract prices. There is no available grower-price information relative to kraut acreage not under contract. In view of increasingly favorable consumer demand and present reduced acreage, an expansion in kraut acreage in 1940 probably will be justified.

Cabbage for market and kraut: Commercial acreage, yield per acre, production, and season average price received by farmers

Area	10-yr.av. 1928-37	1937	1938	1939 Prel.
	Acreage			
	Acres	Acres	Acres	Acres
Fall	1,250	2,800	2,600	2,700
Early	42,920	58,200	46,100	54,400
Second early	16,180	18,600	22,200	18,800
Intermediate	29,620	34,150	34,140	33,440
Late domestic	39,460	41,090	46,570	38,260
Late Danish	36,030	37,090	35,180	31,500
Total late	75,490	78,180	81,750	69,760
Total all States	165,460	191,930	186,790	179,100
For kraut	20,370	25,040	17,740	17,070
For market	145,090	166,890	169,050	162,030
	Yield per acre			
	Short tons	Short tons	Short tons	Short tons
Fall	6.6	7.0	6.5	5.3
Early	5.3	4.8	5.1	4.9
Second early	5.3	5.2	6.2	4.9
Intermediate	5.9	6.6	6.5	6.3
Late domestic	7.7	7.0	11.0	6.5
Late Danish	7.8	7.1	10.5	6.6
Average late	7.8	7.0	10.8	6.6
Average all States	6.54	6.09	8.01	5.8
For kraut	7.55	6.12	11.01	6.16
For market	6.40	6.08	7.69	5.77
	Production			
	Short tons	Short tons	Short tons	Short tons
Fall	8,300	19,500	16,800	14,300
Early	227,900	276,500	237,400	266,300
Second early	86,400	97,500	137,400	92,600
Intermediate	174,600	225,800	222,400	209,600
Late domestic	303,000	286,100	511,500	248,300
Late Danish	282,200	262,500	370,300	208,500
Total late	585,200	548,600	881,800	456,800
Total all States	1,082,400	1,167,900	1,495,800	1,039,600
For kraut	153,800	153,200	195,400	105,200
For market	928,600	1,014,700	1,300,400	934,400
	Price per short ton			
	Dollars	Dollars	Dollars	Dollars
Fall	27.59	14.21	19.35	14.20
Early	13.38	12.75	15.59	14.50
Second early	27.29	24.39	10.54	19.04
Intermediate	13.47	12.93	11.99	---
Late domestic	11.04	12.57	6.47	---
Late Danish	11.85	13.04	5.26	---
Average all States	15.32	13.82	9.05	---
For kraut	16.56	9.61	5.27	---
For market	8.08	14.25	9.61	---

Release Date
November 14

THE CELERY OUTLOOK FOR 1940

Summary

The outlook for celery indicates an increase in production for 1940 of about 10 percent over that of 1939, and a total production approximating the record 1938 crop of 11.9 million crates (New York 2/3-size crates or equivalent). This outlook is based on assumptions of normal yields and normal reactions to prices received during the 1939 season. The anticipated increase in demand is expected to cause moderately greater returns to growers for the year, despite the increased production, but not in all regions.

Production of fall and winter celery, the first crop of the 1940 marketing season, is expected to increase. The crop will also face heavy competition from late 1939 storage celery. The price outlook is relatively less favorable for this crop than for the crop of other seasons.

With improved demand conditions and with production approximately the same or only slightly increased, returns to celery growers in the early and second early areas should improve over 1939.

The outlook in the intermediate celery States is for continued moderate expansion of production without a serious reduction in prices.

Large crops and low prices for 2 successive seasons in the late groups of celery-producing States point to a reduced crop in 1940, with a corresponding increase in prices received.

Factors Affecting Returns to Celery Growers

On the supply side, the actual quantity produced is the most important price-influencing factor. The outlook for 1940 is for a moderate increase in supply, which by itself may cause the price to growers to decline.

The quality of the celery marketed is an important consideration, especially over short periods of time. There is no adequate statistical measure of quality, but this factor must be considered when anticipating prices to be received for celery.

Competition from other vegetables is a minor factor and for practical purposes may be ignored.

On the demand side, the amount of income of nonagricultural workers exerts a very strong influence on the price received for celery. As celery may be considered a semi-luxury, an increase in income has a very definite effect upon the demand for celery, which in turn improves the price received for the available supply. The demand outlook for 1940 is for improvement in consumer income over that of 1939, and this increase in demand is expected to be sufficient to more than overcome the price-depressing effect of the increase in supply, so that actual returns to celery growers may be greater during 1940.

There has been, during the past 20 years, a consistent increase in the demand for celery which is not explained by income of consumers, but which evidently represents a gradual shift in the diet of the American public towards the use of more vegetables. Celery growers for the 1940 season should continue to benefit from this factor if usual economic conditions prevail.

This is not to imply, however, that celery producers have not had marketing difficulties, for production has increased from an average of 4.3 million crates during the 5 years, 1918-22, to an average of 9.1 million crates during 1933-37, and 11.9 million crates for 1938. The average price received by growers from 1918-22 was $2.17; for the period 1933-37 it was $1.57; and in 1938 it was $1.33 per crate. Corresponding figures for 1939 are not yet available, but will probably approximate $1.55.

Regional Outlook

Fall and Winter celery is grown in California and is marketed from November to January. The 1940 crop is harvested beginning in November 1939. This crop meets strong competition from storage celery produced in the late States. A very large 1939 crop of late celery indicates larger-than-usual storage this season. Fall and Winter celery is marketed during the holiday season, which is the season of greatest consumption. It appears that the income of consumers has only a slight influence on the demand at this particular season. Although acreage of Fall and Winter celery for 1940 is less than that of 1939, production will probably increase, as yields in 1939 were the lowest (except for 1928) on record. Supply factors are unfavorable, and the demand factors were only moderately favorable for this region.

The Early and Second Early celery is produced in California and Florida and is marketed from January through June, with some quantities being used locally on the West Coast throughout the summer. Production for the 1939 season has increased to about four times the production of 1918-22 and prices to growers in this area declined more during this period than for any other group of States. In 1939, production decreased about 12 percent from that of 1938. The price received increased about 28 percent, from $1.49 to $1.90. With improved demand conditions and production approximately the same for the new season, returns to growers should improve still further.

Intermediate celery is grown in the Eastern States, principally in New York and Michigan, and is marketed in July and August. It is the summer celery of the East. Production for the 5 years, 1918-22 averaged 388,000 crates. By 1939 production had increased to 1,370,000 crates. Growers have received approximately the same price through this period of time, however, and in 1939 received the second highest price since 1918. Summer is normally the period of lowest consumption of celery. It appears, therefore, that the trend towards the use of fresh vegetables at all times of the year has been especially beneficial to this seasonal group. The outlook is for continued moderate expansion of production without a sacrifice of earning power.

Late celery is grown principally in New York and Michigan, with other States scattered to the Pacific Coast also in this group. The crop is harvested in September and October principally, but large quantities go into storage and are sold mostly in November and December. Since 1928, production has fluctuated between 3 and 4 million crates, depending largely upon prices received. Production for the entire Late 1939 crop is indicated to be slightly

larger than in 1938. The first indications are that prices will also be low this season (1939), and if the planting reaction in these Late States follows its usual pattern production for the 1940 season will be reduced with a corresponding increase in prices received.

Celery: Acreage, yield, production, and farm price by regions, 5-year averages, 1918-37; annual, 1938-39

Year	Fall and Winter				Early and Second Early				Intermediate			
	Acreage	Yield	Production	Farm price	Acreage	Yield	Production	Farm price	Acreage	Yield	Production	Farm price
	Acres	Crt. 1/	1000 crt. 1/	Dol. per crt.1/	Acres	Crt. 1/	1000 crt. 1/	Dol. per crt.1/	Acres	Crt. 1/	1000 crt. 1/	Dol. per crt.1/
Average-												
1918-22	3,680	258	951	2.66	3,162	355	1,124	2.92	1,374	282	388	1.59
1923-27	4,956	219	1,084	1.83	5,776	318	1,835	2.56	2,484	261	647	1.76
1928-32	7,176	173	1,240	1.17	8,620	362	3,125	2.19	3,712	273	1,014	1.63
1933-37	7,368	180	1,323	1.53	10,216	322	3,286	1.95	4,286	248	1,064	1.60
1938	9,750	210	2,048	1.65	13,150	331	4,359	1.49	4,670	267	1,249	1.41
1939 2/	9,050	145	1,312	1.80	11,750	326	3,825	1.90	4,640	295	1,370	1.87
1940 2/	8,300											

Year	Late				Total			
	Acreage	Yield	Production	Farm price	Acreage	Yield	Production	Farm price
	Acres	Crt. 1/	1000 crt. 1/	Dol. per crt. 1/	Acres	Crt. 1/	1000 crt. 1/	Dol. per crt. 1/
Average-								
1918-22	7,378	248	1,829	1.58	15,594	275	4,292	2.17
1923-27	10,796	266	2,875	1.60	24,012	268	6,441	1.93
1928-32	13,114	289	3,791	1.23	32,622	281	9,170	1.60
1933-37	13,116	259	3,404	1.20	34,986	260	9,077	1.57
1938	13,980	301	4,212	.99	41,550	286	11,868	1.33
1939 2/	14,820	290	4,292		40,260	268	10,799	

1/ New York 2/3-size crate or equivalent, prices f.o.b. rough packed or equivalent.
2/ Preliminary, subject to revision.

Release date
November 14

THE OUTLOOK FOR SNAP BEANS FOR MARKET FOR 1940

Summary

The 1939 total production of snap beans for market broke all records, and the season average price to growers was higher than that of the year before, up to and including the intermediate crop. In view of the exceptionally large fall crop (of 1938) in southern Florida and the resulting low prices in that section, it appears probable that the fall plantings for the 1939-40 shipping season will be materially reduced. But the higher prices in other producing sections during 1939 probably will tend to stimulate plantings of snap beans in 1940, particularly in view of the prospective further increase of consumer purchasing power. However, any material increase over the very high record of 1938 (177,360 acres), coupled with possible better-than-average yields, might result in a crop so large that some could not be marketed.

The outstanding features of the snap-bean crop for the country as a whole during the last 21 years are the sharp increase of acreage, the general decrease in yield per acre, and the general decline in price to growers.

1939 Season Reviewed

The 1939 season for snap beans for market was noted for its record-breaking production, combined with generally higher prices to growers than in 1938. This unusual combination probably was the result of increased demand and higher purchasing power of consumers. Production in the fall areas (of 1938) was nearly double that of the season before, and returns to growers in those areas dropped sharply to a relatively low level, but in the later producing sections of the country prices registered advances over those of 1938 ranging from 3 cents to 43 cents per bushel.

Total 1938 acreage of snap beans for market reached an all-time high of 177,360 acres, and the 1939 acreage was reduced only slightly. Yields per acre were exceptionally large in Florida this year. Yields also exceeded those of 1938 in the early and second-early producing sections, but were somewhat disappointing in the intermediate and the first section of late States. Total United States commercial production of about 15,985,000 bushels in 1939 broke all previous records, but the prices to growers were well maintained at a general average for the United States of 95 cents per bushel (up to and including the intermediate States), compared with 92 cents for all States in 1938 and a 10-year (1928-37) average of $1.18 per bushel.

Regional Outlook

Fall States: The fall-crop acreage of snap beans for the 1939 shipping season in southern Florida was sharply increased to 18,000 acres, or 44 percent more than for the preceding season. Exceptionally large yields per acre resulted in a huge fall crop in Florida of 2,700,000 bushels, about double the production of the year before. Plantings of the fall crop (of 1938) in southern Texas were kept at 2,500 acres, and yields were below average. Only 88,000 bushels were harvested in that section. The average price to growers in these

two States declined sharply to only 70 cents per bushel, compared with $1.66 the year before. If this low price has the usual effect on growers' intentions to plant, it seems probable that the fall acreage for the 1940 shipping season will be materially reduced. Early October reports already indicate a possible reduction of about 10 percent.

Early States: Acreage of the winter and spring crops in Florida and the spring crop in California and Texas for the 1939 shipping season was reduced about 11 percent below that of 1938 to 54,200 acres. Because of higher yields per acre in Florida, however, the combined production in these three States increased slightly to 5,409,000 bushels. Prices to growers also advanced in all sections and averaged $1.25 per bushel, as against 98 cents in 1938 and a 10-year average of $1.69 per bushel. In view of this 25 percent increase in returns to growers, compared with 1938, it seems probable that the winter and spring acreage in Florida, Texas, and California will be slightly increased for the coming season.

Second-early States: Five Southern States (Louisiana, Mississippi, Alabama, Georgia, and South Carolina), growing a second-early crop of snap beans, reduced their 1939 acreage about 10 percent, but, with larger yields than in 1938, had a slightly larger crop, totaling 1,590,000 bushels. In spite of greater production, the 1939 average price to growers increased to 79 cents per bushel, compared with only 61 cents in 1938, but this was still 20 cents below the 10-year average price. It appears probable that growers will respond to these higher 1939 prices and increase their plantings somewhat in 1940.

Intermediate (1) States: An increase of about 3 percent over the 1938 plantings was made in the bean acreage of the first group of intermediate States (North Carolina, Virginia, Tennessee, and Arkansas) during 1939. Their total of 24,700 acres was 53 percent above the 10-year average (1928-37) figure. Lower yields, however, more than offset the acreage increase, and production in this group of States was 1,307,000 bushels, or 9 percent less than in 1938, but still 20 percent above average production. Prices increased over those of 1938 in Virginia and Arkansas, thus causing the average price to growers in this entire group of States to advance to 64 cents per bushel, compared with 61 cents in 1938 and a 10-year average of 85 cents. Since the acreage of snap beans in this first intermediate group is already very large, it is probable that no further increase will be made in 1940. The 1939 acreage, with average yields, probably would produce as large a crop as could be marketed.

Intermediate (2) States: The four States (Maryland, Delaware, New Jersey, and Illinois) in the second section of intermediate States reported a slight increase of acreage this year, but the average yield per acre was far below normal because of drought. Consequently, a relatively small 1939 crop crop of only 871,000 bushels of beans was harvested in this group, and prices to growers advanced, particularly in Maryland and New Jersey. The group average of 89 cents per bushel was one-fourth more than the 1938 price to growers and almost up to the 10-year average figure. These higher prices may encourage farmers to plant larger acreage in 1940. But, since the intermediate producing States meet severe competition from local or homegrown supplies in city markets, further increases in their plantings of beans seem inadvisable, especially if the yield per acre in 1940 happens to be more nearly normal than it was in 1939.

Intermediate (3) States: For the first time, this year's report on snap beans for fresh-market shipment includes a third section of intermediate States - northern Georgia, western North Carolina, and southwestern Virginia. These three areas reported a total of 7,250 acres this season, with probable yields of about 93 bushels per acre and a combined production of 676,000 bushels of beans, slightly over half the total being in North Carolina. Such a production would be slightly less than that harvested in these areas in 1938. Most of this crop moves to market by motor truck. With an indicated average price of only 55 cents per bushel to growers in 1939, it seems probable that this group of States will not make much change in its plantings next year. The tendency may be to reduce the acreage slightly.

Late (1) States: The first group of late States (Pennsylvania, New York Michigan, and Colorado) harvested a record crop of beans in 1938, and the average price to growers dropped to a relatively low level. Plantings for 1939 were reduced slightly; yields are indicated to be considerably below those of 1938, and present indications are for a production of only 1,392,000 bushels. But this would still be about 90 percent more than the 10-year average crop for this group. In 1938 the average price to growers was 83 cents per bushel. Returns for the 1939 crop will not be known until later. Any increase of plantings for 1940 seems inadvisable.

Late (2) States: Bean acreage in the second group of late States (South Carolina, North Carolina, Virginia, Maryland, New Jersey, Mississippi, Louisiana, and California) was increased slightly in 1938, and increased again in 1939. With yields per acre indicated to average about 98 bushels, this late crop would amount to 1,952,000 bushels, compared with 1,522,000 in 1938 and a 10-year average of 1,589,000 bushels. It is probable that the acreage will be reduced slightly in 1940.

Snap beans for market: Commercial acreage, yield per acre, production, and season average price per bushel received by growers, average 1928-37, annual 1936-39

Group of States	Average 1928-37	1936	1937	1938	Preliminary 1939
Acreage:	Acres	Acres	Acres	Acres	Acres
Fall, preceding yr.	14,980	14,900	21,300	15,000	20,500
Early (1)	18,210	29,100	28,900	30,000	30,000
Early (2)	28,830	30,600	23,400	30,600	24,200
Second-early	22,540	25,200	26,500	28,400	25,500
Intermediate (1)	16,170	21,300	24,700	24,000	24,700
Intermediate (2)	12,110	13,050	11,800	11,500	11,700
Intermediate (3)	---	---	---	7,350	7,250
Late (1)	5,810	9,500	10,560	10,690	10,400
Late (2)	17,280	21,450	19,550	19,820	19,990
Total	135,930	165,100	166,710	177,360	174,290
Yield per acre:	Bushels	Bushels	Bushels	Bushels	Bushels
Fall, preceding yr.	88	87	94	98	136
Early (1)	89	60	62	85	90
Early (2)	85	89	94	90	112
Second-early	61	53	45	54	62
Intermediate (1)	67	44	42	60	53
Intermediate (2)	97	95	93	90	74
Intermediate (3)	--	--	--	94	93
Late (1)	127	91	126	161	134
Late (2)	92	81	96	77	98
Average	83	72	75	83	92
Production:	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.
Fall, preceding yr.	1,313	1,295	2,006	1,475	1/ 2,738
Early (1)	1,555	1,746	1,792	2,550	2,700
Early (2)	2,462	2,710	2,195	2,753	2,709
Second-early	1,382	1,328	1,191	1/ 1,538	1/ 1,590
Intermediate (1)	1,090	942	1,047	1,433	1,307
Intermediate (2)	1,176	1,245	1,095	1,037	1/ 871
Intermediate (3)	---	---	---	691	676
Late (1)	740	867	1,332	1,726	1,392
Late (2)	1,589	1,747	1,886	1,522	1,952
	11,307	11,880	12,544	14,725	15,985
Price per bushel:	Dollars	Dollars	Dollars	Dollars	Dollars
Fall, preceding yr.	1.27	1.28	1.00	1.66	.70
Early (1)	2.19	1.65	1.65	1.20	1.28
Early (2)	1.37	1.32	1.76	.78	1.21
Second-early	.99	1.19	1.25	.61	.79
Intermediate (1)	.85	1.12	.93	.61	.64
Intermediate (2)	.91	.89	1.04	.71	.89
Intermediate (3)	--	--	--	.65	.55
Late (1)	.88	1.05	.95	.83	--
Late (2)	1.02	.84	1.01	.94	--
Average	1.18	1.20	1.24	.92	--

1/ Includes some quantities not harvested on account of market conditions.

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THE TOMATO OUTLOOK FOR 1940

Summary

The prospects are for an increase of plantings and production of tomatoes for the fresh market in 1940. Increases in the acreage planted are expected in those areas where substantial reductions in acreage took place in 1939. Available data for 1939 indicate that prices to growers were higher than in 1938. The acreage planted in 1940 will probably be increased over that harvested in 1939 in the fall, second early, and late (2) seasonal production areas. In the two sections of the early States, intermediate and late (1) areas, no relative change of any considerable magnitude is expected in the acreage planted next year as compared with 1939.

Review of the 1939 Season

The United States acreage of tomatoes for the fresh market in 1939 was slightly lower than that in 1938 when the record production brought extremely low prices. The total 1939 acreage available for harvest, the second largest on record, was approximately 4 percent smaller than in 1938, but about 25 percent greater than the 10-year 1928-37 period. Yields for 1939 were approximately equal to those obtained during the previous year and to the 10-year average. Preliminary estimates through the intermediate seasonal production areas indicate that the 1939 farm prices were nearly 40 percent higher than in these areas during 1938, and slightly higher than those obtained on the average during the 10-year period 1928-37.

The reduction in acreage in 1939 compared with 1938 resulted largely from decreases in the fall, second early, and late (1) seasonal producing areas. The decrease in production resulted chiefly from declines in the second early and two sections of the late States. The largest expansion in acreage occurred in the early (1) area, while the early (2) States showed the largest increase in production.

The 1939 production in the fall States increased substantially as a result of higher yields although acreage was reduced, while that in the early (1) area decreased slightly in spite of increased acreage since yields, although above average, were sharply lower than in 1938. Both acreage and production were higher in the early (2) States than in 1938, and lower in the second early area. In the intermediate and late (1) States the acreage was decreased slightly. Production, however, increased in the intermediate and decreased in the late (1) area. The production in the late (2) area decreased more than one-third as a result of both lower acreage and lower yields.

Outlook by Regions

Fall and early States

Although the 1939 production of fall tomatoes (the fall crop supplies the earliest new-crop movement, starting in fall of preceding year) in Florida and

Texas was about 60 percent greater than in the previous year, prices received by growers declined only slightly. With the acreage in 1939 substantially lower than in the previous year there will undoubtedly be some tendency for growers to increase this acreage in 1940 unless weather conditions during planting time are unfavorable.

The 1939 acreage of spring-crop tomatoes in South Florida was increased sharply over the previous year, from 15,500 acres to a new high of 18,000 acres. Production decreased slightly as the yields, although above average, were sharply lower than in 1938. The increased price received for the 1939 crop of $2.40 per bushel in comparison with $1.70 per bushel in 1938, more than offset the reduced production, and the cash income from the 1939 crop was 40 percent greater than in the previous year. No decrease in the acreage of early (1) tomatoes in south Florida for 1940 is anticipated, and an increase is possible.

In other producing districts of Florida, in the Lower Valley of Texas, and in the Imperial Valley of California, average prices of $2.14 per bushel received by growers for the 1939 crop were substantially higher than the near-record low price of $1.47 per bushel received for the 1938 crop. As the production in these States was approximately 12 percent greater than in the previous year, the cash income from the crop increased substantially. As a result, no decrease from the record high acreage in 1939 is anticipated for the 1940 season.

Imports of fresh tomatoes from Mexico and Cuba for the last five seasons, chiefly during the period from December through May, have averaged approximately 4,000 cars annually. Domestic carlot shipments during the same months have averaged in excess of 10,000 cars during the last 5 years. More than 40 percent of these domestic shipments, however, were made during the month of May. Preliminary figures from the trade indicate that imports from Mexico during the 1939-40 season will be sharply lower than in the past several seasons.

Second early tomatoes

The crop of tomatoes in the second early States (Georgia, Louisiana, Mississippi, South Carolina, and other Texas) in 1939 was approximately 20 percent less than in the previous year, and the prices received by growers of $1.24 per bushel were substantially greater than the extremely low price of $0.73 per bushel received for the 1938 crop. The cash income from the crop was considerably larger than in 1938. Prices to growers in all States in this group, except Mississippi, increased sharply over those received during the previous year. The acreage in these States (except Mississippi) has been increasing over the past several years. It is anticipated, therefore, that these high prices will result in an expansion of acreage, perhaps even offsetting the sharp reduction that occurred in 1939.

Intermediate States

The acreage and production in 1939 in the intermediate States (North Carolina, Virginia, Maryland, New Jersey, Union County of Ohio, Illinois, Tennessee, Arkansas, Missouri, and part of California) were somewhat larger than in 1938. Prices received by growers increased 11 cents per bushel, from

88 to 99 cents. The acreage and production in this group has not shown much change during the last several years and no large change from the acreage planted by producers in 1939 is expected for the 1940 season.

Late States

In the first section of late States (comprised of New York, Pennsylvania, Delaware, Kentucky, other Ohio, Indiana, other Illinois, Michigan, Iowa, Colorado, Utah, Washington, Oregon, and the northern district of California)the acreage and indicated production in 1939 were somewhat lower than in 1938. The acreage of tomatoes in these States has been relatively stable for several years, and the acreage planted in 1940 is expected to show little change.

In the southern district of California (the second section of the late States), the acreage harvested in 1939 decreased sharply from the previous year Some expansion in acreage in this area is probable in 1940.

Acreage, production, and farm price of tomatoes for market, 1928-37 average and years 1936-39

Group	10-yr. av. 1928-37	1936	1937	1938	1939 8/
	1	2	3	4	5
			Acreage		
	Acres	Acres	Acres	Acres	Acres
Fall 1/	5,860	7,300	10,700	9,000	7,300
Early (1) 2/	12,750	11,000	17,200	15,500	18,000
Early (2) 3/	28,150	35,200	27,300	41,000	42,600
Second Early 4/	39,680	41,300	49,800	62,400	53,900
Intermediate 5/	42,360	47,130	50,500	48,500	48,300
Late (1) 6/	32,550	35,050	36,400	35,800	35,200
Late (2) 7/	8,310	7,150	7,000	10,000	7,100
Total All States	169,360	184,130	198,900	222,200	212,400
			Production		
	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.	1,000 bu.
Fall	356	645	522	350	556
Early (1)	1,448	1,188	1,617	2,945	2,880
Early (2)	2,048	2,861	2,146	3,562	4,013
Second Early	3,528	3,297	3,133	4,088	3,325
Intermediate	5,676	6,836	6,901	6,350	6,628
Late (1)	4,744	5,049	5,983	5,774	5,315
Late (2)	907	930	1,155	1,550	958
Total All States	18,707	20,806	21,457	24,619	23,675
			Farm price per bushel		
	Dollars	Dollars	Dollars	Dollars	Dollars
Fall	2.29	2.07	1.90	2.59	2.46
Early (1)	2.68	2.90	2.65	1.70	2.40
Early (2)	2.29	2.12	2.32	1.47	2.14
Second Early	1.34	1.19	1.49	0.73	1.24
Intermediate	0.93	0.94	0.91	0.88	0.99
Late (1)	0.87	0.86	0.78	0.72	9/
Late (2)	1.57	1.75	1.50	1.45	9/
Total All States	1.33	1.30	1.29	1.06	9/

1/ Florida, Texas (acreage planted fall of previous year).
2/ Florida (south).
3/ California (Imperial Valley), Florida (other), Texas (lower valley).
4/ Georgia, Louisiana, Mississippi, South Carolina, Texas (other).
5/ Arkansas, California, Illinois (Union County), Maryland, Missouri, New Jersey, North Carolina, Ohio (southeast), Tennessee, Virginia.
6/ California (North District), Colorado, Delaware, Illinois (other), Indiana, Iowa, Kentucky, Michigan, New York, Ohio (other), Oregon, Pennsylvania, Utah, Washington.
7/ California (South District).
8/ 1939 data, except acreage, preliminary.
9/ Not available.

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THE OUTLOOK FOR ONIONS FOR 1940

Summary

The 1940 plantings of onions for the entire United States are expected to about equal the area harvested in 1939. Prospective increases in the early States will probably be offset by decreases in some of the intermediate and late States. Assuming average yields and no change in acreage, a production in 1940 about 8 percent below that of 1939 would result. It would, however, be 11 percent greater than the 1928-37 average production.

Owing to exceptionally high yields in the late producing States, the 1939 production of onions in the United States was near the largest of record. Although the acreage for harvest was above the 1928-37 average, it was the smallest since 1934. The decrease in the area harvested in 1939, compared with other recent years, was the result of dry weather in south Texas which prevented growers from planting all the acres intended and caused some planted acreage to fail.

Early Bermuda Onions

On November 1, 1938, growers of Bermuda-type onions in the early producing areas of California, Louisiana, and Texas, indicated that they intended to plant an acreage for harvest in 1939 about equal to the 64,080 acres grown in 1938. Dry weather in south Texas, where the major part of the early Bermuda acreage is located, prevented growers from putting out as large an area as they had intended and plantings totaled only 58,950 acres. Lack of rainfall continually harassed the crop during the growing season in some localities in Texas so that considerable abandonment of acreage occurred, and only 50,900 acres remained at harvest time. Yields on the acreage actually harvested, although somewhat below the 1928-37 average, were much higher than those obtained in 1938 and the highest since 1932. The production finally obtained was but 4 percent below that of 1938 and 6 percent below the 1928-37 average.

Only a little lower price per hundredweight was received for the 1939 crop than for the crop of 1938. Because of the slightly lower average price in 1939, together with the probability of a large supply of late storage onions being carried over into the beginning of the marketing season for the 1940 early crop, it seems probable that growers will wish to plant an acreage in 1940 only slightly smaller than was intended to be planted in 1939. But most of the seed for the Bermuda acreage in both south and north Texas is imported from the Canary Islands and the seed crop this year is reported to be relatively light. Available supplies of new seed, plus old seed carried over, are not believed to be sufficient to plant an acreage any larger than was planted a year ago. Such an acreage in the early States would be 10 percent greater than the acreage actually harvested in 1939.

Since 1930, a large part of the acreage of early Bermuda onions in Texas has been shifted from high-yielding irrigated land to relatively

low-yielding nonirrigated land. As a result, yields of onions in the early group of States for the period 1931-39, inclusive, have averaged only 40 sacks per acre compared with an average of 84 sacks per acre for the 1921-30 period. If an acreage 10 percent greater than that harvested in 1939 is grown for harvest in 1940 and if yields equal to the 1931-39 average are obtained, the resulting production will be 8 percent in excess of the 1939 crop, 2 percent above the 1928-37 average production, and 32 percent below the record production of 1936 when an unprecedented tonnage was abandoned in fields because of low price.

Intermediate (1) Onions

The acreage of onions in north Texas and the intermediate producing section of California in 1939 was increased by 14 percent over the acreage of the previous season. All of this increase was in north Texas and represented an attempt on the part of the growers to compensate for the decreased acreage in south Texas due to drought, to expand into new producing sections, and to lengthen the marketing season by planting a considerable acreage of Spanish-type onions which mature somewhat later than the predominant Bermuda type.

Yields were fairly satisfactory and the production was above average. Shipments from this production started as the early Bermuda season was ending and continued into the marketing period for the intermediate (2) onions from more northerly States. Prices were low and difficulty was experienced in marketing part of the crop. It is probable that growers will be inclined to reduce their acreage in 1940. A decrease of from 10 to 15 percent, to an acreage level about equal to that of 1938, is a reasonable assumption. On three previous occasions, the production in this group has exceeded that of 1939, but in two instances prices received were unprofitably low. In the third instance returns were satisfactory because of a light production in south Texas.

Intermediate (2) Onions

The acreage of onions in the intermediate (2) States (N.J.; Va.; Ky.; Okla.; Iowa, Scott County; Wash., Walla Walla County) in 1939 was above the 1928-37 average acreage, but low yields were harvested and the final production was the lowest on record. The price per hundredweight received by growers was about the same as for the 1938 crop. No great change in acreage is expected for 1940. If plantings in 1940 are held at the 1939 level and average yields are obtained, a production somewhat greater than the 1928-37 average would result. Such a production, however, would be below the large crop of 1935 when returns to growers were fairly satisfactory.

Late States

The 1939 acreage of onions in the late States was practically the same as the previous high acreage of the 1935 season. Growing conditions were favorable in most areas, with resultant yields and production the highest of record. The quality of the crop was uniformly good. Harvesting was completed earlier than usual with a minimum of weather damage, and the onions should store well. Prices were relatively low at harvest time, and it is probable that the average price for the entire marketing season will be below the price for the 1938 crop.

In the Eastern group of late States, the acreage in recent years has been above the 1928-37 average owing to an expansion in plantings on the muck lands of New York. The price received for the 1939 crop may serve to check this expansion. But the effect on per acre returns from the low price per hundredweight will be offset to a considerable extent by the exceptionally high yield per acre. Consequently, little reduction in acreage for 1940 appears probable in the Eastern States. With average yields, this would result in a production 35 percent above the 10-year average and above the production of any season except 1936 and 1939.

Acreage in 1939 in the Central group of late States was well below the 1928-37 average acreage. Comparatively light plantings in Indiana and Ohio during recent seasons have not been offset fully by increased plantings in Michigan and Minnesota. The expansion of acreage in Michigan, the most important State in this group, probably will be checked by the low returns from the 1939 crop. Thus an acreage in 1940 about equal to that of 1939 appears probable for the Central States. Despite relatively good yields, the 1939 production for the group was below the 1928-37 average production. With average yields in 1940 from an acreage about equal to that of 1939, excessive supplies are not likely in this area.

A considerable increase in plantings in the Western States, together with high yields, resulted in a record production in 1939. Competition with large quantities of high-quality onions in the Central and Eastern States adjacent to important markets presents a serious marketing problem to Western growers. The difficulties encountered in disposing of the 1939 crop probably will result in a reduction of acreage in 1940. A decrease in plantings of as much as 15 percent would still mean an acreage above the 1928-37 average, but with average yields the resultant production would be only 5 percent above the 10-year average and somewhat below the production of most recent seasons.

Onions: Acreage, production, and farm price

Group of States	10-year average 1928-37	1935	1936	1937	1938	Indicated 1939
	Average					
	Acres	Acres	Acres	Acres	Acres	Acres
Early (Bermuda) 1/	46,580	58,650	82,470	55,730	64,080	50,900
Intermediate (1) 2/	11,790	19,250	28,800	20,500	13,600	15,500
Intermediate (2) 3/	6,430	8,350	8,600	6,000	5,810	6,690
Late:						
Eastern 4/	12,780	14,780	15,900	17,610	17,530	17,310
Central 5/	24,710	26,900	22,580	19,530	20,900	21,350
Western 6/	15,250	15,800	15,420	15,190	16,110	18,860
Total, late	52,740	57,480	53,900	52,330	54,540	57,520
Total, all States	117,540	143,730	173,770	134,530	138,030	130,610
	Production					
	1,000 sacks	1,000 sacks	1,000 sacks	1,000 sacks	1,000 sacks	1,000 sacks
Early (Bermuda) 1/	2,202	1,875	3,292	2,129	2,168	2,076
Intermediate (1) 2/	807	1,372	1,353	1,272	768	1,008
Intermediate (2) 3/	874	1,070	838	886	837	677
Late:						
Eastern 4/	2,831	3,101	4,237	3,283	3,761	4,539
Central 5/	3,912	3,560	4,431	3,328	3,422	3,878
Western 6/	3,171	3,511	3,066	3,888	3,974	5,034
Total, late	9,914	10,172	11,734	10,499	11,157	13,451
Total, all States	13,797	14,489	17,217	14,786	14,930	17,212
	Price per 100-pound sack 7/					
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Early (Bermuda) 1/	1.68	2.72	.76	1.59	1.25	1.18
Intermediate (1) 2/	1.18	1.57	.79	.91	1.47	.73
Intermediate (2) 3/	1.34	1.21	1.13	1.34	1.17	1.16
Late:						
Eastern 4/	1.31	1.34	.94	1.49	1.14	--
Central 5/	1.24	1.14	.81	1.32	1.14	--
Western 6/	1.19	1.09	.79	1.16	.91	--
Total, late	1.25	1.18	.85	1.31	1.06	--
Total, all States	1.31	1.42	.85	1.31	1.11	--

1/ Louisiana; Texas; California.
2/ Texas, north; California.
3/ New Jersey; Virginia; Kentucky; Oklahoma; Iowa, Scott County; Washington, Walla Walla County.
4/ Massachusetts; New York; Pennsylvania.
5/ Ohio; Indiana; Illinois; Michigan; Wisconsin; Minnesota; Iowa, other.
6/ Idaho; Colorado; Utah; Nevada; Washington, other; Oregon; California.
7/ Average price received by growers for crop-marketing season.

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THE WATERMELON OUTLOOK FOR 1940

Summary

Total United States production of watermelons in 1940 will probably exceed the short crop of 1939 by from 5 to 30 percent. Larger crops are anticipated in each of the early, second-early, and late State areas. Although these expectations can be realized by means of the probable yield increases alone, an acreage expansion is in prospect in all areas. However, the probable increase in the level of consumer income should tend to cushion the price decline which the increased supplies are likely to cause, and total returns to growers may exceed those of 1938 and 1939, despite a generally lower level of unit prices.

Review of the 1939 season

The total United States acreage planted to watermelons has remained remarkably stable during the last three seasons. The variation from the 261,140 acres planted in 1939 has been less than 1 percent. This acreage is about 3 percent above the 10-year 1928-37 average. Total production on the 1939 acreage, however, was approximately 10 percent below the 1928-37 average of 68,000,000 melons, as disease and weather damage made heavy inroads on yields in the early and second-early States. Indications are that the late-producing area harvested its largest crop of recent years, continuing the upward trend of production in these States.

With some exceptions, 1939 prices to growers were substantially above the levels prevailing in most States in 1938, owing both to the generally reduced supply situation and to improved demand conditions in consuming centers. Improvement was most marked in the heavy-producing States of the Southeast, which obtained relatively low prices for their watermelons in 1938. Total 1939 cash income to growers in the early and second-early States, however, shows only a moderate increase over that received in 1938, because of the substantial decline in production.

Outlook by Regions

Early States

It appears that Florida growers may increase their plantings of watermelons in 1940, possibly as much as 10 percent. The improvement of prices in 1939 over those in the preceding year, together with the prospect of a relatively higher-priced market next season, is likely to stimulate an acreage expansion of 10-15 percent. An even greater increase in production is in prospect provided average yield per acre is realized. Not much change in acreage is expected in the Imperial Valley of California, where 6,000 acres were planted in 1939, and a larger yield of melons increased production slightly over that in 1938, despite a reduction in plantings of 1,000 acres. Prices to growers were accordingly somewhat lower. For the two early areas combined, the prospect for 1940 appears somewhat more favorable to growers, for prices are not expected to decline proportionally with

the probable increased production.

Second early States

The season of 1939 was characterized by widely divergent results to growers in the eight States comprising the second-early region (Alabama, Arizona, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, and Texas). In Georgia, the heaviest producing State of the group, total cash returns from the watermelon crop were seriously reduced, even in relation to the low levels of farm value reported in 1938. Owing to disease infestation and unfavorable weather, the yield of melons per acre was the poorest on record. Total production declined more than 50 percent from that of 1938, and represented only slightly more than one-third of the 1928-37 average. Despite an approximate 75-percent increase over the prices received in 1938, aggregate farm income to watermelon growers in Georgia was about one-fourth less than in the previous year. Texas growers, also, obtained very poor yields per acre, and this fact, coupled with a reduction in acreage, accounted for a 30-percent decrease in production. The 1939 average farm price in that State, however, reflected the influence of this moderate supply and a substantial rise in unit prices of watermelons maintained total cash income at the levels of recent years. In the other important producing States of the second-early region, crop yield and production compared much more favorably with the 1928-37 average. Prices to growers were higher than in 1938 in the majority of these States.

On the basis of the foregoing review of results in the 1939 season, it appears that the several States last considered are likely to make a net expansion of acreage in 1940. Mississippi and Arizona may be exceptions to this general tendency, but these possible decreases are expected to be more than counter-balanced by increases in the other areas, particularly in North Carolina and Louisiana, where growers experienced a very successful season in 1939. The outlook for Georgia and Texas also points toward the probability of larger acreages in 1940 and an almost certain increase in production over that of 1939, ranging from 20 to 100 percent, and possibly even higher.

This forecast of expanded acreage is predicated on the theory that the determining factor in watermelon plantings in these States next season is likely to be the improved unit price to growers in 1939, rather than their cash income per acre - which actually declined. A larger production is possible with no increase in plantings, or even a slight decrease, provided a near-average yield is obtained. For the second-early group of States as a whole, it appears, therefore, that some increase in acreage and a substantial increase in production may be expected in 1940. The probable effect of acreage expansion and increased production in 1940 in the second-early group of States will be a decline in the general level of prices, although total returns to growers may be somewhat larger than in 1939. Tending to retard the expected price slump is the steadily increasing level of consumer income which should stimulate the demand of watermelons if carried through the summer months of 1940. But the influence of this demand factor is not likely to be sufficient to offset the effect on prices of the probable large increase in supplies.

Late States

The upward trend in the acreage of the late States since 1927 was accelerated during the 1939 season by an 8-percent increase in plantings over 1938. Planted acreage totaled 73,240 acres in the following States in 1939: Arkansas, California, Colorado, Delaware, Illinois, Indiana, Iowa, Maryland, Missouri, New Jersey, Oklahoma, Oregon, Virginia, and Washington. This total compares with the 10-year 1928-37 average of 54,000 acres. With yield per acre also in excess of the 10-year average, the total 1939 production of the late group of States was over 27,000,000 melons. Thus, for the first time in the history of the watermelon industry, the crop of the late States, although produced on less than half the combined planted acreage, exceeded that of the second-early group. Information regarding prices and returns to growers in the late States during 1939 is not available at this time, but the general level is expected to approximate the average for last season, which was equal to the 1928-37 average. The light supplies available from the second-early States are considered to have left a better market for late melons than otherwise would have existed.

It is important that watermelon growers in the late States understand the economic significance of the unusual supply situations which obtained in 1938 and in 1939. In each of these seasons, the second-early melon crop was both advanced in harvest time and light in volume so that the late States found virtually an empty market for their product and secured correspondingly good prices. The success that has attended the expansion of production in the late States in these two seasons unfortunately may encourage growers to continue to extend their acreage in 1940. Assuming this will be the case, and that an average yield per acre will be obtained - following a normal season in the second-early States, both in point of time and in size of crop - it appears probable that growers in the late States will find themselves with surplus supplies in 1940, and are likely to experience a serious decline in cash income per acre from the levels of the two preceding seasons.

Watermelons: Commercial acreage, production, season average price received by farmers, and value, by regions, average 1928-37 and annual 1936-39

Item and region	Average 1928-37	1936	1937	1938	Preliminary 1939
	1	2	3	4	5
ACREAGE:	Acres	Acres	Acres	Acres	Acres
Early	34,470	23,500	27,500	29,500	27,700
Second-early	160,370	169,200	170,100	164,800	160,200
Late	54,000	63,900	65,740	68,650	73,240
Total	248,840	256,600	263,340	262,950	261,140
PRODUCTION:	1,000 melons	1,000 melons	1,000 melons	1,000 melons	1,000 melons
Early	1/ 12,456	8,942	1/ 10,850	1/ 10,265	8,995
Second-early	1/ 36,378	1/ 33,826	1/ 37,069	1/ 33,308	26,214
Late	1/ 19,185	20,787	1/ 25,815	26,356	2/ 27,355
Total	1/ 68,019	1/ 63,555	1/ 73,734	1/ 69,929	2/ 62,564
FARM PRICE:	Dollars per 1,000	Dollars per 1,000	Dollars per 1,000	Dollars per 1,000	Dollars per 1,000
Early	178	170	178	156	172
Second-early	102	128	82	95	122
Late	108	112	108	108	3/
U. S. average	118	129	106	109	3/
FARM VALUE:	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars
Early	2,168	1,521	1,860	1,498	1,547
Second-early	3,524	4,305	2,863	2,850	3,098
Late	2,041	2,328	2,770	2,846	3/
Total	7,733	8,154	7,493	7,194	3/

1/ Includes some quantities not harvested on account of market conditions and excluded in computing farm value.
2/ Indicated, September 21, 1939.
3/ Report due November 10, 1939.

Early States: Florida, and Imperial Valley of California.

Second-early States: Georgia, South Carolina, North Carolina, Alabama, Mississippi, Texas, and Arizona.

Late States: Virginia, Maryland, Delaware, New Jersey, Indiana, Illinois, Iowa, Arkansas, Missouri, Oklahoma, Colorado, Washington, Oregon, and California.

Release Date
November 14, A.M.

THE OUTLOOK FOR CANNING CROPS FOR 1940

Summary

The planted acreage and production of 11 truck crops for manufacture in 1939 was about 20 percent below that of 1938. This decline, which was to be expected in view of the well-defined production cycle in these crops, will be reflected in an equivalent reduction in the total pack of major canned vegetables. Because of the record carry-over of canned vegetables at the beginning of the 1939-40 season, however, total supplies, though probably about 12 percent below the high level of 1938-39, exceed the recent 5-year average consumption.

Total supplies of processed vegetables available for consumption during the 1939-40 season are considerably less than the unusually large supplies of the last two seasons but current wholesale prices show appreciable improvement over those of a year ago. If prices at which canners offer to contract acreage maintain their usual relationship to wholesale prices of the canned products during December and January, and if the present trend of such prices continues into those months, it is probable that the contract prices received by growers for their 1940 acreage will be generally above those of 1939.

Even though consumption of canned and frozen vegetables during 1939-40 is no greater than average, the stocks in the hands of canners and processors at the beginning of the 1940-41 season will be appreciably below average. Consequently, substantial increases in the acreages of most truck crops for manufacture in 1940 will be required to cover average consumption requirements in 1940-41 and provide average carry-overs. For the 4 major crops, green peas, snap beans, sweet corn and tomatoes, increases in acreage of 28, 12, 50 and 28 percent, respectively, should under average growing conditions provide a tonnage sufficient for this purpose.

The tonnage of tomatoes for manufacture in 1939 was slightly larger than in 1938 as compared with a decline of about 20 percent for canning crops in general, and the combined canned pack of tomatoes, pulp and juice for 1939 is likely to be about the same as last year. The acreage and production of California asparagus for manufacture in 1939 also ran counter to the general trend, with planted acreage about 6 percent higher than in 1938 and production about 7 percent higher. The total canned pack of asparagus, in 1939, however, was only about 4 percent larger than last year. Although the planted acreage of lima beans followed the general movement and declined 13 percent from 1938 to 1939, high yields resulted in a 1939 production slightly above that of last year. With tomatoes, asparagus, and lima beans excluded, the average decline in the planted acreage of the remaining 8 crops in 1939 compared with 1938 was about 29 percent, and the average decline in production about 36 percent.

Principal canned vegetables: General statistics, average 1928-37 and annual 1934-35 to 1939-40

Year	Carry-over 1/	Pack 2/	Imports 3/	Total supply	Exports and shipments 4/	Apparent domestic disappearance
	1,000 cases - No. 2 basis					
Average 1928-37	10,141	82,911	2,943	95,995	1,064	84,790
1934-35	4,162	75,253	2,570	82,285	950	78,080
1935-36	3,255	106,287	2,393	111,935	1,077	102,888
1936-37	7,970	94,810	2,057	104,837	956	97,459
1937-38	6,422	117,262	1,971	125,655	1,074	108,609
1938-39	15,972	103,544	2,464	121,980	865	98,830
1939-40 5/	22,285	82,720				

1/ Asparagus, snap beans, sweet corn, green peas, tomatoes, spinach. 2/ Same as in carry-over, plus beets, pumpkins and squash, tomato pulp, and juice. 3/ Tomatoes: Usually account for 90 percent of total. 4/ Asparagus, sweet corn, peas, tomatoes. 1938-39 shipments estimated as same as 1937-38. 5/ Preliminary.

Release Date
November 14, A. M.

THE OUTLOOK FOR SWEET CORN FOR MANUFACTURE FOR 1940

Summary

To provide enough canned sweet corn to meet average consumption in 1940-41 it will be necessary to plant approximately 362,000 acres of sweet corn for manufacture, or an increase of about 50 percent over the planting in 1939. Assuming average yields, a pack of 17 million cases of 24 No. 2 cans could be packed from this acreage. A pack of this size plus a carry-over of 3.9 million cases from the 1939-40 season would assure a supply of 21 million cases, enough to meet normal disappearance and leave an average carry-over of 3 million cases for the 1941-42 marketing season. The supply (pack plus carry-over) in the current season is approximately 21.8 million cases, which is 3.2 million cases below the record supply of last season.

Sweet corn for canning: Acreage, production, supply, disappearance, and prices

Marketing season August 1 to July 31	Planted acreage	Production for canning	Average price to growers	Supply of canned corn (pack plus carry-over)	Disappearance from canners' hands	Wholesale price canned corn (f.o.b. Midwestern factories)
	Acres	Tons in husk	Ton	1,000 cases No. 2's	1,000 cases No. 2's	Per dozen No. 2 cans
1932-33	166,750	387,200	$ 7.50	16,658	14,158	$0.574
1933-34	208,440	394,300	8.01	12,693	11,393	0.758
1934-35	323,590	498,000	8.46	12,568	12,388	0.998
1935-36	418,990	859,900	9.31	21,651	20,821	0.694
1936-37	443,720	606,700	10.30	15,451	14,673	0.960
1937-38	461,850	978,500	11.56	24,319	19,675	0.676
1938-39	360,370	880,100	9.98	25,114	17,763	0.614
1939-40 1/	240,850	593,900	8.45	21,851	---	2/ 0.700

1/ Indicated. 2/ September 1939.

1939 Pack Below the 10-Year Average

Preliminary estimates place the 1939 pack of canned sweet corn in the neighborhood of 14.5 million cases, or about 6 million cases below the 1938 pack and 1.9 million cases below the 1929-38 10-year average. The large packs in both 1937 and 1938 served to pyramid the stocks in canners' hands until on August 1, 1939, the carry-in amounted to 7,351,000 cases, which was 4,338,000 cases above the average carry-over stocks of 3,013,000 cases for the last 10 years. Added to the 1939 pack, the 7,351,000 case carry-in made the supply on hand as of August 1, 1939, total approximately 21.9 million cases. This supply was 3.2 million cases

below the record of 25.1 million cases in 1938-39, and 2.9 million cases above the average for the 10 marketing seasons from 1929-30 to 1938-39.

Prices of Canned Corn

The record high supplies of canned sweet corn in 1938-39, together with the low consumer income, depressed prices for canned corn during the 1938-39 marketing season. The price of mid-western standard evergreen corn averaged 61.4 cents per dozen No. 2 cans for the season, as compared with 62.1 and 57.4 cents in the depression years of 1931 and 1932, and the average of 77.4 cents for the 10 years from 1929 to 1938. Quotations in September 1939 averaged 70 cents per dozen No. 2 cans, as compared with an average of 60 cents per dozen in September of last year.

1940 Carry-over Estimated at Approximately Four Million Cases

The disappearance from canners' hands during the last four marketing seasons has averaged about 18.2 million cases, while the disappearance for the 10 seasons from 1929-30 to 1938-39 averaged 15.9 million cases. Since 1921-22 the disappearance exceeded 19 million cases in only 1935-36 and 1937-38. With increased consumer income for the 1939-40 season, the disappearance during 1939-40 probably will approximate 18 million cases. With such a disappearance the carry-out as of July 31, 1940, will be in the neighborhood of 4 million cases, or a million cases more than the 10-year average.

Grower Prices

Prices to growers averaged $8.45 per ton for the 1939 crop, as compared with the $10.25 per ton average for the 10 years from 1929-38 and $9.98 per ton in 1938. Cash income from sweet corn for manufacture in the past has shown some relationship with planted acreage, with the greater returns going to farmers when the planted acreage was increased. If the acreage in 1940 is increased, the returns to growers will probably show a corresponding gain.

Yields

Yields per acre in 1938 and 1939 were 2.56 and 2.47 tons per acre, respectively (the highest yields since 1925 and 1926), while the average for the last 3 years has been 2.41 tons. In 1934 and 1936, yields were only 1.73 and 1.63 tons, respectively, because of the effects of drought in these years. Assuming yields in 1940 equal to the 1930-39 10-year average, corn packers may expect about 2.10 tons per acre.

A 21 Million Case Supply Desirable for 1940-41

With a probable carry-over from the 1939-40 marketing season of 3.9 million cases, a pack of slightly more than 17 million cases will be necessary to assure a supply of 21 million cases for 1940-41. A supply of this amount is desirable as it allows for a disappearance of 18 million cases, the average of the four seasons from 1935-36 to 1938-39. With about a 17 million case pack and an 18 million case disappearance, the stocks on canners' hands as of July 31, 1941 will

be about 3 million cases. Such a carry-over is equal to the 1929-38 10-year average and is one that is not considered burdensome by the industry.

Increased Planted Acreage Desirable for 1940

A pack of 17 million cases will require approximately 705,000 tons of sweet corn. With yields at 2.10 tons per acre this will mean about 335,700 harvested acres for canning needs. An additional 3,600 harvested acres will be necessary for quick freezing. Allowing 6.3 percent of the planted acreage for average acreage abandonment, plantings of 362,100 acres will meet the industry needs. Plantings of this amount represent a 30.4 percent increase over 1939.

Sweet corn for Manufacture
(In thousand cases - basis 24 No. 2 cans)

Marketing season ending July 31	Pack	Carry-over	Supply of domestic sweet corn	Stocks at end of season	Disappearance from canners' hands	Exports	Apparent domestic consumption of American sweet corn	Imports	Apparent domestic consumption of all sweet corn	Wholesale price per dozen No. 2's standard f.o.b. midwestern factories
										Dollars
1921-22	8,843:	3,040:	11,883:	230 :	11,653:	-- :	11,653:	-- :	11,653:	.879
1922-23	11,419:	230:	11,649:	110 :	11,539:	96 :	11,443:	-- :	11,443:	.858
1923-24	14,106:	110:	14,216:	70 :	14,146:	178 :	13,968:	-- :	13,968:	.965
1924-25	12,131:	70:	12,201:	240 :	11,961:	168 :	11,793:	-- :	11,793:	1.415
1925-26	24,320:	240:	24,560:	5,820 :	18,740:	194 :	18,546:	-- :	18,546:	.933
1926-27	19,069:	5,820:	24,889:	8,900 :	15,989:	171 :	15,818:	-- :	15,818:	.834
1927-28	10,347:	8,900:	19,247:	3,750 :	15,497:	156 :	15,341:	-- :	15,341:	.888
1928-29	14,497:	3,750:	18,247:	3,230 :	15,017:	297 :	14,720:	-- :	14,720:	.892
1929-30	17,487:	3,230:	20,717:	3,250 :	17,467:	307 :	17,160:	-- :	17,160:	.943
1930-31	15,692:	3,250:	18,942:	2,000 :	16,942:	132 :	16,810:	-- :	16,810:	.894
1931-32	19,415:	2,000:	21,415:	7,300 :	14,115:	67 :	14,048:	-- :	14,048:	.624
1932-33	9,358:	7,300:	16,658:	2,500 :	14,158:	48 :	14,110:	-- :	14,110:	.574
1933-34	10,193:	2,500:	12,693:	1,300 :	11,393:	61 :	11,332:	-- :	11,332:	.758
1934-35	11,268:	1,300:	12,568:	180 :	12,388:	57 :	12,331:	-- :	12,331:	.998
1935-36	21,471:	180:	21,651:	830 :	20,821:	90 :	20,731:	-- :	20,731:	.694
1936-37	14,621:	830:	15,451:	778 :	14,673:	70 :	14,603:	-- :	14,603:	.960
1937-38	23,541:	778:	24,319:	4,644 :	19,675:	89 :	19,586:	-- :	19,586:	.676
1938-39	20,470:	4,644:	25,114:	7,351 :	17,763:	96 :	17,667:	-- :	17,667:	.614
1939-40*	14,500:	7,351:	21,851:	--- :	--- :	-- :	--- :	-- :	--- :	.700**

* Indicated.

** September quotation.

SWEET CORN FOR MANUFACTURE: Acreage, Yield per Acre, Production, Prices, and Value Received by Growers, 1939, with Comparisons

Group and State	Acreage			Yield per Acre			Production			Price per Ton			Value of Sales		
	10-year average 1928-37	Harvested 1938	Planted 1939	10-year average 1928-37	1938	Indicated 1939	10-year average 1928-37	1938	Indicated 1939	10-year average 1928-37	1938	Indicated 1939	10-year average 1928-37	1938	Indicated 1939
	Acres	Acres	Acres		Tons			Tons		Dols.	Dols.	Dols.	1000 Dols.	1000 Dols.	1000 Dols.
Maine	12,640	12,700	6,600	3.4	4.6	3.6	43,600	58,400	21,100	18.40	14.80	12.60	807	864	266
New Hampshire	870	420	120	2.9	4.4	2.8	2,500	1,800	300	17.90	14.90	14.00	47	27	4
Vermont	1,400	1,190	1,030	2.5	3.4	3.3	3,500	4,000	2,500	13.40	11.10	11.10	50	44	28
New York	19,710	23,000	16,800	1.9	3.0	2.2	34,900	66,000	38,200	13.00	12.40	10.90	458	818	416
Pennsylvania	6,530	10,800	9,000	1.6	2.0	1.8	10,700	21,600	15,300	12.20	11.60	10.60	134	251	162
Ohio	23,520	22,300	16,100	1.8	2.1	2.1	42,000	46,800	32,200	8.90	8.90	8.30	394	412	267
Indiana	38,360	42,400	30,600	1.6	1.7	2.2	60,400	72,100	67,300	10.50	10.30	8.90	650	764	599
Illinois	66,760	55,000	43,100	2.0	2.6	2.9	135,300	143,000	125,000	10.10	9.50	7.80	1420	1358	975
Michigan	5,950	6,000	2,000	1.1	1.3	1.1	6,700	7,800	2,400	11.20	10.70	10.70	78	83	26
Wisconsin	13,540	26,200	18,900	2.3	2.2	2.1	27,800	57,600	41,600	9.30	9.40	8.60	266	541	358
Minnesota	50,160	55,700	40,300	2.3	3.1	3.0	111,200	172,700	125,600	8.70	8.10	6.70	979	1399	842
Iowa	39,100	32,000	15,600	2.1	2.5	2.6	82,900	82,500	40,900	7.90	7.20	6.30	717	594	256
Nebraska	4,190	2,000	1,300	1.4	2.0	2.1	6,400	4,000	3,400	7.30	7.00	7.00	56	28	24
Delaware	3,140	2,500	750	2.2	2.4	2.2	6,800	6,000	1,600	10.40	9.20	7.40	73	55	12
Maryland	32,820	34,000	23,900	1.8	2.5	2.0	54,200	85,000	45,400	11.70	11.20	9.00	651	952	409
Tennessee	2,630	2,600	1,500	2.5	3.4	3.0	6,300	8,800	4,500	12.20	12.00	12.00	80	106	54
Washington	450	3,800	3,600	2.2	2.9	2.5	1,100	10,400	7,600	11.80	15.20	13.40	12	158	102
Oregon	* 1,350	2,250	2,160	* 1.6	2.4	2.1	* 2,400	5,400	4,800	*14.00	13.70	13.70	* 38	74	66
Other States 1/	4,010	9,300	7,190	2.2	2.8	2.1	9,100	26,200	14,500	10.80	9.69	8.95	99	254	130
Total All States	326,990	343,960	240,850	1.99	2.56	2.47	647,800	880,100	593,900	10.51	9.98	8.41	7004	8782	4996

* Short-time average.

1/ "Other States" include: Colorado, Idaho, Kansas, Montana, New Jersey, Oklahoma, South Dakota, Texas, Utah, Virginia and Wyoming.

Release date
November 14

THE OUTLOOK FOR GREEN PEAS FOR MANUFACTURE FOR 1940

Summary

In order to provide for average consumer requirements of 20 million cases in 1940-41 and an average carryover at the end of the season, a planting of 325,000 acres of peas for canning and quick freezing, with yields per acre and acreage abandonment about equal to the average of recent years, will be needed in 1940. This planting indication is based upon the assumption that approximately 5 million cases (24 No. 2 cans) of peas will be carried over from the 1939 supply and that the equivalent of 1.5 million cases of this quantity will be available for consumption in 1940-41 together with a new pack of 18.5 million cases.

The tonnage required for this pack could be produced from about 270,000 harvested acres if yields were equal to the average of the last 10 years. In addition, it is probable that an increased tonnage of peas will be needed for quick freezing in 1940, or the equivalent of about 29,000 harvested acres. This would make a total harvested acreage of 299,000 acres. If abandonment in 1940 is about the same as the average for the last 10 years, 8 percent, the total planted acreage in 1940 would need to be about 325,000 acres, or an increase of about 28 percent over the relatively small acreage planted in 1939.

The supply of canned peas in the 1939-40 season is indicated to total 25.7 million cases (16.3 million pack and 9.4 million carryover) or somewhat more than enough for normal requirements.

Green peas for canning: Acreage, production, supply, disappearance, and prices

Marketing season May 1 to April 30	Planted acreage	Production for canning	Average price to growers	Supply of canned peas (Pack plus carryover)	Disappearance from canners' hands	Wholesale price of canned peas (Wisconsin brokers)
	Acres	Tons (shelled)	Per ton	1,000 cases No. 2s	1,000 cases No. 2s	Per dozen No. 2 cans
1931-32	258,930	147,400	$54.53	19,286	14,686	$ .908
1932-33	207,750	116,930	43.92	14,966	12,466	.912
1933-34	228,300	136,980	42.48	15,393	14,493	1.110
1934-35	280,390	165,370	50.09	16,642	15,842	1.160
1935-36	341,360	268,120	51.80	25,499	20,599	.803
1936-37	337,500	187,670	51.50	21,453	18,653	.914
1937-38	354,420	268,110	52.72	26,267	20,367	.772
1938-39	334,920	302,540	52.77	31,359	21,959	.680
1939-40	252,810	193,840	46.33	25,700	---	1/ .875

1/ September 1939.

Supply Reduced But Above Requirements

The 1939 pack of canned peas is indicated to total 16.3 million cases of 24 No. 2 cans, or about 9.2 million cases less than the pack of 1938. A record carryover on May 1 of 9.4 million cases, however, resulted in a total supply for the 1939-40 marketing season of 25.7 million cases. This supply is nearly 6 million cases less than the supply available in 1938, but the third largest on record. It marks the fifth successive year in which the supply of canned peas exceeded 21 million cases. Such a succession of large annual supplies is significant in that total annual disappearance has exceeded 21 million cases in only one season of record, the 1933 season, when prices received by canners averaged near the lowest on record.

Prices Low But Advancing

Wholesale market prices of canned peas in late September have been quoted at 82½ to 90 cents per dozen No. 2 cans, or slightly higher than earlier in the season and about 20 cents per dozen higher than for the corresponding period a year earlier. The average for the 1938-39 season was 68 cents per dozen as compared with 77 cents in 1937-38 and was near the lowest season average price on record. Prices to growers for the 1939 harvest averaged about $46.33 per ton as compared with $52.77 per ton received for the 1938 crop.

Disappearance May Continue at High Level

With the total supply decreased by nearly one-fifth from the record high level of last season and with consumer purchasing power rising, total disappearance of canned peas probably will be maintained at a relatively high level or slightly above 20 million cases in the 1939 season. During the first 4 months of the season beginning May 1, 1939 disappearance from canners' hands totaled 8.4 million cases as compared with nearly 8.2 million cases in the corresponding period of 1938. The movement for the entire 1938-39 season totaled 22.0 million cases and set a new high record.

Reduced Carryover into 1940 in Prospect

On the basis of a total supply in 1939 of 25.7 million cases and a total disappearance approximating the average of recent years - 20.5 million cases - the carryover on May 1, 1940 will total 5 million cases. Such a carryover would be 4.4 million cases less than the record large carryover in 1939, but would be 1.5 million cases more than the recent 10-year average.

If it is assumed that the carryover into 1940 will total 5 million cases, approximately 18.5 million cases of canned peas would have to be packed from the 1940 crop in order to provide for a total disappearance in the 1940 season of 20 million cases and a normal or average carryover of 3.5 million cases.

On the basis of a normal packout, 18.5 million cases (24 No. 2 cans) could be packed from about 205,000 tons of peas; and on the assumption of average yields per acre such a tonnage could be produced on a harvested acreage of 270,000 acres.

Quick-frozen peas required 16,000 tons of peas in 1939 and 16,400 tons in 1938, or 25,000 and 26,100 acres respectively. It is probable that some expansion in this industry will occur in 1940. If it is assumed that it will not be increased to more than 17,500 tons of peas, a total of 29,000 acres on the basis of average yields per acre would be needed.

Acreage abandonment of canning peas in 1939 totaled only 6,780 acres, or 2.7 percent, whereas the average abandonment for the recent 10-year period is about 8 percent of the planted acreage.

It is apparent, therefore, that the total planted acreage of peas for processing in 1940 could approximate 325,000 acres, or an increase of about 28 percent over the planted acreage in 1939. Such an acreage would appear to provide for all normal requirements.

CANNED GREEN PEAS: Pack, Canners' Carryover, and Disappearance
(in thousand cases - basis 24 no. 2 cans)

Marketing season ending April 30	Pack	Carryover	Supply of domestic green peas	Stocks at end of season	Disappearance from canners' hands	Exports	Apparent domestic consumption of American green peas	Imports	Apparent domestic consumption of all green peas	Wholesale price per dozen no. 2s (Wisconsin brokers)
										Dollars
1921-22	8,207	4,000	12,207	--	12,207	29	12,178	--	12,178	1.134
1922-23	13,042	--	13,042	--	13,042	102	12,940	28	12,968	1.180
1923-24	13,948	--	13,948	--	13,948	129	13,819	50	13,869	1.270
1924-25	19,315	--	19,315	4,300	15,015	187	14,828	64	14,892	1.163
1925-26	17,816	4,300	22,116	6,000	16,116	165	15,951	66	16,017	.987
1926-27	17,709	6,000	23,709	6,000	17,709	173	17,536	51	17,587	.922
1927-28	12,936	6,000	18,936	3,400	15,536	186	15,350	38	15,388	1.032
1928-29	17,943	3,400	21,343	3,500	17,843	224	17,619	38	17,657	.991
1929-30	18,530	3,500	22,030	3,500	18,530	304	18,226	55	18,281	1.054
1930-31	22,035	3,500	25,535	6,000	19,535	214	19,321	21	19,342	.926
1931-32	13,286	6,000	19,286	4,600	14,686	91	14,595	36	14,631	.908
1932-33	10,366	4,600	14,966	2,500	12,466	67	12,399	9	12,408	.912
1933-34	12,893	2,500	15,393	900	14,493	83	14,410	8	14,418	1.110
1934-35	15,742	900	16,642	800	15,842	101	15,741	31	15,772	1.160
1935-36	24,699	800	25,499	4,900	20,599	126	20,473	16	20,489	.803
1936-37	16,553	4,900	21,453	2,800	18,653	119	18,534	16	18,550	.914
1937-38	23,467	2,800	26,267	5,900	20,367	162	20,205	13	20,218	.772
1938-39	25,459	5,900	31,359	9,400	21,959	152	21,807	38	21,845	.680
1939-40	*16,300	9,400	25,500	--	--	--	--	--	--	**.875

* Indicated 1939.

** September quotation.

GREEN PEAS FOR MANUFACTURE: Acreage, Yield per Acre, Production, Prices and Value Received by Growers, 1928-37 average, 1938 and 1939

Group and State	Acreage			Yield per Acre			Production			Price per Ton			Value of Sales		
	10-year average 1928-37	Harvested 1938	Harvested 1939	10-year average 1928-37	1938	1939	10-year average 1928-37	1938	1939	10-year average 1928-37	1938	1939	10-year average 1928-37	1938	1939
	- Acres -			Pounds (shelled)			Tons (shelled)			- Dollars -			- 1,000 dollars -		
Maine	1,840	3,770	4,150	1,900	1,520	1,820	1,760	2,860	3,780	58.10	56.40	54.00	101	161	204
New York	32,040	36,700	32,830	1,250	1,760	1,210	20,110	32,300	19,860	54.90	57.70	50.00	1,137	1,864	993
Pennsylvania	2,970	6,400	5,950	1,810	2,520	1,180	2,800	8,060	3,510	54.20	58.70	48.90	154	473	175
Ohio	4,650	4,700	3,800	1,280	1,300	950	3,040	3,060	1,800	41.60	41.70	41.90	131	128	75
Indiana	6,320	7,600	6,630	1,770	1,740	1,130	5,730	6,610	3,750	42.30	41.00	38.10	249	271	143
Illinois	14,040	16,260	14,300	1,430	1,370	1,650	10,100	11,140	11,800	50.10	48.20	49.50	517	537	584
Michigan	11,780	12,700	6,350	1,210	1,760	1,840	7,160	11,180	5,840	47.10	53.90	39.40	349	603	230
Wisconsin	103,860	102,300	68,300	1,370	1,940	1,470	72,780	99,200	50,200	53.60	52.20	48.90	3,993	5,178	2,455
Minnesota	16,960	20,250	19,500	1,510	1,840	1,820	12,820	18,630	17,740	49.00	50.30	45.20	636	937	802
Iowa	1,390	2,740	1,450	1,660	1,980	1,320	1,190	2,710	960	53.30	52.70	47.50	60	143	46
Delaware	2,700	3,420	2,400	1,530	820	710	2,100	1,400	850	53.40	54.00	54.70	113	76	46
Maryland	14,420	18,900	13,200	1,670	1,880	1,280	12,150	17,770	8,510	54.30	52.90	50.50	665	940	430
Virginia	3,050	4,000	3,100	1,850	2,100	1,080	2,880	4,200	1,670	53.60	55.20	52.50	145	232	88
Colorado	3,350	3,170	3,250	1,740	1,860	1,620	2,950	2,950	2,630	41.60	42.40	37.00	124	125	97
Utah	10,880	14,250	9,000	2,370	2,900	2,590	13,180	20,660	11,660	51.40	54.20	37.50	685	1,120	437
Washington	8,210	28,000	21,500	2,240	1,890	2,140	9,220	26,460	23,000	50.80	53.40	41.80	450	1,413	961
Oregon	*8,530	20,450	16,500	*1,770	1,690	1,930	*6,800	17,280	15,920	*55.70	50.70	43.50	*368	873	693
California	2,020	3,740	2,510	2,160	1,480	2,200	2,050	2,770	2,760	49.50	36.80	40.80	91	102	113
Other States 1/	7,540	13,010	11,210	2,022	2,045	1,356	7,530	13,300	7,600	52.04	59.10	53.68	386	786	408
TOTAL ALL STATES	253,150	322,360	245,930	1,521	1,877	1,576	193,660	302,540	193,840	51.93	52.77	46.33	10,208	15,965	8,980

* Short time average.

1/ "Other States" include: Arkansas, Idaho, Kansas, Montana, Nebraska, New Jersey, Oklahoma, Tennessee, Texas, and Wyoming.

Release date
November 14

THE OUTLOOK FOR TOMATOES FOR MANUFACTURE FOR 1940

Summary

With average yields a planting of 466,000 acres of tomatoes for manufacture in 1940 probably would provide for all normal requirements in the 1940-41 marketing season. This acreage would be 28 percent more than the 1939 planted acreage. Total supplies of canned tomatoes in 1939 are indicated to be slightly smaller than in 1938 and only slightly larger than average annual disappearance. As a consequence, the carry-over into 1940 probably will be less than normal. Also, the supplies of tomato juice and other products in 1939 are indicated to be somewhat smaller than in other recent years.

Around 24 million cases (24 No. 2 cans) of canned tomatoes, or the equivalent of average disappearance of domestic canned tomatoes for recent years, could be packed from about 720,000 tons of tomatoes. In addition, a total of approximately 1,080,000 tons would be required for the pack of juice and other tomato products. This quantity, 1,800,000 tons, could be produced from 440,000 harvested acres - assuming average yields. If average abandonment is allowed for, an additional 26,000 acres would need to be planted.

1939 Season

Contracts for acreage in 1939 were made at lower prices than in 1938, and the acreage planted decreased about 11 percent. Yields indicated at 4.78 tons per acre, somewhat higher than in 1938, resulted in a production of tomatoes for manufacture of 1,747,300 tons, or slightly more than in 1938 and 20 percent more than the 10-year average crop.

On the basis that the usual proportion of the crop will be used for canned tomatoes, the 1939 pack may be expected to total about 22.4 million cases, or about the same as the recent 10-year average. Supply (pack plus carry-over) of domestic tomatoes, therefore, probably will be 25.2 million cases or about 1 million less than in 1938-39 and the smallest since 1933.

Tomatoes for manufacture: Acreage, production, supply, disappearance, and price

Marketing season Aug. 1 to July 31	Planted acreage	Production for manufacture	Average price per ton to grower	Supply of canned tomatoes (pack plus canners' carry-over)	Disappearance of canned tomatoes from canners' hands	Wholesale price canned tomatoes (f.o.b Indiana)
	Acres	Tons	Dol.	1,000 cases No. 2s	1,000 cases No. 2s	Per doz. No.2 cans
1933-34	296,250	1,081,300	11.39	22,261	21,391	.85
1934-35	435,620	1,420,700	12.03	23,246	21,916	.85
1935-36	510,150	1,689,000	11.68	28,315	26,885	.70
1936-37	477,100	1,987,500	12.64	25,639	23,689	.74
1937-38	473,200	1,926,300	13.11	28,027	24,827	.675
1938-39	408,660	1,737,700	12.41	26,160	23,360	.645
1939-40	365,140	1,747,300	*11.94	25,200		**.70

*Indicated. **September 23.

Prices

Preliminary estimates indicate that the average price received by growers of tomatoes for commercial manufacture was about 4 percent lower for the 1939 crop than in 1938, and about 6 percent lower than the 10-year average. During the marketing season ended July 31, 1939, average wholesale prices of canned tomatoes, only 64.5 cents per dozen No. 2 cans, were also 4 percent lower than in the previous season and 20 percent lower than the average for the last 10 years. Prices rose slightly during the early part of the 1939 season, from 65 cents per dozen during the week of August 5 to 70 cents for the week of September 23.

The level of prices received by canners in December and January is usually a significant factor in determining prices at which tonnage will be contracted with growers the following season. During December 1938 and January 1939, prices received by canners were 4 percent less than during the previous season and canners made contracts with growers in 1939 at prices also about 4 percent lower than in 1938. If prices of canned tomatoes continue higher than a year earlier during the coming winter months, it is probable that contract growers' prices for the 1940 crop probably will also be higher.

Canned Supplies Below Average

The 1939 pack of canned tomatoes is expected to total about 22.4 million cases, or 2 percent less than in 1938, but about equal to the 10-year (1928-37) average of 22,368,500 cases. Carry-over of canned tomatoes on August 1, 1939 was estimated at 2.8 million cases, or about 11 percent more than the average of the annual carry-over during the 10-year (1928-37) period. Adding

this 2.8-million-case carry-over to the estimated pack gives an indicated total supply of domestic canned tomatoes for 1939-40 of about 25.2 million cases, or 4 percent less than the 1938-39 supply.

The pack of tomato juice showed a phenomenal increase from 1933 to 1937. From 4.5 million cases (24 No. 2 cans) in 1933, the pack of juice increased to 16.5 million cases in 1936 and to 16.9 million cases in 1937. These 2 large packs in succession resulted in a large carry-over stock, and in 1938 the pack of juice was reduced to 11.2 million cases. The 1939 pack is indicated at about 12 million cases. The carry-over of juice at the beginning of the 1939 season was less than that of a year ago, 3.0 million cases compared with 3.8 million on August 1, 1938.

Disappearance

Consumer demand for canned tomatoes during the 1938-39 season was lower than in the previous season. Apparent domestic consumption of all canned tomatoes was 4 percent smaller than in 1937-38, and the wholesale price was 4 percent lower. With the supply of domestic tomatoes slightly less than in 1937-38, the disappearance from canners' hands in 1938-39 was also slightly less, being 23,360,000 cases as compared with 24,837,000 cases in 1937-38. Imports during the 1938-39 season totaled 2,464,000 cases and exports totaled 72,000 cases. Apparent disappearance of tomato juice totaled 12 million cases in 1938-39 compared with approximately 13.1 million in 1937-38 and 16.5 million in 1936-37, the largest on record.

1940 Acreage Requirements

Consumption of canned tomatoes, as indicated by disappearance, averaged 24,135,000 cases for the last 5 years and required, on the basis of normal pack-out, a total of 754,000 tons of tomatoes per year. If this rate of consumption is to be maintained in 1940 and if canned tomatoes take about 40 percent of the tonnage of all tomatoes for manufacture, a total production of about 1,800,000 tons will be needed in 1940. On the basis of yields equal to the average of 1928-37, this tonnage would require 440,000 acres for harvest. Provision for an average abandonment in 1940 of about 5.6 percent of the planted acreage would require an additional 26,000 acres. This would call for a total planting of 466,000 acres.

During the World War there was a substantial increase in exports of canned vegetables, but even in 1916-17 exports were valued at only $4,765,000, as compared with exports in 1938 valued at $3,586,000. The actual pack of canned tomatoes showed no increase during the war years and was as follows: 1913 - 24,250,000; 1914 - 25,984,000; 1915 - 14,457,000; 1916 - 22,433,000 and 1917 - 25,735,000.

CANNED TOMATOES: Pack, Canners' Carry-over, and Disappearance (in thousand cases - basis 24 no. 2 cans)

Marketing season ending July 31	Pack	Carry-over	Supply of domestic tomatoes	Stocks at end of season	Disappearance from canners' hands	Exports	Apparent domestic consumption of American tomatoes	Imports	Apparent domestic consumption of all tomatoes	Wholesale price per dozen no. 2s f.o.b. Indiana
										Dollars
1921-22	6,857	10,750	17,607	4,270	13,337	--	13,337	205	13,542	1.155
1922-23	19,695	4,270	23,965	1,700	22,265	313	21,952	720	22,672	1.033
1923-24	25,045	1,700	26,745	4,100	22,645	320	22,325	1,088	23,413	1.090
1924-25	21,370	4,100	25,470	2,390	23,080	183	22,897	2,598	25,495	1.185
1925-26	33,747	2,390	36,137	6,490	29,647	204	29,443	2,984	32,427	.814
1926-27	16,140	6,490	22,630	3,580	19,050	264	18,786	2,821	21,607	.962
1927-28	22,425	3,580	26,005	5,630	20,375	237	20,138	3,649	23,787	.876
1928-29	14,575	5,630	20,205	1,700	18,505	141	18,364	4,009	22,373	1.111
1929-30	24,146	1,700	25,846	1,700	24,146	171	23,975	5,182	29,157	1.044
1930-31	29,015	1,700	30,715	5,400	25,315	103	25,212	2,643	27,855	.756
1931-32	16,341	5,400	21,741	3,380	18,361	162	18,199	3,219	21,418	.719
1932-33	20,500	3,380	23,880	1,800	22,080	142	21,938	2,600	24,538	.664
1933-34	20,461	1,800	22,261	870	21,391	65	21,326	2,790	24,116	.853
1934-35	22,376	870	23,246	1,330	21,916	69	21,847	2,570	24,417	.846
1935-36	26,985	1,330	28,315	1,430	26,885	70	26,815	2,393	29,209	.700
1936-37	24,209	1,430	25,639	1,950	23,689	81	23,608	2,057	25,665	.740
1937-38	26,077	1,950	28,027	3,200	24,827	63	24,764	1,971	26,735	.675
1938-39	22,960	3,200	26,160	2,800	23,360	72	23,288	2,464	25,752	.645
1939-40	*22,400	2,800	25,200	--	--	--	--	--	--	**.700

* Indicated
** September quotation.

TOMATOES FOR MANUFACTURE: Acreage, yield per acre, production, prices and value received by growers, 1928-37 average, 1938 and 1939

GROUP and STATE	ACREAGE			YIELD PER ACRE			PRODUCTION			PRICE PER TON			VALUE OF SALES		
	10-year average 1928-37	Harvested 1938	Planted 1939	10-year average 1928-37	1938	Indicated 1939	10-year average 1928-37	1938	Indicated 1939	10-year average 1928-37	1938	Indicated 1939	10-year average 1928-37	1938	Indicated 1939
	Acres			Tons			Tons			Dollars			1,000 Dollars		
New York	15,000	18,500	16,000	6.8	9.2	7.0	100,700	170,200	112,000	12.80	12.60	12.00	1,273	2,145	1,344
New Jersey	33,200	33,300	31,800	5.0	4.2	5.4	166,600	139,900	171,700	16.10	15.00	14.00	2,742	2,098	2,404
Pa.	7,900	16,400	18,700	4.3	5.3	5.3	36,600	86,900	99,100	13.90	15.00	15.00	507	1,304	1,486
Ohio	13,100	23,700	22,500	5.5	6.6	6.9	73,800	156,400	155,200	10.40	12.10	11.30	767	1,892	1,754
Indiana	72,100	71,200	63,600	4.0	4.2	4.2	287,100	299,000	267,100	11.20	11.20	10.20	3,251	3,349	2,724
Illinois	7,700	8,600	6,700	3.2	4.5	3.3	23,000	38,700	22,100	12.40	12.80	12.00	290	495	265
Michigan	3,000	5,800	5,600	5.5	6.2	5.6	15,700	36,000	31,400	9.80	12.10	11.00	153	436	345
Iowa	5,300	5,200	4,500	3.6	4.6	5.2	18,600	23,900	23,400	11.60	12.00	11.80	223	287	276
Missouri	15,200	14,100	10,600	1.9	2.3	2.3	31,200	32,400	24,400	11.20	10.90	10.10	366	353	246
Delaware	13,400	9,400	8,300	3.3	2.9	3.6	43,200	27,300	31,500	14.90	14.50	13.10	648	396	413
Maryland	48,700	56,000	49,400	3.5	2.9	3.9	169,300	162,400	192,700	14.00	14.10	14.00	2,374	2,290	2,698
Virginia	18,800	20,900	20,000	2.8	3.1	3.4	53,900	64,800	68,000	12.40	11.90	11.20	682	771	762
Kentucky	5,500	3,700	2,600	2.4	3.1	2.8	13,500	11,500	7,300	10.60	10.30	10.10	151	118	74
Tenn.	9,700	8,000	5,400	2.1	2.9	1.9	20,500	23,200	10,300	11.20	11.40	10.40	235	264	107
Arkansas	16,200	17,700	11,200	1.9	2.4	1.6	33,700	42,500	17,900	11.30	11.00	9.60	395	468	172
Colorado	2,600	3,000	2,700	6.4	4.1	5.5	16,400	12,300	14,800	10.00	10.40	10.10	166	128	149
Utah	5,700	5,100	6,000	8.0	10.6	9.3	45,300	54,100	55,800	10.30	10.00	9.30	478	541	519
Calif.	49,700	46,480	54,920	5.4	6.1	5.5	265,500	283,500	302,100	13.10	12.30	11.30	3,514	3,487	3,595
Other States 1/	14,200	23,570	24,620	3.2	3.1	2.8	44,000	72,700	69,000	11.76	10.12	9.81	516	736	677
TOTAL ALL STATES	357,000	390,650	365,140	4.07	4.45	4.59	1,458,600	1,737,700	1,675,800	12.72	12.41	11.94	18,731	21,558	20,010

1/ "Other States" include: Conn., Fla., Ga., Idaho, Kans., La., Minn., Miss., Nebr., N.Mex., N.Car., Okla., Ore., S.Car., Texas, Wash., W. Va., and Wisc.

Release Date
November 14

THE OUTLOOK FOR SNAP BEANS FOR MANUFACTURE FOR 1940

Summary

A 1940 pack of about 7.6 million cases of snap beans probably would be sufficient to meet average consumption requirements and to reduce the carry-over to about average proportions. Such a pack probably could be obtained from about 80,000 tons. If yields and abandonment are near average, a planting of 58,100 acres in 1940, or 12 percent more than in 1939, would produce the required pack.

In the fall of 1939 wholesale prices for canned snap beans advanced somewhat above the low levels established during the 1938-39 season. As prices paid to growers for the 1939 crop of snap beans are near the record low levels from 1932 to 1934, the scale of prices in 1940 may be somewhat above the 1939 level.

Snap Beans for Canning: Acreage, production, supply, disappearance, and prices.

Marketing season August 1, to July 31	Planted acreage	Production for canning	Average price to growers	Supply of canned snap beans (pack plus carry-over)	Disappearance of canned snap beans from canners' hands	Wholesale price of canned snap beans at Baltimore
	Acres	Tons	Per ton	1,000 cases no. 2s	1,000 cases no. 2s	Per dozen no. 2 cans
1931-32	58,720	68,700	$52.98	7,567	6,167	$ .63
1932-33	31,480	43,900	37.97	5,424	4,724	.61
1933-34	42,890	60,200	38.59	6,232	5,532	.71
1934-35	47,860	66,100	41.41	7,000	6,620	.74
1935-36	51,730	81,500	43.06	7,541	7,381	.69
1936-37	57,570	76,500	44.44	6,789	6,759	.83
1937-38	69,780	107,000	47.82	10,082	9,382	.66
1938-39	75,730	128,100	44.87	11,415	9,775	.56
1939-40	51,710	78,400	42.00	8,840	--	1/ .66

1/ September quotation.

Record 1938 Pack

The 1938 pack of canned snap beans was the largest on record and resulted in the largest recorded total supply for a season. Carry-over at the end of the 1937-38 marketing season of around 500,000 cases (basis 24 no. 2) was slightly below the average carry-over for the preceding seven marketing seasons.

Wholesale prices for the canned product were reduced to a low level early in the 1938-39 season. These prices remained relatively low until late in the season. For the 12-month period ending July 31, 1939, the average seasonal price per dozen no. 2 cans of 56 cents was nearly 20 percent below the average price for green and wax beans for the preceding seven marketing seasons.

The domestic consumption of canned snap beans during the 1938-39 season of around 9,775,000 cases slightly exceeded the record large disappearance from canners' hands for the 1937-38 season. But while the canned product was moving into marketing channels relatively freely, wholesale prices were low and canners contracted with growers for the 1938-39 requirements at prices about 7 percent below the 1938 prices.

1939 Acreage Reduced

The 1939 acreage planted to snap beans for manufacture was reduced about 32 percent below the 1938 plantings. The production indicated for 1939 of 78,400 tons compares with 128,100 tons estimated for 1938. The 1938 pack was 10,915,000 standard cases. Although statistics regarding the pack for 1939 are not yet available, it seems probable that this year's total pack will be around 7,000,000 cases. The carry-over on July 31, 1939 was probably about 1,840,000 cases. Adding this carry-over to a 7,000,000-case pack gives a supply of 8,840,000 cases for the 1939-40 marketing season.

Domestic consumption of snap beans during the last eight marketing seasons has ranged from 4,724,000 cases in 1932-33 to the record heavy consumption of 9,775,000 cases in 1938-39. In the 1937-38 season, about 9,382,000 cases of canned beans left canners' hands. The average disappearance for the last five marketing seasons is 7,983,000 cases. Such factors as the quantities of competing winter vegetables, particularly fresh snap beans, and the buying power of consumers have a bearing on the disappearance of the canned product.

The unusually large disappearance of canned snap beans during the 1937-38 and 1938-39 seasons was accomplished at a relatively low level of wholesale prices. Prices have recently advanced and it appears they may remain somewhat above the recent low levels, and consumption requirements for the 1939-40 marketing season may be somewhat lower than for either of the two preceding seasons.

Assuming that 8,000,000 cases (or a quantity about in line with the average of the five marketing seasons 1934-35 to 1938-39) move from canners' hands during the 12-month period ending July 31, 1940, the supplies estimated on hand on July 31, 1939 of 8,840,000 cases will be adequate for the 1939-40 season and leave a carry-over for the 1940-41 season of around 840,000 cases

1940 Requirements

A pack of between 7,500,000 and 7,750,000 cases of snap beans in 1940 probably would be sufficient to keep the supply within the limits of average consumption requirements and leave a carry-over at the end of the 1940-41 season that would not be burdensome. A production of approximately 80,000 tons probably would provide for the required pack of canned snap beans.

Given a yield per acre equal to the average of the 10-year (1928-37) period, or 1.46 tons per acre, 80,000 tons could be produced from a harvested acreage of around 55,000 acres. Allowing for an average abandonment of 5.8 percent, a total of 58,100 acres would need to be planted in 1940. This would be an increase of 12 percent above the 1939 planted acreage.

SNAP BEANS FOR MANUFACTURE: Acreage, Yield per Acre, Production, Prices and Value Received by Growers, 1928-37 Acreage, 1938 and 1939.

State	Acreage			Yield per acre			Production			Price per ton			Value of sales		
	10-year average 1928-37	Harvested 1938	Planted 1939	10-year average 1928-37	1938	Indicated 1939	10-year average 1928-37	1938	Indicated 1939	10-year average 1928-37	1938	Indicated 1939	10-year average 1928-37	1938	Indicated 1939
	Acres	Acres	Acres	Short tons	Short tons	Short tons	Short tons	Short tons	Short tons	Dollars	Dollars	Dollars	1,000 dollars	1,000 dollars	1,000 dollars
Maine	1,000	1,720	1,090	2.6	2.9	2.5	2,600	5,000	2,700	45.30	45.00	45.00	120	225	122
New York	7,710	9,000	6,800	1.6	1.9	1.3	12,100	17,100	8,800	58.60	54.50	48.00	729	934	422
Pennsylvania	2,310	2,600	2,100	1.4	1.5	1.5	3,000	3,900	3,200	43.80	38.60	34.00	138	151	109
Indiana	2,510	1,270	650	1.0	1.4	1.0	2,400	1,800	600	46.50	44.00	44.00	109	79	26
Michigan	4,740	6,700	4,500	1.3	1.3	1.3	5,900	8,700	5,800	46.90	47.10	41.40	271	410	240
Wisconsin	6,190	9,100	7,100	1.4	1.4	1.2	8,100	12,700	8,500	53.10	49.30	49.00	446	626	416
Delaware	1,260	1,100	750	1.3	1.3	1.3	1,500	1,400	1,000	41.30	41.70	41.70	64	58	42
Maryland	8,780	12,700	8,500	1.3	1.7	1.2	11,500	21,600	10,200	45.10	38.40	35.30	524	829	360
South Carolina	620	500	300	1.1	1.0	1.3	700	500	400	36.20	32.20	32.20	30	16	13
Tennessee	1,710	3,100	2,300	1.2	1.3	1.4	2,000	4,000	3,200	39.40	35.50	30.20	82	142	97
Mississippi	2,000	2,200	1,900	.8	.7	.7	1,700	1,500	1,300	39.80	34.10	32.40	71	51	42
Arkansas	2,000	3,550	2,340	1.0	1.6	1.0	1,800	5,700	2,300	43.70	38.30	31.00	82	218	71
Louisiana	1,580	1,800	1,000	.9	.9	1.1	1,400	1,600	1,100	37.90	35.00	35.00	58	56	38
Colorado	1,280	1,000	660	2.6	2.6	2.2	3,500	2,600	1,500	47.00	42.70	42.70	181	111	64
Utah	720	1,230	680	2.8	3.5	3.5	2,000	4,300	2,300	44.00	44.50	41.80	95	191	96
Washington	610	1,110	1,160	3.7	4.5	3.8	2,100	5,000	4,400	48.40	48.00	46.10	105	240	203
Oregon	850	2,600	1,820	4.6	5.3	4.9	4,200	13,800	8,900	55.60	48.80	46.40	233	673	413
California	670	920	400	4.0	4.0	4.0	2,700	3,700	1,600	69.40	50.60	50.00	182	187	80
Other States 1/	5,690	11,270	7,680	1.2	1.2	1.4	6,300	13,200	10,600	44.27	41.62	41.30	283	551	439
U. S. total	52,230	73,470	51,710	1.46	1.74	1.52	75,500	128,100	78,400	49.26	44.87	42.00	3,803	5,748	3,293

1/ "Other States" include: Florida, Georgia, Idaho, Illinois, Iowa, Kentucky, Missouri, Montana, New Jersey, North Carolina, Ohio, Oklahoma, Texas, Vermont, Virginia, and Wyoming.

CANNED SNAP BEANS: Pack, canners' carry-over, and disappearance
(in thousand cases - basis 24 no. 2 cans)

Marketing season ending July 31	Pack	Carry-over	Supply of domestic snap beans	Stocks at end of season	Disappearance from canners' hands	Exports	Apparent domestic consumption of American snap beans	Imports	Apparent domestic consumption of all snap beans	Wholesale price per doz. no. 2s at Baltimore: Green	Wholesale price per doz. no. 2s at Baltimore: Wax	Wholesale price per doz. no. 2s weighted by type
										Dol.	Dol.	Dol.
1926-27	4,037											
1927-28	4,677											
1928-29	6,215											
1929-30	8,529									.943	1.115	.96
1930-31	8,251			1,500						.829	1.019	.88
1931-32	6,067	1,500	7,567	1,400	6,167	--	6,167	--	6,167	.614	.716	.63
1932-33	4,024	1,400	5,424	700	4,724	--	4,724	--	4,724	.601	.662	.61
1933-34	5,532	700	6,232	700	5,532	--	5,532	--	5,532	.693	.850	.71
1934-35	6,300	700	7,000	380	6,620	--	6,620	--	6,620	.721	.806	.74
1935-36	7,161	380	7,541	160	7,381	--	7,381	--	7,381	.690	.714	.69
1936-37	6,629	160	6,789	30	6,759	--	6,759	--	6,759	.826	.910	.83
1937-38	10,052	30	10,082	700	9,382	--	9,382	--	9,382	.628	.825	.56
1938-39	10,915	700	11,615	1,840	9,775	--	9,775	--	9,775	.552	.636	.56
1939-40	*7,000	1,840	8,840	--	--	--	--	--	--	--	--	1/ .66

* Indicated.

1/ September quotation.

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THE FRUIT OUTLOOK FOR 1940

General Summary

Consumer demand for fruits in the United States during 1940 is expected to be somewhat higher than in 1939. This will mean an increase in the domestic outlet for the large supplies available from the 1939 harvests. But large supplies of fruits also are available this year in the major importing countries. This fact, along with war conditions in Europe, is expected to offset largely the favorable factor of increased consumer buying power in the United States.

The average combined production of all fruits during the next five years (1940-44) probably will be larger than the average for the 5-year period, 1934-38. Production during the 1939 season is indicated to be well above the 1934-38 average.

During the next five years significant increases are expected in the production of grapefruit, oranges, and lemons. Moderate increases are anticipated for peaches, pears, and cherries, and grape production probably will increase slightly. The trend in apple production is expected to continue downward at a moderate rate. Dried prune production probably will decrease moderately during the next few years. No significant changes are likely to occur in the average production of other fruits.

Prices of fruits in general have been at relatively low levels for several years, and it is apparent that as supplies continue to increase it will be increasingly difficult to dispose of fruit supplies at reasonable returns to the growers unless there is a marked improvement in the level of consumer purchasing power.

Recent trends of production of the 13 major fruit crops are indicated by the 5-year averages in the following table.

Volume of United States fruit production, major crops,
5-year averages, 1919-38

Crop	1919-23	1924-28	1929-33	1934-38
	(Thousand tons - fresh equivalent basis)			
Apples	3,904	4,013	3,805	3,668
Citrus, total	1,641	2,123	2,673	3,986
Oranges	1,156	1,469	1,822	2,521
Grapefruit	297	402	579	1,114
Lemons	188	252	272	351
Grapes	1,735	2,321	2,071	2,369
Peaches	1,116	1,315	1,275	1,255
Plums and prunes	454	623	707	760
Pears	403	523	597	700
Apricots	149	167	243	216
Strawberries	153	204	209	193
Cherries	1/ 46	2/ 83	3/ 125	3/ 134
Cranberries	28	30	31	28
Olives	11	15	19	29
Total 13 fruits	9,640	11,417	11,755	13,338

1/ 5 States. 2/ 10 States. 3/ 12 States.

Total volume of fruit production during the five seasons, 1934-38, averaged about two-fifths larger than that of the 5-year period, 1919-23. The rate of increase, as measured by the 5-year averages, was fairly uniform during this 20-year period. The trend of apple production has been moderately downward. Production of oranges has more than doubled and is now exceeded only by apples. The grapefruit crop has increased to nearly four times the 1919-23 average, and lemon production has almost doubled. Significant increases also have taken place in the production of grapes, pears, plums and prunes, apricots, strawberries, and cherries.

On a per capita basis the annual average per capita production of the 13 fruits increased from 176 pounds for the 5-year period, 1919-23, to 207 pounds during 1934-38. The per capita production of apples declined 20 percent during this period whereas that of all citrus fruits doubled. Cherries, pears, plums and prunes, olives, and apricots increased materially in per capita production over the same period; grapes increased moderately, peaches declined slightly after a temporary increase; strawberries increased rapidly during the middle of the period but are now only slightly higher than in 1919-23. From present indications it appears that during the next five seasons a larger per capita supply of fruit may be expected but an increasing proportion of this supply will be comprised of citrus fruits. The following table illustrates the trend in per capita production and the significant shifts that have occurred in the composition of the per capita total during the past 20 years.

United States per capita production of major fruit crops, 5-year averages, 1919-38

Crop	1919-23	1924-28	1929-33	1934-38
	Pounds	Pounds	Pounds	Pounds
Apples	71.5	68.4	61.1	56.9
Citrus, total	30.0	36.1	42.9	61.8
Oranges	21.2	25.0	29.2	39.1
Grapefruit	5.4	6.8	9.3	17.3
Lemons	3.4	4.3	4.4	5.4
Grapes	31.7	39.5	33.3	36.7
Peaches	20.5	22.4	20.5	19.5
Plums and Prunes	8.3	10.6	11.4	11.8
Pears	7.4	8.9	9.6	10.9
Apricots	2.7	2.9	3.9	3.3
Strawberries	2.8	3.5	3.4	3.0
Cherries	.8	1.4	2.0	2.1
Cranberries	.5	.5	.5	.4
Olives	.2	.3	.3	.4
Total 13 fruits	176.4	194.5	188.9	206.8
Bananas - imports	18.6	23.7	21.0	22.7

The per capita consumption of fresh and canned fruit also has increased materially during the last 20 years but that of dried fruits has decreased slightly within the last decade. The following data represent the apparent per capita consumption of fresh, canned, and dried fruits by 5-year periods from 1919 to 1938.

United States per capita consumption of fresh, canned, and dried fruits, 5-year averages, 1919-23 to 1934-38.

Variety	1919-23			1924-28			1929-33			1934-38 1/		
	Fresh	Canned	Dried	Fresh	Canned	Dried	Fresh	Canned	Dried	Fresh	Canned	Dried
	Pounds per capita											
Apples 2/	50.6	1.30	.25	45.0	1.42	.16	39.5	.98	.13	38.6	1.10	.13
Pears	4.8	.69	.06	5.3	.68	.07	4.8	1.00	.03	5.9	1.19	.04
Peaches	11.7	2.58	.43	12.0	3.52	.33	10.2	2.84	.29	10.8	3.26	.31
Plums and prunes	1.3	.19	1.55	1.3	.26	1.68	1.3	.36	1.65	1.1	.55	1.87
Apricots	.2	1.03	.11	.2	.70	.17	.4	.71	.26	.2	.86	.23
Cherries	.4	.46	--	.9	.64	--	1.2	.67	--	1.3	.69	--
Cranberries	.6	--	--	.5	--	--	.5	--	--	.5	--	--
Strawberries	3.0	--	--	3.2	--	--	3.0	--	--	3.0	--	--
Grapes	14.7	--	--	19.6	--	--	16.0	--	--	20.5	--	--
Pineapples	.8	2.26	--	1.1	3.26	--	.9	3.44	--	.7	3.93	--
Figs	3/	--	.50	.2	--	.48	.1	--	.39	.2	--	.44
Berries	--	.42	--	--	.76	--	--	.55	--	--	.53	--
Olives	--	.34	--	--	.39	--	--	.38	--	--	.39	--
Fruits for salad	--	.01	--	--	.16	--	--	.34	--	--	.87	--
Currants	--	--	.32	--	--	.11	--	--	.06	--	--	.04
Dates	--	--	.37	--	--	.46	--	--	.38	--	--	.46
Raisins	--	--	2.60	--	--	2.70	--	--	2.08	--	--	2.16
Total	88.1	9.28	6.19	89.3	11.81	6.16	77.9	11.27	5.27	82.8	13.37	5.68
Oranges	17.4	--	--	20.2	--	--	23.5	--	--	31.0	--	--
Grapefruit 4/	4.9	.03	--	5.7	.22	--	6.9	.48	--	10.3	2.00	--
Lemons	3.4	--	--	4.2	--	--	4.0	--	--	4.7	--	--
Total	25.7	.03	--	30.1	.22	--	34.4	.48	--	46.0	2.00	--
Bananas	17.2	--	--	21.9	--	--	18.3	--	--	20.7	--	--
GRAND TOTAL	131.0	9.31	6.19	141.3	12.03	6.16	130.6	11.75	5.27	149.5	15.37	5.68

1/ Preliminary.

2/ Canned includes apple sauce.

3/ Less than .005.

4/ Canned includes grapefruit juice.

As with other agricultural commodities, variations in prices received by producers of fruits are associated rather closely with variations in the two factors, total supply and consumer income. During the period, 1919-29, when consumer income was on a relatively high level and the combined production of all fruits was on a low level compared with more recent years, most of the variation in fruit prices in this period was caused by the rather marked changes from year to year in fruit supplies. Since 1929, however, total production has remained on a relatively high level whereas consumer income has been relatively low with marked variations from year to year. During the latter period the influence of consumer income on fruit prices has been more important than in previous years.

In relation to the 1924-29 level of fruit production and prices, the recent 5-year (1934-38) average production of all fruits combined is 13 percent higher whereas the index of prices received for all fruits is 39 percent lower. The index of prices received for all farm products (1934-38 average) is about 28 percent below the 1924-29 level. During this period prices of grapefruit, oranges, cherries, pears, and dried prunes decreased more than prices of other major fruits. Prices of grapefruit and oranges decreased 62 and 54 percent respectively; cherries 50 percent, pears 43 percent, dried prunes 44 percent, grapes 36 percent, apples 31 percent, strawberries 30 percent, peaches 26 percent, apricots 25 percent, olives 20 percent, plums and fresh prunes 15 percent. The 1934-38 average of cranberry prices was the same as the 1924-29 average.

Data in the following table indicate the changes in total fruit production, prices received for fruits, prices received for all agricultural products, and consumer purchasing power (as measured by income of industrial workers) during the last 20 years.

Fruit production, fruit prices, and nonagricultural income, 1919-38
(Index numbers 1924-29 = 100)

Year	Fruit production	Fruit prices	Income of industrial workers (July-June average)	Prices received for all farm products
1919	77.8	137.9	110.6	145.9
1920	93.1	121.4	97.2	144.5
1921	59.7	129.5	76.1	85.6
1922	99.3	96.0	94.8	90.4
1923	100.8	83.9	99.6	97.3
1924	91.8	103.7	94.6	97.9
1925	91.8	104.0	100.7	106.8
1926	120.1	87.0	101.4	99.3
1927	87.6	112.8	98.9	95.2
1928	118.7	80.4	105.0	102.1
1929	90.0	112.1	100.9	100.0
1930	112.4	71.3	76.6	86.3
1931	121.4	55.2	56.2	59.6
1932	104.6	44.1	42.3	44.5
1933	102.1	58.2	58.4	47.9
1934	105.3	60.0	64.0	61.6
1935	117.1	60.6	73.6	74.0
1936	101.2	73.9	89.6	73.1
1937	142.0	58.1	82.2	82.9
1938	125.5	52.2	76.2	65.1
1939 1/	137.1			

1/ Based on preliminary indications.

With rapid increase in fruit production during recent years the export outlet has become of increasing importance in the marketing of United States fruit crops. Although trade restrictions of various kinds in a number of countries have tended to curtail United States fruit exports during the last 10 years, the total volume exported in recent years is much greater than it was in the 5-year period immediately preceding the World War.

For the 1939-40 marketing season the United States, Canada, and Europe have relatively large supplies of fruits. The average-to-large crops produced in Europe this season have tended to restrict imports during the early months of the season. This situation has been particularly unfavorable for apple exports from the United States and Canada.

In addition, it appears that exports may be restricted further by an unfavorable exchange rate with Great Britain, France and Canada. Import licenses are now required by the British Government for all fresh, canned, and dried fruit except fresh apples, pears, bananas, oranges, grapefruit, limes, and lemons. It seems almost certain that some foreign markets will be closed to the United States and others may restrict imports of fruit and fruit products because of the necessity of conserving exchange and the scarcity of shipping space. Increased ocean-freight and insurance rates may also have an important effect.

It is probable that exports of fresh apples and pears from the United States during the 1939-40 season will be considerably smaller than the relatively large volume exported last year. A large part of the United States exports of citrus fruits usually goes to Canada. It seems probable, however, that exports to Canada this season will be no larger than usual and that exports to European countries will be considerably less than those of recent years.

Large supplies of dried fruits are available this season but the present export prospects are unfavorable. The United Kingdom, the most important foreign market for dried fruit, has placed in operation a number of import-control measures which, for the present at least, will curtail imports from the United States. This situation may be changed somewhat if it becomes difficult for the United Kingdom to obtain supplies from the Mediterranean countries, Australia, and South Africa. Shipments of these commodities to central Europe and the Baltic States may be negligible. Exports to Scandinavian countries, which have increased sharply in recent years, probably will be curtailed because of naval operations in the North Sea.

The trend in the volume of United States fruit exports from 1909 to 1938 is indicated by the index numbers shown in the following table:

Volume of United States fruit exports, 1909-38
(Index numbers 1909-13 = 100)

Year 1/	Exports 2/	Year	Exports	Year	Exports
1909	76	1919	122	1929	216
1910	89	1920	108	1930	337
1911	101	1921	105	1931	305
1912	136	1922	121	1932	255
1913	98	1923	214	1933	248
1914	119	1924	184	1934	197
1915	109	1925	211	1935	276
1916	101	1926	301	1936	192
1917	63	1927	258	1937	283
1918	111	1928	372	1938	316

1/ Year beginning July 1.

2/ Index includes fresh apples, dried apples, dried apricots, oranges, raisins and prunes.

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THE ORANGE OUTLOOK FOR 1940

Summary

The United States production of winter oranges for 1939-40 is expected to approximate the record winter orange crop of 1938-39. Florida oranges will make up a larger proportion of the winter orange production than for last season. The production of California Valencias is not determinable at this time. An anticipated increase in the level of consumer demand is a favorable factor in prospect for the 1939-40 season, but a probable reduction in exports due to conditions arising out of the European war and heavier competition from larger supplies of apples than in 1938-39 are unfavorable factors affecting the outlook for the current season.

Domestic orange production has increased rapidly during the last 20 years. The 1938-39 crop of oranges amounted to 79,500,000 boxes, compared with an average crop of 61,400,000 boxes for the period 1934-37 and 30,100,000 boxes during the 5 years 1919-23. Since about 40 percent of the bearing orange and tangerine trees in the United States have not yet reached full production, additional increases in the average level of orange production may be expected over the next 5 years, provided the producing capacity of the orange groves is not impaired by neglect or by damage arising out of abnormal weather conditions. Production of Valencias and other late varieties is expected to increase faster than early and mid-season varieties.

Exports of oranges from the United States have risen sharply in the last two seasons, primarily because of smaller exports from Spain and increased production in this country. On the average, further increases in United States exports during the next few years do not appear to be likely because of the prospect for a continued upward trend in foreign production of oranges and the probability of a recovery in exports from Spain.

The increased orange production in recent years has been accompanied by a decline in orange prices, with prices to growers reaching a record low during 1938-39. Inasmuch as the average United States crop during the next 5 years is expected to be larger than that of the last 5 years, it appears probable that prices of oranges will continue to be on a relatively low level compared with commodity prices generally.

Domestic Production Trend Upward in Recent Years

Orange production in the United States has more than doubled in the last 20 years. The average crop has risen from 30,000,000 boxes during 1919-23 to 61,000,000 boxes for the period 1934-37, with a record crop of 79,500,000 boxes in 1938-39. Production trends for the principal areas are shown by the following data:

United States orange production by areas, averages, 1919-23, 1924-28, 1929-33, 1934-37, annual, 1938 and 1939

Period	California		Florida	Arizona	Texas	Other areas 1/	U. S. total
	Navels & misc.	Valencias					
	(Thousand boxes)						
Averages							
1919-23	11,102	8,728	9,997	77	7	210	30,121
1924-28	13,848	12,678	11,654	75	51	259	38,565
1929-33	13,985	16,926	15,607	145	357	367	47,387
1934-37	15,843	22,556	21,200	245	1,217	385	61,446
Annual							
1938-39	17,900	23,870	33,900	430	2,815	566	79,481
1939-40 2/	14,960	3/	35,900	425	2,650	394	3/

1/ Includes Alabama, Mississippi, and Louisiana.
2/ As indicated October 1, 1939.
3/ Estimate not available before December 1.

Approximately 48 percent of the 49,360,000 boxes by which 1938-39 orange production exceeded the average for 1919-23 was due to greater production in Florida, while 31 percent of the increase was accounted for by California Valencia oranges. California Navel and miscellaneous oranges contributed 14 percent to the increase in production between the two periods and the remaining States contributed only 7 percent.

A tendency for an increasing proportion of the orange crop to be marketed during the high-price months, extending from May through September, has accompanied the market upward trend in production. This shift in the marketing season has been accomplished by the planting of more late-variety trees, and has been especially noticeable in California where the increase in the production of California Valencias has been very rapid.

On the basis of October 1 conditions, the United States 1939-40 production of oranges, excluding California Valencias, will total 54,300,000 boxes compared with 55,611,000 boxes last season, and the 1933-37 average of 37,294,000 boxes. Orange production in Florida will contribute a larger proportion of the winter orange crop this season than in 1938-39 and the

crop in that State is expected to be the largest on record. The size of the 1939-40 California Valencia orange crop is not yet definitely determinable on the basis of available information. The October 1 condition of this crop, at 71 percent of normal, was lower than the condition of 79 percent a year earlier.

Number of Bearing Trees Increasing

The number of bearing orange trees in the United States has increased rapidly since 1920. According to census enumerations, there were over 33,000,000 bearing orange trees in the 7 States of California, Florida, Arizona, Texas, Alabama, Mississippi, and Louisiana in 1935, compared with only 14,000,000 in 1920. The increase in the number of bearing trees between 1930 and 1935 was particularly rapid, with 9,000,000 trees coming into production during that period. The trends in the numbers of bearing, non-bearing, and total orange trees in the United States, as reported in census enumerations, are shown in the following table:

Oranges: Number of bearing, non-bearing, and total trees in the United States, census years, 1920, 1925, 1930, and 1935

Year	Bearing	Non-bearing	Total
	(Thousands of trees)		
1920	14,438	5,225	19,663
1925	21,734	8,600	30,334
1930	24,362	7,584	31,946
1935	33,115	5,806	38,921

Estimates based on recent tree surveys indicate there were about 38,300,000 bearing orange trees (including tangerines) in the 4 States of California, Florida, Texas, and Arizona as of July 1939. This represented only a slight increase over July 1938, but an increase of about 20 percent since 1935.

Complete estimates of the present number of non-bearing orange trees (trees under 5 years of age) in the United States are not available at this time. Such information as is at hand indicates that the average number of orange trees planted per year since 1935 has been below the high average level of plantings during the period 1920-35. For this reason it is expected that the rate of increase in the number of bearing orange trees over the next 5 years will be much lower than the average increase in the last 10 years.

Large Number of Young Bearing Trees

The estimated number of bearing orange trees (including tangerines) of various ages in the principal producing States in July 1939 was as follows:

Oranges and Tangerines: Number of bearing trees in California, Florida, Texas, and Arizona, as of July 1939, classified by varietal and age groups

Age group	Varietal group: Navel and other early varieties		Valencia and other late varieties		Tangerines		All varieties	
	1	2	3	4	5	6	7	8
	1,000 trees	Percent	1,000 trees	Percent	1,000 trees	Percent	1,000 trees	Percent
5 years old	281	2	341	2	5	*	627	2
6-10 years old	2,580	15	4,221	22	184	10	6,985	18
11-15 years old	3,311	19	4,142	22	643	37	8,096	21
16-20 years old	2,261	13	3,517	18	541	31	6,319	16
21 years & over	8,925	51	6,959	36	388	22	16,272	43
Total	17,358	100	19,180	100	1,761	100	38,299	100

* Less than 1 percent.

It is significant that approximately 40 percent of the bearing orange trees in the principal producing areas is less than 16 years old. The trees in this age group, for the most part, have not yet reached full producing capacity and are in that stage of development where yields per tree increase rapidly as the trees become older. It is important to note further that nearly 60 percent of the trees under 16 years of age is composed of Valencias and other late varieties.

Future Production to be Higher

As a large percentage of the present number of orange trees is composed of young trees that have not reached full bearing capacity, further increases in production may be expected in the future. Under average growing conditions and with reasonable care, the present orange acreage is capable of producing an average crop during the next 5 years in excess of 80,000,000 boxes. Average production amounted to 65,000,000 boxes during 1934-38, and 77,100,000 boxes for the two seasons of 1937 and 1938.

There will be a further shift in production to the late varieties marketed during the months of May through September, for nearly 60 percent of the bearing trees under 16 years of age is composed of these varieties.

World Production Trend Upward

The most recent estimate of orange production in the principal countries placed the 1936-37 world crop at 228,000,000 boxes, compared with an average crop of 159,000,000 boxes for the period 1926-30 and 133,000,000 boxes during 1921-25.

Brazil, the United States, Palestine, Spain, Japan, and Egypt have made the greatest contributions to the rapid increase of production. The rate of increase in production of oranges in all foreign countries together has been about the same as in the United States, and the United States accounted for approximately one-fourth of the world crop in 1935-36 and 1936-37, as was the case during the 5-year period ending in 1925-26. It is probable that the large United States orange crops of the last two seasons represented a larger proportion of the total world production. The larger volume of world production has augmented the quantities of oranges moving into world markets in all seasons of the year.

Further increases in foreign orange production are in prospect, especially in Palestine, Brazil, and South Africa. Recent reports indicate that damage to orange groves in Spain incident to the war there has been much smaller than earlier was believed to be the case.

Export Outlook Not Favorable

Exports of oranges from the United States amounted to 7,581,000 boxes during the 12 months ending with June 1939, compared with 5,932,000 boxes in 1937-38 and the 1930-34 average of 3,690,000 boxes. These increased exports have resulted primarily from reduced competition from Spanish oranges in European markets as a consequence of the war in Spain and from larger supplies in this country. Exports from Spain declined from an average of 26,500,000 boxes during 1930-34 to less than an equivalent of 5,000,000 boxes in 1938-39.

During the current season, the European war may be a factor which will restrict exports of oranges from the United States. From a longer time viewpoint, the prospective further increases in orange production in foreign countries probably will subject our exports to more intense competition, and exports from Spain no doubt will recover from their low levels of the last 2 years. An additional unfavorable factor is the tendency for foreign countries to lengthen their marketing seasons. Palestine for example, is increasing its production of Valencia lates, which can be shipped as late as May or June. On the other hand, Brazil has been increasing its shipments at the beginning of its shipping season in the early spring months. Shifts of this nature which tend to increase foreign

shipments of oranges during months in which they were formerly relatively light indicate still greater competition from foreign countries to United States exports of oranges.

During the five seasons ending in 1936-37, exports to Canadian markets amounted to nearly 60 percent of the total United States exports of oranges. The bulk of the exports to countries other than Canada are shipped to the United Kingdom.

Juice and Byproduct Uses Increasing

The upward trend in orange production in the United States has led to the utilization of significant quantities of oranges for the manufacture of juice, canned oranges, fruit salads, and various byproducts. An average of 5,938,000 boxes of oranges was used for these purposes in the two seasons beginning in 1937 and 1938, compared with an average of 2,904,000 boxes for 1934-35 and 1935-36. The manufacture of these orange products was confined largely to California and Arizona before 1937-38, but Florida is becoming of increasing importance. The quantities of oranges processed in recent years are shown by the following data.

Oranges: Quantities used in the manufacture of juice, canned products, and various byproducts, California, Arizona, and Florida, 1934-35 to 1938-39

Season	California and Arizona 1/			Florida 2/	Total 3 States
	Navels and misc.	Valencias	All		
	1,000 boxes	1,000 boxes	1,000 boxes	1,000 boxes	1,000 boxes
1934-35	693	2,997	3,690	178	3,868
1935-36	487	1,240	1,727	213	1,940
1936-37	1,461	4,411	5,872	620	6,492
1937-38	669	4,022	4,691	1,250	5,941
1938-39 3/	1,148	3,600	4,748	1,188	5,936

1/ Estimates compiled by California-Arizona Orange-Grapefruit Agency. These figures include some oranges which were shipped to byproduct plants and dumped by them.

2/ Estimates obtained from the following sources:
1934-35 - Florida Citrus Control Committee.
1935-36 - Statistical Bulletin, Florida Citrus Exchange.
1936-37 - Florida Citrus Control Committee.
1937-38 - Wilson, H. F., "Marketing Florida Citrus - Summary of 1937-38 Season."
1938-39 - California: California-Arizona Orange-Grapefruit Agency. Florida: Wilson, H. F., "Marketing Florida Citrus - Summary of 1938-39 Season."

3/ Preliminary.

Orange Prices at Low Levels

The large production of oranges in this country during recent years has been accompanied by a decline in the price of oranges, with prices to growers reaching a record low during the 1938-39 season. According to a preliminary estimate, growers received $0.87 per box for the 1938-39 crop, or 29 cents less per box than in 1937-38. During the 5-year period 1933-37 producers received an average price of $1.45 per box, compared with $1.30 for 1928-32 and $2.81 in the 5 seasons 1923-27.

Year-to-year changes in orange prices are affected by many factors, among which are supplies of oranges, the level of consumer incomes, supplies of apples, and the quality of oranges produced. During 1939-40 it is expected that consumer income on the whole will be greater than for last year. On the other hand, larger supplies of apples as well as a probable decline in orange exports will be unfavorable factors this season.

If the indicated increases in orange production over the next several years materialize, it appears probable that prices received by growers during the next 5 years will continue on a low level. Of course, if all commodity prices should rise materially, the price of oranges no doubt also would increase, though perhaps not so rapidly as commodity prices generally.

ORANGES: Production by States and average price received by growers - 7 States, 1919-38

Crop season	Production								Average price 7 States 2/
	California 1/	Florida	Texas	Arizona	Alabama	Louisiana	Mississippi	Total 7 States	
	Thousand boxes								Dollars
1919-20	17,073	7,533	9	80	20	37	31	24,783	2.81
1920-21	22,547	9,457	5	60	82	42	25	32,218	2.07
1921-22	13,921	8,371	5	80	82	50	30	22,539	2.78
1922-23	21,286	10,897	10	81	190	60	45	32,569	2.07
1923-24	24,324	13,725	6	86	225	75	55	38,496	1.68
1924-25	18,535	11,639	17	60	2	75	3/	30,328	3.67
1925-26	24,200	10,044	10	86	130	100	27	34,597	2.80
1926-27	28,167	11,512	41	75	75	150	42	40,062	2.72
1927-28	22,737	9,487	70	54	110	200	50	32,708	3.77
1928-29	38,994	15,588	115	99	85	220	30	55,131	1.83
1929-30	21,483	10,304	261	137	212	187	37	32,621	3.36
1930-31	35,470	19,211	250	139	3	287	2	55,362	1.51
1931-32	34,900	14,220	520	145	80	245	54	50,164	1.28
1932-33	34,265	16,200	335	147	120	278	80	51,415	1.00
1933-34	28,439	18,100	430	155	3	245	2	47,374	1.48
1934-35	45,047	17,600	650	170	140	293	88	63,988	1.23
1935-36	32,809	18,000	777	340	2	244	1	52,073	1.58
1936-37	29,827	22,500	2,000	220	56	309	26	54,938	1.82
1937-38	45,914	26,700	1,440	350	76	238	37	74,785	1.16
1938-39*	41,770	33,900	2,815	430	96	385	85	79,481	.87

* Preliminary.
1/ Production in California includes the following quantities which had no farm value: 1933-34 - 977,000 boxes; 1934-35 - 1,395,000; 1935-36 - 614,000; 1936-37 - 1,023,000; 1937-38 - 662,000 boxes.
2/ Average price from all methods of sale.
3/ Production negligible.

ORANGES: Production in California and Florida by varietal groups, 1919-1938

Crop season	California 1/			Florida 2/			
	Valencias	Navels and miscellaneous	Total	Early and midseason	Valencias	Tangerines	Total
	Thousand boxes						
1919-20	7,984	9,089	17,073	-	-	-	7,533
1920-21	9,942	12,605	22,547	-	-	-	9,457
1921-22	5,904	8,017	13,921	-	-	-	8,371
1922-23	9,676	11,610	21,286	-	-	-	10,897
1923-24	10,136	14,188	24,324	-	-	-	13,725
1924-25	7,297	11,238	18,535	-	-	-	11,639
1925-26	12,475	11,725	24,200	-	-	-	10,044
1926-27	13,983	14,184	28,167	-	-	-	11,512
1927-28	10,690	12,047	22,737	-	-	-	9,487
1928-29	18,947	20,047	38,994	-	-	-	15,588
1929-30	11,213	10,270	21,483	-	-	-	10,304
1930-31	18,228	17,242	35,470	-	-	-	19,211
1931-32	19,400	15,500	34,900	-	-	-	14,220
1932-33	19,324	14,941	34,265	-	-	-	16,200
1933-34	16,465	11,974	28,439	9,600	6,500	2,000	18,100
1934-35	26,057	18,990	45,047	10,700	4,900	2,000	17,600
1935-36	18,340	14,469	32,809	9,600	6,300	2,100	18,000
1936-37	16,593	13,234	29,827	12,000	7,500	3,000	22,500
1937-38	29,234	16,680	45,914	13,700	10,700	2,300	26,700
1938-39*	25,870	17,900	41,770	17,500	13,000	3,400	33,900

* Preliminary.
1/ Production in California includes the following quantities which had no farm value: Valencias, 1933-34 - 572,000 boxes; 1934-35 - 717,000; 1935-36 - 354,000; 1936-37 - 529,000; 1937-38 - 346,000 boxes. Navel and miscellaneous, 1933-34 - 405,000; 1934-35 - 678,000; 1935-36 - 260,000; 1936-37 - 494,000; 1937-38 - 316,000 boxes.
2/ Separation by varietal groups not available for Florida before the 1933-34 season.

ORANGES: Estimated Bearing Trees, by States and Age Groups, as of July 1939 1/

Navel and Other Early Varieties

State	Bearing acres 5 years old and over	Bearing trees 5 years old and over	Bearing Trees - By Age Groups						
			5 years old	6 - 10 years old	11 - 16 years old	16 - 20 years old	21 years old and over	5-15 years old - not in full production	16 years old and over - at or near full production
	Acres		Thousand trees						
California 2/	93,778	8,513	101	714	1,309	566	5,836	2,134	6,392
Florida 3/	116,215	7,554	151	1,319	1,460	1,573	3,048	2,930	4,624
Texas 4/	13,954	921	12	308	498	103*	-	818	103
Arizona	4,122	367	17	239	44	16	51	300	67
Total 4 States	231,069	17,358	281	2,580	3,311	2,281	8,935	6,172	11,186

Valencia and Other Late Varieties

California 2/	139,000	12,232	229	3,797	3,113	1,392	5,496	5,144	7,088
Florida 3/	93,355	6,068	96	1,039	1,317	1,858	1,458	2,752	3,316
Texas 4/	9,561	631	8	198	360	65*	-	566	65
Arizona	2,832	249	8	187	47	2	5	242	7
Total 4 States	244,748	19,180	341	4,221	4,142	3,317	6,959	8,704	10,476

All Varieties

California 2/	235,778	20,748	330	3,511	3,427	2,158	11,332	7,288	13,480
Florida 3/	209,570	13,622	247	2,358	3,077	3,434	4,506	5,682	7,940
Texas 4/	23,515	1,552	20	506	858	168*	-	1,384	168
Arizona	6,954	616	25	426	91	18	56	542	74
Total 4 States	475,817	5/36,538	622	6,801	7,453	5,778	15,884	14,876	21,662

* 16 years old and older.

1/ Estimates based upon surveys by age and varietal groups made in Florida in 1934, Arizona in 1935; California in 1938, Texas in 1934 and 1937. Estimates do not include tangerines.

2/ California trees calculated from acres at the rate of 88 trees per acre.

3/ Florida acres calculated from trees at the rate of 65 trees per acre.

4/ Texas acres calculated from trees at the rate of 66 trees per acre.

5/ Total bearing trees in the United States amounted to about 37,617,000 trees. In addition to the total for the four States shown above, it is estimated that there were 1,079,000 bearing trees in Alabama, Mississippi, and Louisiana, as of July 1939. Most of the trees in Alabama and Mississippi consist of Satsumas; those in Louisiana are mostly Navels.

ORANGES: Tree numbers, U. S. Census enumerations

STATE	CENSUS 1920		CENSUS 1925		CENSUS 1930		CENSUS 1935	
	Non-bearing	Bearing	Non-bearing	Bearing	Non-bearing	Bearing	Non-bearing	Bearing
	Trees	Trees	Trees	Trees	Trees	Trees	Trees	Trees
California	2,599,707	10,300,068	1,762,027	13,870,018	2,539,312	14,239,607	2,634,579	17,342,937
Florida	2,341,341	3,684,327	6,046,261	7,305,722	3,421,837	9,002,362	2,076,538	13,355,512
Texas	41,551	14,350	134,878	69,336	764,006	366,431	586,976	1,165,520
Arizona	13,362	46,952	54,185	77,246	358,914	96,564	238,051	389,120
Alabama	165,536	260,294	359,126	262,669	161,377	432,632	62,300	277,572
Mississippi	37,350	28,127	57,109	11,406	111,981	69,703	21,290	236,639
Louisiana	26,356	104,382	135,931	137,456	226,848	154,946	185,970	347,872
Total	5,225,203	14,438,500	8,599,517	21,733,873	7,584,275	24,362,235	5,805,704	33,115,172

TANGERINES: Estimated Bearing Trees, by States and Age Groups, as of July 1939 1/

State	Bearing acres 5 years old and over	Bearing trees 5 years old and over	Bearing Trees - By Age Groups						
			5 years old	6 - 10 years old	11 - 15 years old	16 - 20 years old	21 years old and over	5 - 15 years old - not in full production	16 years old and over mostly in full production
	Acres		Thousand trees						
California 2/	1,486	131	2	38	41	9	41	81	50
Florida 3/	24,354	1,583	2	124	584	526	347	710	873
Texas 4/	637	42	1	18	17	6*	-	36	6
Arizona	59	5	-	4	1	-	-	5	-
Total 4 States	26,536	1,761	5	184	643	541	388	832	929

* 16 years old and older.

1/ Estimates based upon surveys by age and varietal groups made in Florida in 1934, Arizona in 1935, California in 1938, Texas in 1934 and 1937.

2/ California trees calculated from acres at the rate of 88 trees per acre.

3/ Florida acres calculated from trees at the rate of 65 trees per acre.

4/ Texas acres calculated from trees at the rate of 66 trees per acre.

Oranges and mandarins: Estimated production in principal countries, average 1926-27 to 1930-31, 1931-32 to 1935-36, annual 1935-36 to 1938-39

Country	Average 1926-27 to 1930-31	Average 1931-32 to 1935-36	1935-36	1936-37	1937-38	1938-39 1/
	1,000 boxes	1,000 boxes	1,000 boxes	1,000 boxes	1,000 boxes	1,000 boxes
United States	43,177	53,003	52,073	54,938	74,785	79,481
Spain	37,358	33,775	29,149	2/	2/	2/
Brazil	12,346	33,611	35,469	36,716	2/	2/
China 3/	25,000	25,000	25,000	25,000	25,000	25,000
Palestine 4/	2,600	5,800	6,000	11,500	13,000	15,000
Japan	11,218	13,786	17,274	11,763	2/	2/
Italy	8,417	11,645	10,148	13,287	11,124	12,931
South Africa 4/	2,000	3,800	3,300	4,000	4,500	4,200
Mexico	5/ 3,262	3,499	3,552	4,582	4,633	2/
Algeria	1,834	2,212	2,417	2,802	2,803	2/
Australia	2,169	2,693	2,658	2,611	2,658	2/
Greece	678	1,072	1,090	1,691	1,545	1,601
Cyprus 4/	100	160	260	480	500	2/
Jamaica 4/	100	150	250	450	350	2/
New Zealand	5/ 5	6/ 25	25	33	2/	2/
Trinidad 4/	16	20	25	25	2/	2/
France	23	38	32	40	41	2/
Yugoslavia	2/	7/ 12	19	5	22	13
Dominica 4/	2	7	10	12	13	2/

Compiled by the Office of Foreign Agricultural Relations from official and trade sources and reports of the International Institute of Agriculture at Rome.

1/ Preliminary.
2/ Not available.
3/ Rough approximation.
4/ Estimated from exports.
5/ 4-year average.
6/ 1 year only.
7/ 2-year average.

Oranges and mandarins: Exports from principal countries, averages 1926-27 to 1930-31, 1931-32 to 1935-36, annual 1935-36 to 1937-38

Country	Average 1926-27 to 1930-31	Average 1931-32 to 1935-36	1935-36	1936-37	1937-38
	1,000 boxes	1,000 boxes	1,000 boxes	1,000 boxes	1,000 boxes
United States	3,770	3,906	4,210	2,488	1,506
Spain	26,353	27,195	25,240	14,004	1/ 3,243
Italy	3,695	2,922	2,339	4,505	
Palestine	2,334	4,918	4,992	9,191	9,573
Brazil	572	2,508	3,232	5,023	5,431
South Africa	1,171	2,199	2,393	3,704	3,189
Cyprus	92	137	230	400	403
Egypt	2/ 1	57	151	163	
Jamaica	53	86	104	347	239
Syria and Lebanon	2/ 120	39	76	196	501
Trinidad	9	16	19	20	

Compiled by the Office of Foreign Agricultural Relations from official sources.

1/ Half cases of 110 pounds. Approximate only, due to war conditions.

2/ One year only.

Release Date
November 13 - P. M.

THE GRAPEFRUIT OUTLOOK FOR 1940

Summary

Barring severe damage to trees by bad weather conditions, the trend in production of grapefruit during the next few years will continue upward. The expected increase in production will be most pronounced in the late, or seedless, varieties of grapefruit which predominate in Texas, California, and Arizona.

The bearing acreage of grapefruit in all producing areas has been increasing rapidly during recent years, and the trend of production has been sharply upward. Approximately 65 percent of the bearing grapefruit trees in the United States at the present time have not yet reached the age of full production. Roughly 80 percent of the bearing seedless grapefruit trees in the United States had not yet reached full production in 1939, while only 35 percent of the bearing trees of the early, or seeded, varieties were less than 16 years old and not in full production.

Assuming that growing conditions will be similar to the average of the last 10 years, and considering recent production trends and potential increases in bearing surface of the present number of trees, production during the next five marketing seasons probably will average one-third higher than during the last five seasons.

The large grapefruit crops produced since the 1935-36 season have returned prices to growers approximating the low prices received during the depression years of 1932 and 1933. The average price received by growers for grapefruit during the 1938-39 season was the lowest on record. Prices to grapefruit growers are expected to remain at relatively low levels during the next few years, unless the anticipated production is reduced as a result of extremely low yields or damage to the producing plant.

Exports of fresh grapefruit to European countries during the 1939-40 season are likely to be less than the 1938-39 exports as a result of the European war. Exports to other than European markets, however, are likely to be maintained. Purchasing power in Canada is expected to increase, and this may result in increased imports of grapefruit from the United States.

Grapefruit Acreage and Production Have Increased Rapidly

The upward trend in grapefruit production has been closely associated with the trend in number of bearing trees. Data indicating the grapefruit tree numbers in the United States by census years and the average production during corresponding periods are given in the following table:

GRAPEFRUIT: United States Tree Numbers and Average Production

Year	Bearing Trees	Marketing Seasons	Average Production
	1	2	3
	1,000 trees		1,000 boxes
1920	1,937	1919-20 to 1922-23	7,043
1925	3,473	1923-24 to 1927-28	9,493
1930	5,107	1928-29 to 1932-33	14,730
1935	10,079	1933-34 to 1937-38	22,987

The number of bearing trees in 1935 was nearly twice the number in 1930 and over five times the number in 1920. Average production during the period 1933-34 to 1937-38 was 50 percent larger than during the period 1928-29 to 1932-33 and more than three times the average production during the period 1919-20 to 1922-23.

Acreage surveys conducted in the producing areas during recent years indicate a total of over 13,200,000 bearing trees (5 years old and over) in groves as of July 1939. Of this total, approximately 65 percent were from 5 to 15 years of age and had not yet reached full production. Moreover, about 36 percent of the bearing trees were from 5 to 10 years old. Increases in productive capacity of the large number of young grapefruit trees as they grow older will contribute to increasingly larger supplies in the future.

Continued Increase in Production Anticipated

Large increases in production may be expected in all states during the next few seasons. In Texas and Arizona over 90 percent of the bearing trees have not yet reached full production, while in California two-thirds of the bearing trees are less than 16 years old. The rate of increase in production in Florida during the next few years is not expected to be so rapid as in the other areas since more than two-thirds of the bearing trees in that state have reached the age of full production. Production of grapefruit in Texas, Arizona, and California consists chiefly of the late, or seedless, varieties; and production of seedless grapefruit will contribute an increasingly larger proportion of the total United States grapefruit supplies during the next few years. Only about 20 percent of the bearing seedless grapefruit trees in this country have reached full production in contrast to nearly 70 percent of the bearing seeded grapefruit trees now in full production.

The exact course of grapefruit production is difficult to forecast in view of the hazards of hurricanes and freezes to which the crops may be subjected. Assuming average growing conditions of the last 10 years, however, and allowing for the potential increases in the bearing surface of young trees, the present bearing acreage would permit an average production during the next 5 years which may approach 40,000,000 boxes. This estimate may be modified by

neglect and abandonment of groves; for, in the absence of a marked increase in purchasing power of consumers, such large crops of grapefruit will probably result in low prices and low returns to growers.

As the production of grapefruit has expanded, increasing quantities of grapefruit have been utilized in other than fresh commercial channels. United States production averaged 23,200,000 boxes during the period 1933-34 to 1937-38. Of this total, 62 percent was shipped to commercial fresh channels, 28 percent processed for commercial channels, 5 percent purchased by the Federal Surplus Commodities Corporation, and 5 percent consumed locally or eliminated in the production areas. Of the 43,670,000-box crop in 1938-39, 47 percent was shipped to commercial fresh channels and 32 percent used in the canning of juice and segments for commercial outlets. In addition, approximately 3,400,000 boxes, or 8 percent of the crop, were bought by the Federal Surplus Commodities Corporation for relief distribution while an equivalent amount was diverted from normal channels under industry diversion programs. The remainder was consumed locally in the production areas or eliminated from commercial channels.

Grower Prices Low in 1938-39

Prices received by growers for grapefruit during the 1938-39 season were the lowest on record in all producing areas. It is estimated that prices to growers for grapefruit in all areas averaged 42 cents per box (including picking and hauling to the packing houses or canning plants) during the 1938-39 season. This average may be compared with an average of 84 cents per box to growers during the five seasons ending in 1937-38. Prices to grapefruit growers are expected to remain at relatively low levels during the next few years, unless the anticipated production is reduced as a result of extremely low yields or damage to the producing plant.

Grapefruit for Canning

The canning of grapefruit has increased in importance during recent seasons; and in the 1938-39 season approximately 14,000,000 boxes of grapefruit were processed for commercial sale in comparison with the previous record volume of 10,100,000 boxes in the 1937-38 season.

The commercial pack of grapefruit sections in Florida, Texas, California-Arizona, and Puerto Rico increased from about 1,000,000 cases (equivalent cases of 24 No. 2 cans) to 4,360,000 cases in 1936-37 and amounted to approximately 4,400,000 cases in 1938-39. The total pack of grapefruit juice (including quantities sold commercially and for relief distribution) amounted to the record of 12,100,000 cases in 1938-39, in contrast to 6,430,000 cases in 1936-37 and 205,000 cases in 1928-29.

Grapefruit Export Outlook Less Favorable

Imports of fresh grapefruit into European countries are likely to be curtailed as a result of the European war. The United Kingdom is the only European country in which grapefruit is consumed on any considerable scale and

even there the fresh fruit is still considered a semi-luxury by most consumers. Palestine has a relatively large crop this year, and if the war does not interfere with shipping, it is expected to supply European markets throughout the winter season. Shipment of United States grapefruit to Europe during next summer will depend to a considerable extent upon the supplies available from Brazil and South Africa but shipments from those areas are likely to be affected if the war continues.

Exports to other than European markets are likely to be maintained this season. Purchasing power in Canada is expected to expand as a result of the increased industrial activity incident to the war, and this may mean increased imports of United States grapefruit.

Although there has been an increase in quantities of grapefruit consumed in European countries during the last few years, the increase in exports of fresh grapefruit to these countries has not been shared by the United States. Exports of fresh grapefruit from the United States to countries other than Canada have been declining for a number of years despite the large increase in production in this country. During the 1938-39 season 400,000 boxes of fresh grapefruit were exported to countries other than Canada, compared with average exports of 465,000 boxes during the period 1932-33 to 1936-37, and 640,000 boxes during the preceding 5-year period. The decline in the proportion of world grapefruit exports shared by the United States is due to the increasing production of grapefruit in other areas, particularly Palestine, the Union of South Africa, and Brazil. The upward trend in production in these countries and consequent upward trend in their exports may be expected to continue for several seasons.

United States exports of canned grapefruit sections, however, have expanded rapidly during the last few years. The United Kingdom is by far the most important foreign outlet and in the recent Anglo-American trade agreement the duty on the canned fruit was removed altogether. Normally the bulk of the canned grapefruit imported in the United Kingdom is consumed by the restaurant and hotel trade. Consumption by these sources may be reduced as a result of the war. If the canned product is substituted for the fresh in household use on any appreciable scale, however, exports of canned grapefruit may be maintained or increased.

Exports of canned grapefruit segments to all countries during the 9-month period November to July of the 1938-39 season totaled 1,477,000 cases. This quantity may be compared with the previous record volume of 1,200,000 cases during the entire 1937-38 season.

GRAPEFRUIT: Production by States and Average Farm Price, 4 States, 1919-20 to 1938-39

Crop Season	Production					Price per Box Rec'd by Growers
	Florida	California 1/	Texas	Arizona	Total 4 States	Average 4 States 2/
	1	2	3	4	5	6
	thousand boxes					dollars
1919-20	5,898	363	3	29	6,293	1.85
1920-21	6,142	395	5	34	6,576	1.90
1921-22	6,644	360	8	35	7,047	1.78
1922-23	7,766	394	35	60	8,255	1.46
1923-24	8,936	363	65	95	9,459	.84
1924-25	9,177	387	301	105	9,970	1.35
1925-26	7,660	600	200	150	8,610	2.26
1926-27	8,693	672	361	120	9,846	1.64
1927-28	8,158	720	524	176	9,578	2.56
1928-29	11,314	972	753	211	13,250	1.39
1929-30	8,274	1,000	1,530	365	11,169	2.22
1930-31	16,109	1,290	1,135	400	18,934	.92
1931-32	10,786	1,431	2,480	450	15,147	.99
1932-33	11,800	1,350	1,385	614	15,149	.74
1933-34	10,700	1,713	1,140	800	14,353	.95
1934-35	15,200	2,167	2,760	1,240	21,367	.70
1935-36	11,500	2,267	2,762	1,800	18,329	1.05
1936-37	18,100	1,310	9,630	1,400	30,440	.78
1937-38	14,600	1,943	11,800	2,750	31,093	.68
1938-39* 3/	23,600	1,824	15,670	2,700	43,794	.42

GRAPEFRUIT: Production in Florida by Varietal Groups, 1933-34 to 1938-39

Crop Season	Production 4/		
	Seedless	Other	Total
	1	2	3
	thousand boxes		
1933-34	2,800	7,900	10,700
1934-35	4,100	11,100	15,200
1935-36	4,000	7,500	11,500
1936-37	6,000	12,100	18,100
1937-38	5,500	9,100	14,600
1938-39*	7,900	15,700	23,600

* Preliminary.

1/ Production in California includes the following quantities which have no farm value: 1934-35 - 181,000 boxes; 1935-36 - 34,000 boxes; 1936-37 - 300,000 boxes; 1938-39 - 70,000 boxes.

2/ Average price from all methods of sale.

3/ Includes 1,650,000 boxes in Florida, 1,700,000 boxes in Texas, 230,000 boxes in Arizona, and 70,000 boxes in California which have no farm value.

4/ Separation by varietal groups not available for Florida before the 1933-34 season.

GRAPEFRUIT: Tree Numbers, U. S. Census Enumerations

STATE	CENSUS 1920		CENSUS 1925		CENSUS 1930		CENSUS 1935	
	Non-bearing	Bearing	Non-bearing	Bearing	Non-bearing	Bearing	Non-bearing	Bearing
	1	2	3	4	5	6	7	8
	- trees -		- trees -		- trees -		- trees -	
Florida	963,336	1,681,481	951,909	2,969,910	938,874	3,595,155	493,438	4,929,128
Texas	74,039	5,454	315,694	159,576	2,198,614	714,735	1,856,735	3,438,420
California	81,873	231,136	251,616	304,262	494,496	619,561	431,277	980,880
Arizona	12,768	18,819	14,568	38,988	495,254	177,068	297,478	731,032
Total	1,132,016	1,936,890	1,533,787	3,472,736	4,127,238	5,106,519	3,078,928	10,079,460

Number of Grapefruit Trees in Certain States by Age Groups
As of July 1939 1/

State	Bearing Acres 5 Years Old & Over	Bearing Trees 5 Years Old & Over	Bearing Trees - By Age Groups: 5 Years Old	6-10 Years Old	11-15 Years Old	16-20 Years Old	21 Years Old & Over	5-15 Years Old Not in Full Production	16 Years Old & Over At or Near Full Production
	1	2	3	4	5	6	7	8	9
	acres	- - thousand trees - -							
EARLY VARIETIES									
Florida	54,169	3,521	23	355	387	813	1,943	765	2,756
California	1,501	123	19	32	34	18	20	85	38
Texas	8,864	585	3	207	296	79*	--	506	79
Arizona	152	14	--	4	2	1	7	6	8
Total 4 States	64,686	4,243	45	598	719	911	1,970	1,362	2,881
LATE VARIETIES (SEEDLESS)									
Florida	30,646	1,992	37	432	559	524	440	1,028	964
California	16,692	1,369	69	524	332	218	226	925	444
Texas	67,712	4,469	35	2,153	1,957	324*	--	4,145	324
Arizona	13,631	1,159	34	851	210	37	27	1,095	64
Total 4 States	128,681	8,989	175	3,960	3,058	1,103	693	7,193	1,796
ALL VARIETIES									
Florida	84,815	5,513	60	787	946	1,337	2,383	1,793	3,720
California	18,193	1,492	88	556	366	236	246	1,010	482
Texas	76,576	5,054	38	2,360	2,253	403*	--	4,651	403
Arizona	13,783	1,173	34	855	212	38	34	1,101	72
Total 4 States	193,367	13,232	220	4,558	3,777	2,014	2,663	8,555	4,677

* 16 years old and older.

1/ Estimates based upon surveys by age and varietal groups made in Florida in 1934; Arizona in 1935; California in 1938; Texas in 1934 and 1937. Florida acres calculated from trees at the rate of 65 trees per acre; California, 82 trees per acre; Texas, 66 trees per acre.

Release date
Nov. 13 - P. M.

THE LEMON OUTLOOK FOR 1940

Summary

Average annual production of lemons during the next 5 years probably will be about 10,500,000 boxes. Productive capacity of a large part of the present bearing acreage is expected to increase during this period, and total bearing acreage probably will increase by about 20 percent. Lemon production during the 1939-40 season is expected to be somewhat smaller than the record 11,782,000-box crop produced in 1938-39, but considerably larger than the 1933-37 average of 8,500,000 boxes.

Although production has increased at a relatively rapid rate for the last 15 years, the average price per box has declined only slightly. Marketing prospects for California lemons during the 1939-40 season appear to be somewhat better than marketing conditions during the season just passed. In view of a probable average annual production of over 10,000,000 boxes during the next 5 years, however, it seems probable that either consumption must be developed still further in the United States, or foreign markets must be expanded, if the present level of returns to growers is to be maintained.

Average annual production of lemons in Italy during the 5-year period, 1933-34 to 1937-38, was approximately 25 percent less than during the preceding 5 years. World production has declined since the record 1932-33 crop, owing chiefly to the reduction in Italy, but a further material decline in the world crop is not likely to occur unless Italian production continues to decrease at a rate similar to that of the period 1933-34 to 1937-38.

Annual exports of lemons from the United States during the 5-year period, 1933-37, averaged 50 percent more than during the preceding 5-year period. And in 1938, exports from the United States totaled 798,000 boxes -- more than double the 1933-37 average. The possibility of further increases in exports in 1940 will depend largely upon the extent to which Italian exports are diverted from the United Kingdom to Central Europe as a result of the present European war. Exports from Italy in recent years have declined along with production. The 1933-37 average was 8 percent below the average for the previous 5-year period.

Imports of lemons into the United States have declined during recent years, and are relatively unimportant at present.

Bearing lemon acreage in California in 1939 is estimated at approximately 55,200 acres, while nonbearing acreage, exclusive of 1939 plantings, is placed at approximately 10,600 acres. Forty-three percent of all trees now in bearing are between the ages of 5 and 15 years, and have not yet reached full producing capacity.

Bearing Acreage Increasing Rapidly

The bearing acreage of California lemons[1/] has increased rapidly in recent years. Between July 1936 and July 1939, increases in the acreage of bearing trees averaged more than 4,000 acres annually. On July 1, 1939, plantings of bearing lemon trees were estimated at 55,200 acres, compared with 51,500 acres a year earlier. More than 40 percent of this total bearing acreage is less than 16 years of age and has not yet reached full producing capacity.

Bearing Acreage of Lemon Trees
in the United States
1936-37 to 1939-40, incl.

Crop Year	Bearing Acreage
1936-37	42,756
1937-38	47,089
1938-39	51,501
1939-40	55,200

In addition to this large proportion of the present bearing acreage which consists of relatively young trees, there is a total of 10,600 acres, exclusive of 1939 plantings, which have not yet come into bearing. This nonbearing acreage amounts to 16 percent of the total plantings of all ages.

Most trees 16 years old or older have reached full producing capacity and cannot be expected to show further significant increases in bearing surface. Trees in the 5 to 15 year age-group, however, will continue to increase in bearing capacity for some time.

Trend of Production Expected to Continue Upward

Average annual production of lemons in the United States increased from 6,384,000 boxes for the 5-year period, 1923-24 to 1927-28, to an average of 8,554,000 boxes during the 5 seasons, 1933-34 to 1937-38 -- an increase of 34 percent. The preliminary estimate for the 1938-39 season is 11,782,000 boxes. Production during the 1939-40 marketing season is expected to be somewhat smaller than in 1938-39. But in view of the large proportion of the present bearing acreage which consists of relatively young plantings, together with the prospect that bearing acreage probably will increase by nearly 20 percent during the next 5 seasons, it seems probable that average annual production during that period will be about 10,500,000 boxes.

1/ Small quantities of lemons are produced in Florida and Texas, but commercial production is confined almost entirely to California.

World Production has Declined

World production of lemons declined from an average of 23,667,000 boxes during the 5-year period, 1928-29 to 1932-33, to an average of 21,761,000 boxes during the 5 years 1933-34 to 1937-38, inclusive. Production in Italy has declined since the record 1932-33 crop, chiefly because of extensive damage from mal secco, or dry rot.

Lemon Production: United States, Italy, Spain, and Estimated World Total, average 1923-24 to 1937-38, annual 1938-39

Season	United States	Italy	Spain	Estimated World Total 4/
	1,000 boxes			
5-year average: 1923-24 to 1927-28	6,384	10,821	1,250	19,438
5-year average: 1928-29 to 1932-33	7,216	13,647	1,612	23,667
5-year average: 1933-34 to 1937-38	3,554	10,102	2/1,565	21,761
1938-39 1/	11,782	11,328	3/	3/

1/ Preliminary. 2/ 4-year average. 3/ Not available. 4/ Exclusive of production in China and several minor producing countries.

Annual production in Italy during the 5-year period, 1933-34 to 1937-38, was approximately 25 percent less than during the preceding 5 years. Prior to the 1937-38 season, Italy was the world's leading lemon producing country. But in 1937-38 and 1938-39, Italian production was exceeded by production in the United States. Production in Italy for the 1938-39 season is indicated to be about 11,300,000 boxes.

The trend in world production during the next 5 years will depend largely on whether Italian production is curtailed further by disease damage during that time. No further material decline in the world crop is likely to occur, however, unless production in Italy continues to decrease at a rate similar to that of the period 1933-34 to 1937-38.

United States Exports Increasing

Total exports from all lemon-exporting countries totaled approximately 7,700,000 boxes during the calendar year 1935, the most recent year for which complete data are available. Although Italy has accounted for 80 to 90 percent of world exports of lemons, exports from that country during recent years have declined along with total production. The average for the 5-year period, 1933-37 was approximately 8 percent less than for the previous 5-year period.

Lemons: Exports from Italy and the United States, averages, 1928-32 and 1933-37; annual, 1938. (Calendar Years)

Country	Average 1928-32	Average 1933-37	1938
	(1,000 boxes)	(1,000 boxes)	(1,000 boxes)
Italy	7,114	6,573	1/
United States	240	364	798

1/ Not available.

During the same period United States exports increased over 50 percent; and in 1938, exports from the United States totaled 798,000 boxes, -- more than double the 1933-37 average. Shipments to foreign countries during the first 7 months of 1939 totaled 535,000 boxes.

Before 1935, Canada accounted for nearly all exports of California lemons. But since that time the United Kingdom has become an important customer. In 1938, exports to the United Kingdom were nearly as large as those to Canada. These two countries together accounted for 87 percent of the total for that year.

The export outlook for the 1939-40 season is uncertain, owing to military activities in Europe. The present volume of exports to Canada is likely to be maintained; and if, as a result of war developments, Italian exports should be confined to Central Europe, increased quantities of California lemons may be taken by the United Kingdom.

Imports of lemons into the United States have been relatively unimportant during recent years. Imports in 1938 amounted to 7,000 boxes compared with 73,000 boxes in 1937, and 85,000 boxes in 1936.

Diversion of Large Quantities to Byproducts Plants Expected to Continue

During the 5-year period, 1928-29 to 1932-33, an average of 22 percent of the total lemon production was diverted to the manufacture of various byproducts. For the 5 seasons, 1933-34 to 1937-38, an average of only 16 percent was so utilized. But during this period production increased by nearly one-fifth. Of the 10,747,000-box crop produced in 1934-35, 33 percent was diverted from the channels of fresh consumption.

Although large quantities of lemons are still used for byproducts in years of large production, the proportion of the total crop utilized in this way appears to be declining. With the prospect of larger crops during the next 5 years, however, it seems probable that processing plants will continue to account for large quantities of California lemons. But the prices received by growers for lemons so utilized are much lower than the prices received for fruit disposed of in the fresh market.

Prices to Growers Have Declined Slightly

Although California lemon production has increased rather rapidly during the past 15 years, prices to growers have declined only slightly. During the 5-year period, 1933-34 to 1937-38, returns to growers averaged $2.49 per box, compared with $2.54 during the preceding 5-year period, and an average of $2.76 during the 5 years, 1923-24 to 1927-28, inclusive. The preliminary estimate for the record 1938-39 crop is $2.15 per box.

Lemons: Prices Received by Growers
5-year averages, 1923-24 to 1937-38,
annual, 1938-39

Season	Average Price Received by Growers (dollars)
5-year average: 1923-24 to 1927-28	2.76
5-year average: 1928-29 to 1932-33	2.54
5-year average: 1933-34 to 1937-38	2.49
1938-39	1/ 2.15

1/ Preliminary.

In view of the fact that production for the 1939-40 season is not expected to be quite so large as during the season just passed, together with the prospect of increased consumer purchasing power during 1940, marketing conditions for California lemons during the 1939-40 season may be improved somewhat over conditions of last season. But in view of a probable average annual production of over 10,000,000 boxes during the next 5 years, it seems probable that either additional consumer demand for California lemons must be developed in the United States, or foreign markets must be further expanded, if the present level of returns to growers is to be maintained.

LEMONS and LIMES: Production, and average price received by growers - 1919-1938

Crop	LEMONS		LIMES	
	California		Florida	
Season	Production	Prices per box Received by Growers 1/	Production	Prices per box Received by Growers 1/
	Thousand boxes	Dollars	Thousand boxes	Dollars
1919-20	4,532	2.00	28	3.45
1920-21	5,641	2.92	26	3.10
1921-22	4,377	3.45	33	2.75
1922-23	3,783	3.30	35	2.90
1923-24	6,432	1.60	40	3.00
1924-25	5,301	3.48	36	3.00
1925-26	7,316	2.11	30	4.00
1926-27	7,452	2.81	12	6.50
1927-28	5,419	3.80	2/ --	--
1928-29	7,620	2.60	6	4.50
1929-30	6,109	3.70	8	5.50
1930-31	7,950	2.35	8	5.00
1931-32	7,696	1.95	9	4.50
1932-33	6,704	2.10	10	4.00
1933-34	7,295	2.35	12	3.00
1934-35	10,747	1.41	15	3.50
1935-36	7,787	3.18	12	4.75
1936-37	7,579	3.15	45	3.60
1937-38	9,360	2.35	110	3.50
1938-39*	11,782	2.15	95	3.10

1/ Average price from all methods of sale. 2/ Production negligible.
* Preliminary

LEMONS: Estimated bearing trees, by age groups, as of July 1939. 1/

State	Bearing acres 5 years old and over	Bearing trees 5 years old and over	Bearing Trees - By Age Groups						
			5-years old	6 - 10 years old	11 - 15 years old	16 - 20 years old	21 years old and over	5-15 years old - not in full production	16 years old and over - at or near full production
	Acres		Thousand trees						
California 2/	55,232	4,861	350	1,362	362	459	2,328	2,074	2,787

1/ Estimates based upon surveys by age groups made in 1938.
2/ Lemon trees calculated from acres at the rate of 88 trees per acre.

LEMONS and LIMES: Tree numbers, U. S. Census enumerations

Crop	State	CENSUS 1920		CENSUS 1925		CENSUS 1930	
		Nonbearing	Bearing	Nonbearing	Bearing	Nonbearing	Bearing
		Trees	Trees	Trees	Trees	Trees	Trees
Lemons	California	781,535	2,884,770	284,000	3,196,469	309,185	2,776,114
Limes	Florida	80,870	115,624	--	--	15,430	42,294

Release Date
November 13, P.M.

THE APPLE OUTLOOK FOR 1940

Summary

Large supplies of apples and other fruits in the United States and in foreign countries, and an unsatisfactory export situation, are unfavorable factors in the apple marketing situation for the 1939-40 season. But an increase in domestic consumer buying power during the season, and the program undertaken by growers, aided by the Federal Surplus Commodities Corporation, to divert apples of less desirable grades from sales for fresh consumption into commercial byproducts or other outlets, will tend to offset the unfavorable elements in the situation.

Domestic commercial apple supplies for the current season are about 22 percent larger than for last season, and 5 percent larger than the 1928-37 average. Supplies are relatively heavy in some of the important Central and Eastern States, including important export areas. The quantity of apples used for canning and drying is expected to be considerably larger in 1939 than it was in 1938, when about 10,300,000 bushels were canned and dried.

Canada, with a preferential market in the United Kingdom, anticipates difficulty in moving a normal volume of fresh apples to oversea markets in 1939-40. As a result, the Canadian Government now proposes to divert into canning and drying 5,000,000 bushels or more of varieties and grades of apples normally exported. During the last several years Canada has canned and dried annually an average of only a little over 1,000,000 bushels of apples.

Increased supplies of canned or dried apples in Canada will be a significant competitive factor this season in the movement of United States canned and dried apples into export.

From a long-time viewpoint, the number of apple trees of bearing age in the United States is expected to continue to decrease, and the production trend during the next 5 or 6 years is expected to continue downward at a moderate rate with greater reduction in the total crop than in the commercial crop. If plantings and replacements continue to be as light as they have been during the last several years, production 10 to 15 years hence may be materially lower than it is now.

In the Pacific Coast and Rocky Mountain States commercial production in recent years has been fairly stable at around 35,000,000 bushels per year. Young trees in these regions are relatively few, and the tendency to remove old and unprofitable trees was continued during last year. The peak of production has been passed for these regions as a whole, and the general downward trend in production is expected to continue at a moderate rate.

In the Central States the annual production varies tremendously. Increasing commercial production from young orchards probably will offset decreas-

ing production from old commercial and farm orchards for several years, assuming average growing conditions.

Although the hurricane of September 1938 destroyed or damaged many apple trees in the New England storm area, permanent tree loss from the storm will not greatly affect commercial production in the Atlantic Coast States as a whole. A stationary supply to a moderate decrease in commercial production in this group of States is expected during the next several years.

Year's Commercial Supply Above Average

October 1 conditions indicate a commercial apple crop in 1939 (that part of the total crop to be sold for fresh consumption of 101,000,000 bushels, which is 22 percent more than was marketed as fresh fruit in 1938, and 5 percent larger than the 10-year average (1928-37) of 96,500,000 bushels.

Because of unfavorable export conditions, the quantity of apples offered for sale on the fresh domestic market will show a greater increase over 1938 than will total commercial production. In the four years of low prices, 1931, 1932, 1935, and 1937, fresh domestic sales averaged 91,932,500 bushels compared with an average of 70,144,750 bushels in the four years of relatively higher prices 1933, 1934, 1936, and 1938.

Table 1. - United States production and utilization of apples

Year	Domestic fresh sales	Exports	Consumed on farm	Unharvested	Other uses	Total
			Thousand bushels			
1919	77,895	3,152	30,347		29,238	140,632
1920	95,107	7,995	45,497		58,089	206,688
1921	62,818	3,282	15,318		14,220	95,638
1922	95,373	5,269	43,187		45,596	189,425
1923	97,627	12,295	36,687		34,306	180,915
1924	79,172	9,604	37,531	300	33,850	160,457
1925	90,065	11,015	29,787		21,557	152,424
1926	102,258	21,292	45,903	7,388	52,815	229,656
1927	69,824	9,430	20,048		16,406	115,708
1928	88,896	21,042	34,040		33,835	177,813
1929	78,991	10,279	24,178		21,644	135,092
1930	85,092	20,340	24,044		27,141	156,617
1931	95,177	18,030	41,423	2,100	48,673	205,403
1932	76,269	13,754	23,476	4,220	29,130	146,849
1933	69,603	12,262	28,885	4,600	33,247	148,657
1934	71,808	8,062	22,657	50	23,142	125,719
1935	91,509	12,240	32,999	4,000	37,168	177,916
1936	68,784	6,755	19,668		22,299	117,506
1937	104,775	10,958	40,735	12,526	41,789	210,783
1938	70,324	1/ 12,071	22,308	4,985	22,666	132,354

1/ Preliminary.

If the 1939 apple season is characteristic of the two recent large crop seasons of 1935 and 1937, a large quantity of apples will be unharvested, consumed on the farm, and converted to byproducts. The indicated commercial crop of 1939 is larger than the crop of 1938 in all groups of States except the Western, and is larger than the recent 10-year average in all groups except the South Central and Western States

Table 2. - Production of apples by groups of States and for the United States, 1933-39

TOTAL CROP

State groups	1933	1934	1935	1936	1937	1938	1939 1/
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
Western 2/	50,171	50,097	53,601	47,753	53,322	50,803	-
Central 3/	35,175	26,794	48,042	20,807	61,410	23,297	-
Atlantic Coast 4/	63,311	48,828	76,273	48,946	95,941	58,254	-
United States	148,657	125,719	177,916	117,506	210,673	132,354	-

COMMERCIAL CROP

Western 2/	30,897	30,386	35,059	34,419	35,835	35,320	31,428
Central 3/	16,395	13,553	24,178	10,352	23,931	11,720	24,020
Atlantic Coast 4/	34,633	29,931	44,512	30,768	50,967	35,355	45,550
United States	81,925	79,870	103,749	75,539	115,733	82,395	100,998

1/ Indicated production as of October 1, 1939. Total crop not available.

2/ Includes the States of Mont., Idaho, Wyo., Colo., New Mex., Ariz., Utah, Nev., Wash., Oregon, and Calif.

3/ Includes the States of Ohio, Ind., Ill., Mich., Wisc., Minn., Iowa, Mo., S. D., Neb., Kans., Ky., Tenn., Ala., Miss., Ark., La., Okla., and Tex.

4/ Includes the 6 New England States, N. Y., N. J., Pa., Del., Md., Va., W. Va., N. C., S. C., and Ga.

High temperatures, lack of water, insect damage, and orchard neglect, have reduced commercial apple prospects in several of the Western areas. Commercial supplies in the Western States in 1939 are indicated at about 31,400,000 bushels, or 20 percent below the recent 10-year average and 11 percent smaller than the 1938 crop. October estimates indicate a below-average production in all the important producing States in the region.

The 1939 commercial crop in the Central States is indicated at about 24,000,000 bushels, or nearly one-third larger than the recent 10-year average and double the 1938 crop. All States in the region except Iowa, Nebraska, Kentucky, Tennessee, Arkansas, and Oklahoma, have production prospects that are above average. Relatively large crops are indicated for Ohio, Indiana, Illinois, and Michigan. These States probably will produce in 1939 around 20,000,000 bushels compared with an average production of 13,000,000 bushels.

In the Atlantic Coast (Eastern) States, commercial production in 1939 is expected to be around 45,600,000 bushels or about 15 percent larger than the recent 10-year average, and 29 percent larger than the commercial crop of 1938. Production is expected to be above average in many of the important producing States in the region, especially in New York, New Jersey, Pennsylvania, West Virginia, Maryland, and Delaware.

Production of Leading Varieties of Apples in 1939

Most of the increase of the 1939 apple crop over 1938 was in the fall and early winter varieties. The Baldwin crop was larger than in 1938 in New York and New England, but the size of the fruit was unusually small. In Michigan, Ohio, and Indiana, the Baldwin crop was relatively large. The Ben Davis crop was larger than last year in New York, New Jersey, Pennsylvania, and New England. The Delicious crop was less than last year in Washington and was relatively short in Idaho, New York, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, Ohio, Indiana, Illinois, and Michigan. In Oregon, the Delicious crop was larger than last year. Production of Grimes Golden was relatively light in Maryland, fair in Illinois, and heavy in Virginia, Pennsylvania, Michigan, and Indiana. The Greening crop was medium to heavy in Ohio, Indiana, Illinois, and Michigan and heavy in Maryland and Virginia.

The McIntosh variety has been increasing in importance in New England and New York during recent years. Large crops of this variety were produced in these States in 1939. In Michigan, however, the production of McIntosh was relatively light. Production of Yellow Newtowns (Albemarle Pippins) in Hood River County, Oregon, was approximately two-thirds of last year's crop. In the Watsonville area in California, a good crop of Newtowns was expected early in the season, but hot dry weather during September reduced sizes and production materially. In Virginia, the crop probably did not exceed the light crop of 1938. Production of Northern Spys was below last year in New England, New York, Pennsylvania, and Michigan. The crop of Rome Beauties in Pennsylvania and Washington was only fair. But in Maryland, Ohio, and Indiana production was relatively heavy.

Production of Stayman Winesaps was fairly heavy in New Jersey, Pennsylvania, and West Virginia and relatively light in Delaware, Maryland, and Virginia. Good crops of Winesaps were produced in Virginia and West Virginia, but the crops were relatively light in Indiana, Illinois, Idaho, and Washington. Production of York Imperials was rather light in Illinois,

Pennsylvania, Virginia, and West Virginia, while in New Jersey and Maryland the crop was heavier than in 1938.

Increase Expected in North American Canned and Dried Apple Supplies

During the last 5 years, 1934-38, an average of 6,417,000 bushels of the United States apple crop was used annually for drying, and about 63 percent of the dried pack was exported. During the same period an average of 6,480,000 bushels was used in canning apples and applesauce, and about 10 percent of these canned products was exported.

Table 3. - Production and exports of dried and canned apples in terms of fresh apples, 1924-38

Year	Dried apples		Canned apples and sauce	
	Production	Exports	Production	Exports
	Thousand bushels	Thousand bushels	Thousand bushels	Thousand bushels
1924	7,000	2,804	6,300	562
1925	6,125	3,621	7,800	538
1926	7,263	4,764	6,900	675
1927	5,133	3,165	6,600	573
1928	9,946	7,295	9,600	1,151
1929	7,379	3,466	6,500	836
1930	7,671	5,559	6,200	640
1931	6,563	4,502	4,400	695
1932	6,869	5,690	4,800	748
1933	7,525	6,297	5,400	439
1934	5,688	3,571	6,300	561
1935	7,525	5,032	6,000	900
1936	6,038	3,343	7,100	503
1937	7,233	3,564	8,300	497
1938	5,600	4,500	4,700	625

The small crop in 1938 and relatively good apple prices for recent years resulted in one of the smallest dried and canned packs during the depression years. Although it is too early to estimate the quantity of United States apples that will be dried and canned in 1939, the large crop and a stagnant market for fresh apples indicate a substantial increase over last season in both canned and dried apples.

In the last few years, several new apple byproducts, such as apple juice and powdered apples, have been developed. An increase over 1938 is expected in these byproducts.

Production of canned and dried apples in Canada will increase this year as the result of the Government's policy of assisting the industry by diverting to byproducts fresh apples that are not expected to move into export markets as a result of the war. It is reported that in Nova Scotia the Dominion Government proposes to divert into canning or drying 4,500,000 to 5,250,000 bushels of varieties and grades normally exported, and will guarantee to growers prices ranging from $1.47 per barrel of 3 bushels of No. 1 large, down to 81 cents for Domestic small. The Cabinet Council has also taken under consideration an appeal to similarly provide for 300,000 to 450,000 bushels of Ontario apples. In addition, 500,000 boxes of British Columbia apples of export varieties and sizes will be bought by the Dominion Government at a price of $1.05 per box if unsold by the end of March 1940.

In the last several years Canada has used an average of only a little over 1,000,000 bushels per year for canning and drying. Reported plans for this season provide for increasing the pack four or five fold.

Export Outlook Unfavorable

Exports of fresh apples from the United States during the 1939-40 season are expected to be considerably below the 12 million bushels exported during last season. Large fruit crops are expected in most European countries and American apples will meet keener competition from domestic supplies in the important importing markets than obtained last season.

As a result of the war, several new factors are expected to adversely affect the export outlook. Shipping space and the foreign exchange available for fresh fruit are likely to become serious problems, as both tonnage and exchange are expected to be reserved to a considerable extent for the purchase and transportation of commodities that are considered more vital than fresh fruit in the present emergency. Consumer demand in Europe is expected to shift toward foods that are less perishable and are cheaper than imported fresh apples, although a certain quantity of fresh fruit will probably be considered practically essential to health. The disruption of normal distribution, because of the shifts in population and various restrictions imposed on the fruit trade as a result of the war, will complicate the problem of marketing fresh fruit in Europe this season.

It is expected that the United Kingdom markets for the next few months will be supplied largely from domestic production supplemented with imports from Canada. Production prospects for dessert and cooking apples, and especially for the important cooking variety, Bramleys, are reported to be good to very good. Canada, according to present information, expects a heavy harvest of around 15,600,000 bushels of apples. The Nova Scotian barreled crop is estimated at around 6,500,000 bushels, and supplies from this area, aided by the competitive advantage of imperial preference and a more favorable exchange rate, probably will restrict the movement of eastern United States apples to Britain.

There is the probability that apples from outside sources will be subjected to special restrictions in view of domestic supplies and the need of the British Government to conserve shipping space and foreign exchange. Even

Canada, with a normal preferential market in the United Kingdom for about 6,600,000 bushels of fresh apples, anticipates reduced exports in 1939-40. Confronted with this probability, the Canadian Prime Minister announced September 25 that the Cabinet Council had approved a plan for granting Dominion Government aid to the apple industry.

During the spring and summer season, Australia and New Zealand are the principal suppliers of apples to the United Kingdom. Although these countries are expected to have ample supplies of fruit available for export, the time required to transport fruit as against nearer sources of supply, increased insurance and shipping charges, and shipping risks, and the diversion of space to move other commodities that will have priority over fresh fruit may tend to limit the export movement. Reduction of supplies from Australia and New Zealand will improve the outlook for a late movement of Pacific Northwest boxed apples to Europe.

France expects very large crops of apples and pears this fall and French markets will probably be well supplied with domestic table and cooking apples. The movement of apples into France, in the face of the new Government import-control system, is expected to be considerably below imports of last season.

Fruit crops in Belgium and the Netherlands range from good to very good. Imports from the United States will be limited during the first half of the season by the supplies of domestic fruit. Military operations are expected to reduce the re-export trade of these countries to Central Europe and Scandinavia below the level that obtained last fall, and this will probably be reflected in reduced takings of United States apples.

The Scandinavian countries report good to bumper fruit crops. Above-average domestic supplies, along with naval operations that will interfere with trade in Baltic areas, are expected to curtail severely the volume of American fruit exports to these countries.

Exports to Germany and other parts of Central Europe will probably be even below the low levels of recent years. Large supplies available for shipment to urban markets in Bohemia and Styria, and the exportable surpluses in the Tyrol and certain Balkan areas are expected to take care of Germany's requirements throughout the winter. In any case, it is not probable that many United States apples can reach German consumers so long as hostilities continue.

The major part of dried-apple exports from the United States go to the Netherlands, France, Sweden, and the United Kingdom. Practically all the exports of canned apples and applesauce move to Great Britain. The increased supplies in Canada will be a significant competitive factor in the movement of United States canned and dried apples into export.

United States apple exports in recent years have tended to decline, although at a rate which is slower than that at which many other agricultural exports have declined. Increased competition from other apple-producing regions, such as Australia and Canada, resulting from larger production, better quality and better pack, and heavier production of better quality fruit in

European countries, have contributed to this decline. Trade barriers also have been of primary importance in this matter. Quantitative restriction of imports, increased tariff and import charges, and imperial preference which gives Empire producers a competitive advantage in United Kingdom markets, are examples of the kinds of difficulties with which the United States apple industry has been faced in recent years. Many of these difficulties have been mitigated by concessions granted to apple exports under the Trade Agreements Program. These have aided in preventing apple exports from declining further.

Prices Now Lower than Last Season

Prices to growers and at terminal markets for apples marketed during the early part of the 1939 season have been considerably lower than prices of a year earlier. Unfavorable factors in the outlook for apple prices during the remainder of the 1939-40 marketing season are the relatively large supplies of apples and other fruits in the United States and in foreign countries, and the unsatisfactory export situation occasioned by European hostilities.

The size of the commercial apple crop this season is about the same as in 1935. But citrus-fruit supplies may be about 25 percent greater than in 1935. Partially offsetting the influence of larger domestic supplies of competing fruits is the prospect this season for a substantially higher consumer buying power than prevailed in the apple-marketing year of 1935-36.

Table 4. - Average prices per bushel of apples to growers by regions and years 1/

Region	1925-29	1931	1932	1933	1934	1935	1936	1937	1938
	Dolls.	Dolls.	Dolls.	Dolls.	Dolls.	Dolls.	Dolls.	Dolls.	Dolls.
United States									
Crop year	1.20	.66	.59	.78	.89	.71	1.05	.67	.84
Atlantic Coast States									
Crop year	1.19	.65	.65	.83	1.01	.79	1.10	.68	.85
Central States									
Crop year	1.29	.63	.71	.83	.99	.74	1.14	.72	.96
Western States									
Crop year	1.17	.70	.54	.69	.73	.60	.96	.58	.77

1/ See footnotes, table 2, for the States included in each region.

To assist in disposing of the large supplies this season, apple growers have undertaken a program to divert apples of less desirable grades from sales for fresh consumption into commercial byproducts or other outlets. The Federal Surplus Commodities Corporation has made arrangements to buy from individual growers a quantity of apples equivalent to the quantity so diverted.

Decrease in Tree Numbers to Continue

On January 1, 1935 there were about 100,000,000 apple trees of all ages in the United States. This is less than one-half of the number reported in 1910 and about 14 percent less than the number reported in 1930. Since 1930, plantings have been light and removals have continued. The result has been a further decrease in tree numbers of bearing and nonbearing age.

In 1935, only about 17.5 percent of the trees were not of bearing age whereas during each of the 3 previous census years about 24 percent of the trees reported were yet to come into bearing. Indications are that the proportion of trees yet to reach bearing age is considerably less than it was 5 years ago, and that this percentage will continue to decrease if several years should the low rate of planting of the last several years continue.

Table 5. - Total number of apple trees of all ages, of bearing age, and of nonbearing age, by census years for which data are available 1/

Year	All ages	Bearing age	Decrease from previous year	Not of bearing age	Percentage of bearing age	Percentage not of bearing age
	Millions	Millions	Percent	Millions	Percent	Percent
1910	217.1	151.3		65.8	69.7	30.3
1920	151.5	115.3	24	36.2	76.1	23.9
1925	138.0	103.7	10	34.3	75.1	24.9
1930	116.3	88.8	15	27.5	76.4	23.6
1935	100.0	82.5	6	17.5	82.5	17.5

1/ U. S. Bureau of the Census figures rounded to one-tenth million.

As an average of about 10 years is required to develop an apple orchard to commercial bearing age it is evident that the trend in tree numbers of bearing age for the next several years will depend largely on the extent of young trees now in orchards and of future tree removals rather than on future plantings. Should the downward trend in tree numbers continue at the same rate of decrease as occurred from 1930 to 1935, the number of bearing trees in 1940 will be approximately 77,000,000 and the number in 1945 will be about 71,000,000. On the other hand, should tree numbers decrease at the same rate as occurred during the 10-year period, 1925-35, the number of trees of bearing age in 1940 will be about 74,000,000 and the number in 1945 about 66,000,000.

Many tree removals in the past have been from less profitable commercial and farm orchards, and this has tended to increase the average yield because of the higher production per tree of the orchards remaining. Low apple prices, drought, and freezes of recent years have accelerated tree removals and abandon-

ment. This process of elimination will undoubtedly continue but the rate of elimination will depend considerably on economic and weather conditions.

Long-Time Production Trend Downward

For many years a marked reduction in the number of trees of bearing age has not been accompanied by a corresponding decrease in production because of a decided increase of yield per bearing tree. Thus, in 1935 the total number of trees of bearing age was 28 percent less than the number in 1920 but total production had declined only 8 percent. With normal growing conditions during both years the decrease would have been only about 5 percent.

Table 6. - Actual total apple production and estimated production with average growing conditions, yearly averages by 5-year periods

Total production	1912-16	1917-21	1922-26	1927-31	1932-36	1937	1938
	Million bushels	Million bushels	Million bushels	Million bushels	Million bushels	Million bushels	Million bushels
Actual	211.5	155.9	132.6	158.1	143.3	210.8	132.4
Estimated with average growing conditions	186.8	164.3	151.7	160.1	156.3	148.7	148.6

The increase in yield per bearing tree of 35 percent from 1920 to 1935 is the result of an exceptionally large increase between 1925 and 1930 when many plantings in the Northwest were coming into full bearing. At other 5-year intervals since 1910 the increase has averaged only about 5.5 percent, or 1.1 percent a year.

Table 7. - Actual yield of apples per bearing tree, and estimated yield with average growing conditions 1/

Yield per bearing tree	1910	1915 2/	1920	1925	1930	1935
	Bushels	Bushels	Bushels	Bushels	Bushels	Bushels
Actual	1.02	1.49	1.35	1.76	1.78	1.74
Estimated with average growing conditions	1.25	1.32	1.41	1.46	1.80	1.90

1/ Obtained by dividing 5-year average total production of apples by number of apple trees of bearing age. The 5-year averages for production are shown in table 6.

2/ To obtain "actual" yield per bearing tree, the number of trees of bearing age was estimated.

Increases in the average yield per bearing tree in the past have been due to increases in the bearing surface of trees as they increased in age, and to the removal of many low-producing trees. The removal of poor orchards is expected to continue. Some of these will be replaced but such removals and replacements may have relatively little effect upon production during the next 8 or 10 years, for many of the old trees are producing little fruit and the replacements will not be old enough for production. On the other hand, yield per bearing tree may not continue to increase so rapidly as in the past.

Obviously past tendencies in the apple industry may not measure exactly production prospects at any given time in the future. But the relatively large number of old trees now in orchards, and heavy tree removal and light planting during the last decade or more indicate a continuation in the downward production trend. Looking 5 or 6 years ahead, the downward trend is expected to be only moderate, with greater reduction in the total crop than in the commercial crop.

Farther ahead, the future rate of planting will be a very important factor in production. Many commercial orchards were planted shortly after the World War. These have helped substantially in maintaining production as their producing capacity increased with age. Ten years from now many of these orchards will have reached or will be near the point of declining production, and declining production from the older orchards will be more pronounced. Thereafter, production may decline more rapidly, unless plantings are made to replace the orchards that will be going out of production.

Regional Long-Time Production Prospects

Western States

Apple production in the Western States in recent years has been fairly stable at 50,000,000 to 55,000,000 bushels. The commercial crop has averaged around 35,000,000 bushels, with prospects in 1939 for about 31,400,000 bushels. This group of States normally produces about 40 percent or more of the commercial crop of the United States, but production in the Western States amounted to only 31 percent of the total commercial crop in 1937 and is indicated at 31 percent of the 1939 crop.

In the 11 Western States as a whole, a very small percentage of the trees is yet to come into bearing and a large percentage of the acreage has reached full bearing capacity. Yield per bearing tree is about 3.5 times what it was in 1910 but during recent years the tendency has been toward a smaller increase each year.

Removal continues of trees of unpopular varieties, of old trees, and of orchards on poor locations. Plantings continue to be confined largely to replacements in the better orchards. Total and commercial production during the last 5 years has averaged somewhat lower than during the previous 5 years, and in the region as a whole is expected to continue downward for several years.

Table 8. - Average yearly production of apples by 5-year periods, number of trees of bearing age, and average yield per bearing tree in the Western States 1/

TOTAL CROP

Item	1907-11	1912-16	1917-21	1922-26	1927-31	1932-36	1937	1938	1939 2/
Production millions of bushels	15.1	25.4	42.7	54.4	56.9	51.3	53.3	50.8	-
Proportion of U. S. crop Percent	9.8	12.0	27.4	29.8	36.0	35.8	25.3	38.4	-
Number of bearing trees 3/ millions	12.1	4/	21.2	18.3	13.4	11.6	-	-	-
Proportion of trees of bearing age 3/ percent	45.0	4/	87.2	87.2	86.6	87.8	-	-	-
Average yield per bearing tree 5/ bushels	1.25	4/	2.01	2.97	4.25	4.42	-	-	-

COMMERCIAL CROP

Production millions of bushels	-	-	-	41.4	44.2	35.0	35.8	35.3	31.4
Proportion of commercial crop-percent	-	-	-	39.4	44.5	40.5	31.0	42.8	31.1

1/ See table 2 for the States included.
2/ Indicated as of Oct. 1, 1939. Total production not available.
3/ For census years, 1910, 1920, 1925, 1930, and 1935.
4/ Not available.
5/ Obtained by dividing average total production for each 5-year period by number of trees of bearing age in corresponding census year.

Central States

Annual production of apples in the Central States varies greatly because of variations in weather conditions. During the 8-year period, 1931-38, commercial production ranged from a low of about 10,400,000 bushels in 1936 to a high of 28,900,000 bushels in 1937. The indicated commercial crop in 1939 of about 24,000,000 bushels is double the crop of 1938, and 83 percent of the large crop of 1937.

Plantings were heavy in the Central States after the World War, so a relatively large proportion of the trees are young. Recent plantings have been light, and removal of old trees of undesirable varieties and of farm orchards continues. In general, however, orchards in the commercial sections are being well cared for and the bearing capacity is being maintained. Gradual changes are occurring in the varietal composition of commercial orchards. The tendency is toward fewer varieties and to varieties that are in popular demand. The bearing capacity of orchards in the important summer apple sections is apparently being maintained. In the other commercial sections there is a tendency to replace summer varieties with fall and winter varieties.

Obviously, production during the next several years will depend on growing conditions and, in years when conditions are generally good, commercial crops of 25,000,000 to 30,000,000 bushels may be expected as compared with crops of 10,000,000 to 15,000,000 bushels under poor growing conditions. With average growing conditions, production for the region as a whole can be maintained with moderate annual plantings.

Table 9. - Average yearly production of apples by 5-year periods, number of trees of bearing age, and average yield per bearing tree in the Central States 1/

TOTAL CROP

Item	1907-11	1912-16	1917-21	1922-26	1927-31	1932-36	1937	1938	1939 2/
Production									
millions of bushels	58.9	87.7	44.8	52.4	36.2	31.3	61.4	23.3	-
Proportion of U. S. crop percent	38.3	41.5	28.8	28.7	22.9	21.8	29.1	17.6	-
Number of bearing trees 3/ millions	90.0	4/	49.2	40.4	34.6	34.1	-	-	-
Proportion of trees of bearing age 3/ percent	73.2	4/	74.9	69.4	69.7	79.1	-	-	-
Average yield per bearing tree 5/ bushels	.65	4/	.91	1.30	1.05	.92	-	-	-

COMMERCIAL CROP

Production									
millions of bushels	-	-	-	22.6	16.4	15.3	28.9	11.7	24.0
Proportion of commercial crop percent	-	-	-	21.6	16.5	17.8	25.0	14.2	23.8

1/ See table 2 for the States included.
2/ Indicated as of Oct. 1, 1939. Total production not available.
3/ For census years, 1910, 1920, 1925, 1930, and 1935.
4/ Not available.
5/ Obtained by dividing average total production for each 5-year period by number of trees of bearing age in corresponding census year.

Atlantic Coast States (Eastern)

The Atlantic Coast States normally produce from 40 to 45 percent of both total and commercial supplies of apples. The commercial crop in this region has ranged during the last 8 years (1931-38) from around 30,000,000 bushels in 1934 to 51,000,000 bushels in 1937. The indicated 1939 commercial crop of 45,600,000 bushels is equal to 89 percent of the large Eastern crop of 1937.

Nearness to large consuming centers gives the Eastern apple grower a decided economic advantage. Consequently, many of the better orchards have received good care in recent years. On the other hand, generally low-producing commercial orchards have received less-than-average care for several years and farm orchards have continued to decrease in number.

Heavy damage to fruit trees from the hurricane of September 21, 1938 was reported in the New England storm area. Storm damaged trees in some of the better orchards were watered this season as an aid to their recovery. However, removals were unusually high because of the storm, and only a small part of such removals have been replaced to date.

The probabilities are that the production trend in the Eastern region, excluding the storm damaged area, will not show a much further decline during the next few years, and only a moderate decrease for some years thereafter. Decrease in the producing capacity of orchards in the storm damaged area will not materially affect the production trend for the Atlantic Coast States, as the area produces only a small percentage of the total crop.

Table 10. - Average yearly production of apples by 5-year periods, number of trees of bearing age, and average yield per bearing tree in the Eastern States 1/

Item	1907-11	1912-16	1917-21	1922-26	1927-31	1932-36	1937	1938	1939 2/
TOTAL CROP									
Production millions of bushels	79.9	98.4	68.3	75.8	65.0	60.7	95.9	58.3	-
Proportion of U. S. crop percent	51.9	46.5	43.8	41.5	41.1	42.4	45.5	44.0	-
Number of bearing trees 3/ millions	49.2	4/	44.9	45.0	40.9	36.8	-	-	-
Proportion of trees of bearing age 3/ percent	73.2	4/	73.1	76.6	79.8	84.2	-	-	-
Average yield per bearing tree 5/ bushels	1.62	4/	1.52	1.68	1.59	1.65	-	-	-
COMMERCIAL CROP									
Production millions of bushels	-	-	-	40.8	38.8	35.9	51.0	35.4	45.6
Proportion of commercial crop percent	-	-	-	39.0	39.0	41.7	44.0	43.0	45.1

1/ See table 2 for the States included. 2/ Indicated as of Oct. 1, 1939. Total production not available. 3/ For census years, 1910, 1920, 1925, 1930, and 1935. 4/ Not available. 5/ Obtained by dividing average total production for each 5-year period by number of trees of bearing age in corresponding census year.

Release Date
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THE PEACH OUTLOOK FOR 1940

Summary

A continuation of the upward trend in United States peach production is indicated for the next 5 years. The crops of 1938 and 1939 averaged about 11 percent greater than the 51,000,000-bushel average of 1933-37.

There is danger that the peach industry in some areas is being over-expanded. In the areas that produce peaches for market as fresh fruit, growers are generally optimistic. Large plantings have been made in recent years and orchards have not suffered severely from drought or freezing injury since 1936. Many diseased trees have been removed through Government programs and orchards generally are in good condition. In the experience of many growers, returns from peaches have been relatively favorable in recent years. Under these conditions in the past, plantings of peach trees have increased rapidly and have been followed by excessive production, low prices, neglect of orchards, and losses to growers.

In California, where a large part of the crop is canned and dried, a slight upward trend in production is indicated. The crop of clingstone peaches in California has been above market requirements in recent years with consequent low prices.

Exports, which are mostly in the form of canned and dried fruit, averaged only about 5 percent of fresh production for the crops of 1934-38. The export outlook for 1940 is uncertain because of the war situation. Average annual exports of dried peaches were considerably larger in 1914-18 than in 1909-13.

Larger Peach Production Expected

The United States peach crop is marketed chiefly as fresh fruit, except in California, where the principal uses are canning and drying. The harvesting and marketing season for peaches used as fresh fruit in the United States usually begins about June 1 in the southern States and ends about the last of September in the northern States. In most districts the harvesting and marketing take place within a few weeks. Peaches are stored only for short periods and in limited quantities. For these reasons the outlook for peaches varies among regions in accordance with time of ripening, marketing area in which the crop is sold, and whether or not the crop is used as fresh fruit.

In some areas there have been significant increases in planting of early yellow varieties which precede the Hiley in time of ripening. When these varieties come into bearing, marketing conditions will be changed considerably through lengthening of the marketing season in each area and a probable improvement in average quality.

Indications based on reports of plantings, age of trees, and care of orchards, are that the upward trend in production will continue in all of the important regions that produce peaches for market as fresh fruit. The crop in

States other than California averaged 30,000,000 bushels in 1933-37 and the average of the next 5 years probably will exceed this quantity. In California, where the crop averaged 21,000,000 bushels in 1933-37, a slight upward production trend is expected.

Prices

In the experience of many growers, peach prices have been relatively favorable in recent years. In the 5 years 1933-37, prices received by growers in the United States other than California averaged $1.04 per bushel. In the 5 years ended in 1939 the range was from 94 cents in 1935 to $1.20 in 1936. The average price to growers in California in 1933-37 was 65 cents per bushel and the range in the last 5 years was from 32 cents in 1938 to 83 cents in 1937. Average wholesale prices of peaches in July and August in New York City have ranged from $1.48 to $2.89 per bushel from 1933 to 1939, and have averaged about $2.10. The corresponding range in Chicago was $1.51 to $2.88 with an average of $2.18.

Production and price to growers in specified groups of States and California

Group and item	Average 1928-32	Average 1933-37	1935	1936	1937	1938	1939 1/
11 Southern States: (N.C.,S.C.,Ga.,Fla., Tenn.,Ala.,Miss.,Ark.,La.,Okla.,Texas.							
Production (million bu.)	16.0	15.7	17.0	14.6	14.2	16.7	17.4
Price to growers (cents per bu.)	97	99	90	117	128	98	112
Ind.,Ill.,Ky.,Iowa,Mo.,Nebr.,Kans.							
Production (million bu.)	3.9	3.5	6.3	.5	6.0	2.3	4.5
Price to growers (cents per bu.)	102	106	93	151	108	122	101
Pa.,Md.,Va.,W.Va.,N.J., Del.							
Production (million bu.)	5.5	4.2	4.7	3.6	7.3	5.0	6.2
Price to growers (cents per bu.)	106	119	113	145	102	128	103
N. Y., Ohio, Mich.							
Production (million bu.)	4.4	3.4	5.3	3.1	5.8	2.9	5.7
Price to growers (cents per bu.)	107	115	92	147	104	138	76
N.H.,Mass.,R. I., Conn.							
Production (million bu.)	.4	.2	.1	.3	.3	.3	.2
Price to growers (cents per bu.)	155	148	165	153	150	148	167
Colo.,Idaho,N.Mex.,Ariz.,Utah,Nev., Wash., Oregon							
Production (million bu.)	3.3	3.0	3.4	4.0	2.9	4.2	4.0
Price to growers (cents per bu.)	95	93	92	80	99	75	79
United States other than Calif.							
Production (million bu.)	33.5	30.0	36.8	26.1	36.5	31.4	38.0
Price to growers (cents per bu.)	101	104	94	120	114	105	101
California							
Clingstone-Production (million bu.)	15.6	13.9	12.0	14.0	15.4	13.0	15.2
Price to growers (cents per bu.)	57	68	65	66	94	23	-
Freestone-Production (million bu.)	8.2	7.1	5.9	7.5	7.8	7.5	8.5
Price to growers (cents per bu.)	61	61	64	65	61	46	-
Total - Production (million bu.)	23.8	21.0	17.9	21.5	23.2	20.5	23.7
Price to growers (cents per bu.)	59	65	64	66	83	32	40
United States							
Production (million bu.)	57.3	51.0	54.7	47.6	59.7	51.9	61.7
Price to growers (cents per bu.)	85	88	85	94	102	77	84

1/ Preliminary.

Increase in Southern Peach Crop Indicated

From June to early August, 11 southern States are the principal source of market supplies of peaches. About half of the United States peach crop, exclusive of California, is produced in these southern States: N. C., S. C., Ga., Fla., Tenn., Ala., Miss., Ark., La., Okla., and Texas. Large numbers of trees have been planted in some southern States in the last few years, and in general orchards are in good condition. The production trend, for the region as a whole, is expected to be upward during the next 5 years. Most of the increase will occur in the eastern part of the southern peach belt, particularly in South Carolina and North Carolina. Since 1935, large numbers of trees affected by phony disease have been removed through Government programs, and the disease has been brought under control in leading producing districts. Peach production in the 11 southern States in 1933-37 averaged 15,700,000 bushels, and the average price to growers was 99 cents per bushel. Southern production in 1939 was over 17,000,000 bushels and the average price was $1.12. The average production in the next 5 years is likely to exceed the 1939 production by a considerable margin.

In South Carolina, where approximately two-thirds of the commercial trees are not yet of bearing age, the indicated production trend is more sharply upward than in any other southern State. Increases are expected in North Carolina and Tennessee; and in Georgia some increase, mostly of early varieties, is anticipated. Recent heavy planting in the South may result in excessive supplies within a few years.

Larger Production Indicated for Illinois and Nearby States

In years when growing conditions are favorable, Illinois and nearby States produce most of the peaches used in midwestern markets in August. Drought and low temperatures in the period 1934-36 destroyed many trees in this group of States, but orchards in this region are now in generally good condition and plantings have increased. Early varieties have been planted in some districts in an effort to avoid competition from nearby districts. Average production in the next 5 years is expected to be above the 3,500,000-bushel average for the period 1933-37. There is wide variation in the size of the crop in this region from year to year, owing to climatic conditions. The smallest and largest crops in the last 5 seasons were 500,000 bushels and 6,300,000 bushels respectively. In only 1 of the last 5 years has the price to growers averaged below $1 per bushel, but returns from the crop fluctuate widely because of variations in production.

Some Increase Probable in Pennsylvania and Nearby States

In August, the eastern peach markets are largely supplied by Pennsylvania, Maryland, Virginia, West Virginia, New Jersey, and Delaware. Much of the crop is moved by motortruck to nearby markets. The crop in this group averaged 4,200,000 bushels in 1933-37. Prices to growers were fairly favorable and averaged $1.19 per bushel. The production outlook for the next 5 years is for some increase in the group, but it varies among the States. In Pennsylvania, Virginia, West Virginia, and Delaware, a continuation of the upward trend is anticipated. Not much change is expected in Maryland. In New Jersey some decrease is probable.

Upward Trend in Great Lakes Area

In September, the Great Lakes area in New York, Ohio, and Michigan is the principal source of peach supply in eastern and midwestern markets. For the three

States the 1933-37 average crop was 3,400,000 bushels and the average price to growers was $1.15 per bushel. Climatic conditions cause rather wide fluctuation in size of crops from year to year. The average production is expected to be somewhat larger in the next 5 years than in 1933-37 because of increased plantings in the last few years and generally good condition of orchards.

New England Peaches Marketed Locally

In New England, an increasing interest is reported in marketing peaches at roadside stands or locally, and a decreasing interest in shipping to distant markets. The industry is not large. Commercial orchards are receiving good care, but the 1938 hurricane caused considerable damage to trees and only a slight upward production trend is anticipated.

Production for Market Increasing in West

In the Western States, other than California, the peach crop averaged 3,000,000 bushels in 1933-37. The upward trend in production is likely to continue for a few years. Government inspection and the elimination of trees affected with mosaic disease have had a pronounced effect in bringing orchards into better condition. There has been a marked upward trend in Colorado. A large part of the crop is marketed in the region west of the Mississippi River. Average prices to growers during the last 5 years have ranged from 75 cents to 99 cents per bushel.

Peaches in California

Prospective changes in bearing acreage of peaches in California during the next 5 years are small. Slight increases in bearing acreage and production of both clingstone and freestone varieties appear probable. Losses of clingstone trees, due to high water in the spring of 1938, have been made up through new plantings, and small additions have been made to the nonbearing acreage of freestone varieties in recent years. Bearing acreages of the two types of peaches have tended to become equal. Of the bearing acreage in 1938, 38,362 acres, or 49 percent, were clingstone and 39,770 acres, or 51 percent, were freestone varieties.

Acreage of peaches in California

Year	Clingstone			Freestone			All peaches		
	Of bearing age	Not of bearing age	Total	Of bearing age	Not of bearing age	Total	Of bearing age	Not of bearing age	Total
	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres
1936...	41.9	8.7	50.6	39.5	8.0	47.5	81.4	16.7	98.1
1937...	41.6	12.5	54.1	40.1	8.8	48.9	81.7	21.3	103.0
1938...	38.4	13.5	51.9	39.8	9.4	49.1	78.1	22.9	101.1
1939 1/	39.2	-	-	40.8	-	-	80.0	-	-

1/ Preliminary.

Clingstone peaches, which accounted for 64 percent of the 1939 production of peaches in California, are used primarily for canning; while freestone varieties, which made up the remaining 36 percent of production, are mostly dried or are

utilized fresh. During the 5-year period 1934-38, approximately 81 percent of the clingstone peaches produced in California were canned, 12 percent dried, and 7 percent were utilized as fresh fruit. In the same period, approximately 7 percent of the freestone peaches were canned, 59 percent were dried, and 34 percent were utilized as fresh fruit.

Utilization of California peaches in terms of fresh fruit, 1934-38 average

Type	Canned	Dried	Utilized in fresh form	Total utilized
	Tons	Tons	Tons	Tons
Clingstone	252,840	38,480	20,280	1/ 311,600
Freestone	12,220	100,820	57,760	170,800
Total	265,060	139,300	78,040	1/ 482,400
	Percent	Percent	Percent	Percent
Clingstone	81	12	7	100
Freestone	7	59	34	100
Total	55	29	16	100

1/ In addition, there were 14,800 tons of unharvested clingstone peaches.

In the period 1934-38, commercially canned clingstone and freestone peaches accounted for approximately 11,042,000 bushels (265,000 tons) of California peaches, or 55 percent of total harvested production. Peaches used for drying averaged 5,792,000 bushels (139,000 tons) annually, or approximately 29 percent of harvested production. Peaches shipped from the State in fresh form or utilized fresh within the State amounted to 3,250,000 bushels (78,000 tons), or 16 percent of harvested production.

Canning of freestone peaches declined to 392,000 bushels (9,400 tons) in 1938 after the record pack of 1,012,000 bushels (24,300 tons) in 1937. Some clingstone peaches were not harvested in 1938, because of unfavorable marketing conditions. Indications are that both the canned and dried packs in 1939 are larger than in 1938. Stocks of canned peaches on hand on June 1, 1939, were reported to be approximately 3,000,000 cases, or about half as large as the stocks on hand a year earlier.

Exports

Approximately 15 percent of the 1934-38 commercial production of canned peaches and 15 percent of the commercial production of dried peaches in California were exported.

California pack and United States exports of canned and dried peaches

Period or season 1/	Canned pack	Canned exports	Dried pack	Dried exports
	1,000 cases 2/	1,000 cases 3/	Tons	Tons
1921-25 average	7,572	1,321	23,140	3,284
1926-30 "	12,448	1,868	23,000	3,828
1931-35 "	8,996	1,672	22,500	3,616
1933	10,309	1,810	23,400	3,784
1934	8,598	1,120	25,900	3,176
1935	11,216	2,288	19,500	3,048
1936	10,711	1,317	26,300	3,522
1937	13,248	1,253	22,900	3,174
1938 4/	9,822	2,148	21,900	4,119

1/ July of year shown through June of the following year.
2/ Cases of 24 No. 2½ cans.
3/ Converted to cases of 24 No. 2½ cans at 45 lbs. per case.
4/ Preliminary.

The most important foreign market for canned peaches is the United Kingdom. Dried peaches are taken in largest quantities by France and Canada. Small quantities of fresh peaches are exported principally to Canada. Exports of canned, dried, and fresh peaches in terms of fresh fruit averaged between 4 and 5 percent of United States production in 1934-38.

The export outlook for 1940 is uncertain. The United Kingdom normally receives about twice as many canned peaches from the United States as from Australia and it is probable that the United States will maintain its relative importance as a source of canned peaches in that market, but the export movement of canned peaches may be reduced because of the policy of the British Government toward imports of all canned fruits. An increase in exports of dried peaches occurred in 1914-18 as compared with 1909-13.

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November 13, P.M.

THE CHERRY OUTLOOK FOR 1940

Summary

Continuation of the present slight upward trend in the production of sour cherries is indicated for the next 5 years, with production slowly increasing in most of the principal eastern producing States. Recent changes in acreage are too small to affect appreciably the total volume of production, but further increase in production is to be expected from the large number of young bearing and nonbearing trees.

A similar upward trend is also indicated in the production of sweet varieties, with sweet-cherry production increasing at a more rapid rate than in the case of sour cherries. Some increase in plantings is occurring, but in general any production increase in the immediate future will result from increasing production from young trees.

The utilization of cherries has increased in most of the major outlets during recent years, but a slower rate in future expansion is indicated. The pack of canned red pitted cherries continues on an upward trend, with a heavy pack--over 3 million cases--in 1939. The difficulty in moving the pack of canned red pitted cherries during recent years indicates, however, that little further expansion in the pack is to be expected unless consumer demand improves. The pack of frozen cherries has trended upward during the last 7 years and further increase is indicated. The pack of canned sweet cherries, which has trended downward for over a decade, remained relatively stable during the period 1934 through 1937. The heavier packs in 1938 and 1939 were to be expected from the very heavy production in these years, but do not necessarily indicate a reversal of the past downward trend. The volume of brined cherries continues to increase, although at a much slower rate than formerly. Present conditions in the main outlets for brined cherries do not indicate any appreciable increase in this pack in the immediate future. Fresh shipments of sweet cherries have shown no marked trend either upward or downward during recent years. In these years, when fresh shipments have increased, producers have received low returns.

The continuing upward trend in production, with most of the principal market outlets now expanding at a relatively slow rate, indicates that no appreciable increase in prices to producers is to be expected except as it may accrue from a general increase in consumer purchasing power.

Trend of Production Continues Upward

Sour Cherries -- The trend of production of sour cherries continues slightly upward and, in view of the number of young trees, further increase in production during the next 5 years is to be expected. In 1935, 20 percent of all trees in the principal sour-cherry producing States were nonbearing. The absence of tree removals in appreciable numbers during 1930 to 1935, such as

had occurred during the 10-year period preceding 1930, and present indications regarding existing acreage, indicate that no appreciable change in acreage is to be expected. New plantings at the present time are, in general, insignificant. Further production will therefore depend upon the increasing bearing surface of the present acreage.

Variation in production from year to year has been very marked during the last 5 years. This extreme fluctuation in total production arises from the alternation of heavy and light cherry production in most of the sour cherry producing States and from the fact that in recent years all of the principal States have had their heavy crops in the same year.

Production in the Sour Cherry Area

State	1929-1933 Average	1934	1935	1936	1937	1938	1939 Prel.
	Tons	Tons	Tons	Tons	Tons	Tons	Tons
New York	19,094	20,630	22,910	13,280	21,750	16,900	27,210
Sweet	--	1,260	2,390	1,670	1,770	1,440	1,980
Sour	--	19,370	20,520	11,610	19,980	15,460	25,230
Pennsylvania	7,148	7,720	9,880	5,120	9,890	6,560	12,170
Ohio	4,232	6,070	7,380	1,380	7,340	3,630	8,860
Michigan	28,388	29,900	30,590	29,890	35,840	14,940	35,280
Sweet	--	1,800	2,510	2,260	2,287	2,240	2,680
Sour	--	28,100	28,080	27,630	33,553	12,700	32,600
Wisconsin	8,374	7,760	10,820	2,790	13,500	8,600	8,350
Montana	620	550	500	110	340	430	360
Colorado	3,382	5,230	4,010	700	3,460	5,280	3,920
Total	71,238	77,860	86,090	53,270	92,120	56,340	96,150

Sweet Cherries -- The trend of production of sweet cherries continues upward at a somewhat more rapid rate than that of sour cherries. Although some slight expansion of acreage is indicated, new acreage will represent a minor factor during the next few years. The high proportion of young trees, general throughout the sweet-cherry area, indicates the continuance of the upward trend of production during the next few years. The fluctuation in production during 1934 to 1937 was much less than that in sour-cherry production, with crops ranging from 52,000 tons to 62,000 tons, but high potential producing capacity of existing acreage is indicated by the heavy crops of over 84,000 tons and 88,000 tons in 1938 and 1939, respectively.

Production in the Sweet-Cherry Area

State	1929-1933 Average	1934	1935	1936	1937	1938	1939 Prel.
	Tons	Tons	Tons	Tons	Tons	Tons	Tons
Idaho	3,026	2,920	2,950	1,890	1,600	2,490	1,800
Utah	2,936	2,400	2,200	3,400	2,100	4,440	2,130
Washington	15,300	18,000	16,000	18,000	13,500	26,500	26,800
Oregon	12,120	13,000	15,800	15,600	13,800	21,100	24,100
California	20,120	17,000	15,000	23,000	21,600	30,000	33,600
Total	53,502	53,320	51,950	61,890	52,600	84,530	88,430

Pack of Red Pitted Cherries Increasing

The total pack of red pitted cherries has reflected the changes in annual production of sour cherries during recent years, but has increased at a more rapid rate. Thus, although the 1939 crop was less than 5 percent greater than that of 1937, the total canned pack of red pitted cherries in 1939, amounting to approximately 3,138,000 cases, was 27 percent greater than the 1937 pack.

The shift in pack toward the smaller container continues, with No. 2 cans representing approximately two-thirds of the total pack of 1939 as compared with 40 percent in 1937. The record pack in No. 2 cans in 1939, amounting to over 2 million cases or more than double the corresponding packs in the three preceding seasons, probably indicates the limit in this pack for several years to come. In regard to the No. 10 can pack, the carry-overs from the last two seasons and the relatively small pack in this container in 1939, indicate that no appreciable expansion in this pack is to be expected in the next few years. In general, the difficulties encountered in moving the canned red pitted cherry pack in recent years indicate that canning cannot be expected to provide much additional outlet for the indicated future increase in production.

Downward Trend in Canned Pack of Sweet Cherries

The canned pack of sweet cherries has shown a downward trend for more than a decade, with wide fluctuations from year to year partly reflecting the changes in sweet-cherry production. Competition from other canned fruits and fruit juices has tended increasingly to restrict the movement of canned sweet cherries, and the latter pack has irregularly declined in volume, trending sharply downward until 1933. Total pack remained fairly stable during 1934 through 1937, but with a further slight decline in the pack of Royal Ann cherries. The sharp upturn in pack in 1938 and 1939 reflects the record production of these years, but does not necessarily indicate a change in the trend of the canned sweet-cherry pack.

The decline in pack of sweet cherries reflects primarily the downward trend in pack of the Royal Ann. In contrast to this, the much smaller pack

of the black varieties has steadily increased during the last 8 years, and will probably continue to increase for some years. The pack of black cherries reached a total of approximately 94,600 cases in 1938 and represented nearly 14 percent of the total sweet-cherry pack in that year as compared with 6 percent in 1933 and somewhat over 7 percent in 1934.

Pack of Canned Red Pitted Cherries

Area	No. 2	No. 10	Misc.	Total
	Cases	Cases	Cases	Cases
		1939 Pack		
New York & Pa.	468,181	244,396	54,022	766,599
Mich., Wis., & Ohio	1,476,378	591,894	34,529	2,102,801
Western/1	57,705	193,719	16,721	268,145
Total	2,002,264	1,030,009	105,272	3,137,545
		1938 Pack		
New York & Pa.	205,186	118,832	22,565	346,583
Mich., Wis., & Ohio	561,266	412,184	8,598	982,048
Western/1	53,809	297,218	15,155	366,182
Total	820,261	828,234	46,318	1,694,813
		1937 Pack		
New York & Pa.	203,151	303,759	54,506	561,416
Mich., Wis., & Ohio	735,660	824,787	57,373	1,617,820
Western/1	56,079	194,097	42,570	292,746
Total	994,890	1,322,643	154,449	2,471,982

/1. Comprising Colorado, Idaho, Nebraska, Montana, Washington, Oregon, and Utah.

Pack of Canned Sweet Cherries

	Total Pack	Western/1 Royal Anns	Western/2 Black Varieties
	Cases	Cases	Cases
Av. 1929-1933	704,429/3	625,335	--
1934	470,455	414,365	34,948
1935	518,621	441,659	57,531
1936	522,616	425,684	57,946
1937	507,473	379,856	79,588
1938/4	685,662	591,080	94,582
1939/4		670,000	

/1. Comprising California, Washington, Oregon, and Idaho.
/2. Comprising Washington and Oregon.
/3. Short-time average.
/4. Subject to revision.

Frozen Pack Increasing

The pack of frozen cherries has followed an upward trend during the last 7 years and further increase is indicated. Normally over 90 percent of the total frozen pack is processed in the principal eastern cherry-producing States. Notwithstanding greatly decreased production last year in these States, the 1938 frozen pack amounted to more than 29 million pounds, or only 13 percent below that of 1937. With the light carry-over from 1938 and with record production of sour cherries, the 1939 pack of frozen cherries will probably exceed that of 1937.

Brined Pack Slowly Increasing

The pack of brined cherries, which followed a rapidly upward trend during 1930 to 1936, has increased only slightly during the last 2 years. The total pack in California and the Pacific Northwest, the area in which the brined pack is largely concentrated, amounted to 120,300 barrels in 1938 as compared with a pack of 116,900 barrels in 1936, an increase of approximately 400 tons of cherries. The rapid increase in this pack, following 1929, resulted from the expansion in pack of canned fruit cocktail and canned fruits for salad, and from the increased demand for brined cherries for use in cocktails. Although the sharp curtailment of these canned packs in 1938 was due principally to heavy carry-overs from the large 1937 packs, further increase in these outlets for brined cherries can be expected to be at a considerably lower rate than occurred during the 6 years preceding 1938. Since brined cherries represent only a small percentage of the total fruits used in these packs, future increase in the use of brined cherries in these outlets can be expected to be relatively small. The decrease in demand for brined cherries for use in cocktails during the last 2 years, together with a smaller rate of increase in the mixed fruit packs, indicates a future utilization of brined cherries at a level not appreciably above that of recent years.

Pack of Brined Cherries in California and Pacific Northwest

Year	Total	California	Northwest/1
	Barrels	Barrels	Barrels
Av. 1929-1933	50,110	24,285	25,825
1934	64,000	32,000	32,000
1935	87,133	40,000	47,133
1936	116,920	55,000	61,920
1937	118,001	46,136	71,865
1938	120,279	42,072	78,207

/1. Comprising Washington, Oregon, and Idaho.

Little Increase in Fresh Shipments

Shipments of fresh cherries from California, which trended sharply upward until 1931, have fluctuated during the last 7 years around the level reached in 1930. Increased fresh movement during recent years has been accompanied by price conditions affording relatively low returns to producers. Changes in the volume shipped fresh have tended to reflect the changes in production. With the indicated upward trend in future sweet-cherry production, some increase in fresh shipments may be expected.

Prices to Producers

Sour Cherries -- Prices to producers during the last 3 years have been at higher levels than those prevailing after 1930, but remain well below predepression levels. With continuing increase in production and with present prospects in the established market outlets, increase in prices to producers in the next few years appears unlikely unless consumer demand increases appreciably above recent levels.

Sweet Cherries -- Prices to producers of sweet cherries rose fairly steadily from 1932 to 1936. In 1937, prices rose sharply to a level little below that of predepression years. The heavy production of 1938 followed, and farm prices in that year declined just as sharply to the lowest level since 1933. The further increase in production in 1939 and the present upward trend in bearing acreage indicate that unless there is considerable improvement in consumer demand, prices during the next few years are likely to be appreciably below the level reached in 1937.

Production and Farm Price in the Sweet and Sour Cherry Areas
1924-39

Year	Sweet Cherry Area/1		Sour Cherry Area/2		Imports Fresh in Brine or Prepared/3
	Production	Farm Price	Production	Farm Price	
	Tons	Dollars per ton	Tons	Dollars per ton	Tons
Av. 1929-33	48,802	102	69,360	82	4,152
1934	49,820	79	77,860	46	759
1935	50,150	99	86,090	54	785
1936	57,390	89	53,270	64	465
1937	52,600	144	92,120	81	945
1938	70,550	67	56,340	65	567
1939	88,430	68	96,150	47	

/1. Comprising the following states: Idaho, Utah, Washington, Oregon, and California.
/2. Comprising the following states: New York, Pennsylvania, Ohio, Michigan, Wisconsin, Montana, and Colorado.
/3. Year beginning July 1. Beginning July 1, 1930, imports for consumption.

Cherry Trees: Number and Percentage not of bearing age in the Eastern States, Western States, 12 States, and the United States, 1910, 1920, 1930, and 1935

Item	1910	1920	1930	1935
	Number	Number	Number	Number
5 Eastern States				
Not of bearing age	1,102,106	1,128,204	1,940,939	1,365,543
Of bearing age	3,943,969	4,299,193	3,517,828	5,443,881
Total trees	5,046,075	5,427,397	5,458,767	6,809,424
	Percent	Percent	Percent	Percent
Percentage not bearing	22	21	36	20
	Number	Number	Number	Number
7 Western States				
Not of bearing age	1,391,303	622,339	1,532,127	1,091,896
Of bearing age	1,452,198	2,026,562	2,411,081	3,028,835
Total trees	2,843,501	2,648,901	3,943,208	4,120,731
	Percent	Percent	Percent	Percent
Percentage not bearing	49	23	39	26
	Number	Number	Number	Number
12 States				
Not of bearing age	2,493,409	1,750,543	3,473,067	2,457,439
Of bearing age	5,396,167	6,325,755	5,928,909	8,472,716
Total trees	7,889,576	8,076,298	9,401,976	10,930,155
	Percent	Percent	Percent	Percent
Percentage not bearing	32	22	37	22
	Number	Number	Number	Number
United States				
Not of bearing age	5,621,660	3,694,531	4,615,286	3,746,569
Of bearing age	11,822,044	10,787,751	8,381,472	11,327,435
Total trees	17,443,704	14,482,282	12,996,758	15,074,004
	Percent	Percent	Percent	Percent
Percentage not bearing	32	26	36	25

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THE PEAR OUTLOOK FOR 1940

Summary

The upward trend in pear production in the United States is likely to continue during the next few years at a more moderate rate than during the last 10 years, chiefly because of increased yields from a considerable number of young trees reaching full bearing age. Further increases in production are expected in the three Pacific Coast States and in the major commercial areas of the East North Central States.

New plantings of pear trees have been very small during the past year and are confined to replacements in commercial areas. Commercial orchards on the Pacific Coast and in eastern producing areas generally have received good care during the 1938-39 season, but some abandonment has taken place in farm orchards and isolated plantings.

Since 1930, season average prices to growers have been considerably below prices during the period 1919 to 1929. Although prices up to 1937 had recovered somewhat from the lowest point reached in 1932, they experienced a drastic reduction during the 1938 season, declining almost to the level of prices in 1932. During the current season prices for Bartlett pears have been more satisfactory than in any recent season. A smaller crop than last year, improved demand conditions, and larger quantities used in canning are the major reasons for better prices at the beginning of the 1939 season. A further improvement in domestic demand conditions is in prospect for the remainder of the season. However, the export outlook for the late varieties of pears is unfavorable, and imports of Argentine pears into the United States during the latter part of the season may be larger than usual because of a curtailment of shipments of pears from Argentina to Europe as a result of the war.

Exports of fresh pears, which reached a record movement during the 1938-39 season, are expected to be materially reduced during the current season, mainly because of the effects of the European war. Larger crops in the major importing countries of Europe and increased competition from the major pear-producing countries of the Southern Hemisphere, even in the absence of war, would have resulted in a reduction of exports of United States pears this season as compared with last year.

Gradual Upward Trend in Production

The rapid rise in United States production of pears since the turn of the century, particularly during the last two decades, is not expected to continue at the same rate in the future. Increasing production in the three Pacific Coast States, which has accounted for most of this rise, will continue at a somewhat slower rate than during the last 20 years. A gradual upward trend in pear production in the East North Central States, particularly

Michigan, will probably more than offset a moderate decline expected in the major pear-producing areas of the Middle Atlantic States. In all other areas, pear production is only of local significance and is likely to continue to decline in importance.

The 1939 pear crop of over 30 million bushels is the second largest on record. It is nearly 2 million bushels in excess of the 5-year average production, 1934-38, and follows the largest crop ever produced of over 32 million bushels in 1938. The East North Central States are the only major region in which the 1939 production exceeds that of a year earlier. On the Pacific Coast, where approximately two-thirds of the total production of pears originated in recent years, the crop is more than 2.3 million bushels smaller than last year.

(Table 1)

The 5-year average production of pears in the three Pacific Coast States, 1934-38, amounted to almost 18.5 million bushels, of which nearly three-fourths were Bartlett pears. In California, about 12 percent, in Oregon, 60 percent, and in Washington, 29 percent of the average production consisted of pears other than Bartletts--the so-called fall and winter pear varieties. The d'Anjou, Bosc, Winter Nelis, Hardy, and Comice varieties are the most important in this classification. Of the 1939 crop, approximately 70 percent consists of Bartlett pears and 30 percent of fall and winter varieties.

Production of Bartlett pears on the Pacific Coast during the next few years will be only slightly greater than the average during the years 1934 to 1938. Increasing production is to be expected in Washington and Oregon, where a considerable number of trees are approaching full bearing age. In California, which produces more than 60 percent of the Bartlett pears of the Pacific Coast, production of this variety seems to have reached its peak. Fall and winter pear production, on the other hand, will continue its present rate of increase because of a large proportion of plantings coming into bearing or approaching an age at which the yield per tree is highest. Although new plantings are small, higher average yields per tree point toward further increases in production in the very near future, particularly in Oregon and Washington.

(Table 2)

Except in certain areas in New York and Michigan, pear production in the eastern States is not of great commercial significance and with a few exceptions is not carried on in specialized form. The main varieties are Kieffer and Bartlett pears. In New York, where Bartlett pears predominate in the western part, and Kieffer pears in the Hudson River Valley, production is likely to continue a gradual downward trend. In Michigan, production of pears has followed a steady upward trend and is expected to show further increases in the future, chiefly of the Bartlett variety.

Utilization

Pears are utilized in one of three major forms--fresh, canned, or dried. Kieffer pears are used predominantly in home and commercial canning

or preserving, but Bartletts are used extensively through all three of the major outlets. Fall and winter pears or the late dessert varieties are almost entirely consumed in fresh form.

During the 1934 to 1938 seasons, an average of approximately 5.4 million cases of pears has been canned, in addition to considerable quantities of pears used in canned fruit cocktail and fruits for salad. The canning outlet, including canned fruit mixtures, has absorbed approximately 156,000 tons, or somewhat over 6 million bushels of fresh pears during the last 5 years. During the 1938 season, a total of 145,500 tons was utilized in this form. Indications are that a much larger volume of the 1939 crop will be used in canning. The carry-over of canned pears on July 1, 1938, was about 1.2 million cases, which is about double the carry-over on July 1, 1939.

(Table 3)

Only Bartlett pears are used for commercial drying, which is carried on almost exclusively in California. An average of 1.3 million bushels of fresh pears was dried during the 5-year period, 1934-38, or 14 percent more than the average for the preceding 5 years. During the 1938 season, approximately 1.5 million bushels were dried. This year a smaller volume is expected to be utilized through this outlet.

Although increasing quantities of pears have been canned and dried, these outlets have not absorbed all of the increased production so that the volume of pears available for fresh consumption has been larger from year to year. The expected increase in the production of canned and dried pears in the next few years will not be sufficient to prevent a further rise in the volume of pears marketed fresh, especially because the fall and winter pear varieties, which are increasing most rapidly in production, cannot be diverted from fresh consumption.

Decline in Number of Pear Trees Continues

The decrease in the number of pear trees since 1900, which occurred in all areas outside of the Pacific Coast and offset a rapid increase in plantings in the three western States, has shifted the commercial production of pears from the east to the west. This shift was accompanied by greater specialization in production and a higher average yield per tree. Plantings in the three Pacific Coast States were exceptionally heavy during the 1920's, but have been hardly more than replacements in recent years. In the eastern producing areas, old and injured trees, particularly of unprofitable varieties grown in small farm orchards, are being gradually removed. Replacement plantings are made mostly in commercial orchards.

(Table 4)

Although returns to growers for the record crop of 1938 were generally low and large quantities of pears were not harvested because of unfavorable market conditions, orchards in commercial areas on the Pacific Coast during 1939 have generally been given adequate care. In Michigan, orchards are in good condition and some new plantings have been made. In other eastern States,

except in commercial orchards, trees did not receive adequate care and as no new plantings have been made recently the total number of trees is gradually declining.

1939 Opening Prices Higher

Prices for pears, which had recovered somewhat from the lowest point reached in 1932, experienced a drastic decline during the 1938 season. The average farm price was $0.55 per bushel which is 20 percent below the average price during the 1937 season and approaches the level of prices during the years 1932 and 1933. In following the price trend for pears, however, it must be considered that because of the large volume of Bartlett pears produced, the average farm price for all pears reflects more nearly the price for this variety than for other pears. In contrast to the price trend for Bartlett pears, prices for late varieties of pears in 1937 were below those in 1936, and prices in 1938 improved over prices in 1937 but did not reach the level obtained in 1936. Prices paid for canning Bartletts on the Pacific Coast in 1938 averaged about $13 per ton, which is only slightly above prices in 1932.

(Table 5)

As indicated by September 15 quotations, prices in 1939 were higher than on the same date of any preceding season since 1936. Cannery prices on the Pacific Coast are about $30 per ton this year or more than twice the average price received by growers in 1938. The reasons for this improvement lie mainly in better marketing conditions for fresh as well as canned Bartlett pears and a smaller carry-over of canned stocks than last year.

Marketing Programs

Various types of marketing programs have been in operation for Pacific Coast pears in recent years. A marketing agreement regulating grades and sizes of the major varieties of fall and winter pears became effective in October 1938, and upon termination at the end of a comparatively successful season a similar program was approved by the industry and became effective for the current marketing period. Marketing agreements were in operation for fresh Bartlett pears during the 1934 to 1937 seasons, but not in 1938. Chiefly because of the disastrous results in marketing last year's crop, a marketing program which included regulation of grades and sizes and proration of shipment was put into operation for the 1939 marketing season.

The diversion program for Pacific Coast fall and winter pears, which was in effect during the 1937 and 1938 seasons, is being continued during the current marketing period. This program is designed to assist in the development of markets which formerly have absorbed few or no late pears and to relieve the established markets from the pressure of rapidly increasing supplies. Because of a larger volume of late pears authorized to be diverted during the current season, this program is expected to assist in the marketing of the 1939 crop.

Purchases of fresh pears for relief distribution were made at critical times during the 1938 season and have been authorized for the late varieties of pears during the current marketing period.

Export Outlook Unfavorable

Total exports of pears from the United States during the 1938-39 season reached a record movement of over 6 million bushels or almost one-fifth of the total production. Exports of fresh pears accounted for 53 percent of the total exports, while the exports of canned pears accounted for 24 percent, those of dried pears for nearly 14 percent, and exports of pears in various canned and dried fruit mixtures for 9 percent of the total exports on a fresh-fruit basis.

Returns per bushel from export sales of fresh pears, as indicated by the declared value of fresh exports, continued their downward trend during the past season and approached the lowest level of returns obtained during the 1932-33 season.

(Table 6)

Exports of pears during the 1939-40 season will be much smaller than those of recent years. Consumption of imported pears in Europe, the major export outlet for United States pears, is expected to be severely curtailed as a result of the European war. The perishable nature of the fruit and the fact that imported pears, particularly under present conditions, will be regarded by the majority of European consumers as a semiluxury foodstuff make it unlikely that the necessary facilities for transportation and funds will be made available by European countries for their importation. Even in the absence of war, however, the export outlook this year would have been less favorable than last year. Supplies of European fruits, although generally speaking not entirely comparable in quality with imported fruits, are more abundant this year and would have affected exports from the United States. Furthermore, increased production of pears in certain countries of the Southern Hemisphere would have offered more serious competition in European markets during the latter part of the season than heretofore. The movement of United States pears to South American countries during the early part of the season may be slightly increased. This increase, if any, will have little or no effect in offsetting the reduction in exports to Europe and the countries bordering on the Mediterranean. During the last eight seasons approximately 80 percent of the total exports of fresh pears were shipped to countries of Europe and the Mediterranean, and 6 percent to countries in Central and South America.

(Table 1)

Pears: Production by Principal Regions
5-year averages 1919-38, annual 1936 to 1939.

Crop Year	Middle Atlantic States/2	South Atlantic States/2	East North Central States/2	Pacific Coast States/2	Others	Total
	1	2	3	4	5	6
	- - - 1,000 bushels - - -					
Average --						
1919-1923	3,021	1,142	1,464	8,059	3,868	16,332
1924-1928	2,446	1,207	1,695	12,663	2,559	21,231
1929-1933	1,982	1,082	1,975	16,465	2,879	24,282
1934-1938	2,174	1,362	3,150	18,475	3,238	28,384
Annual --						
1936	1,887	1,394	2,194	19,161	2,529	27,165
1937	2,178	1,334	4,001	18,484	3,551	29,548
1938	2,674	1,511	2,824	22,500	3,134	32,473
1939/1	2,478	963	3,409	20,151	3,310	30,311

/1. Indicated October 1.

/2. The states included in each of the principal regions and the percentage of their average 1919 to 1938 production within the region (given in parenthesis behind the name of the state) are as follows:

Middle Atlantic States, New York (69), New Jersey (7), Pennsylvania (24);
South Atlantic States, Delaware (5), Maryland (12), Virginia (26), West Virginia (5), North Carolina (19), South Carolina (8), Georgia (19), Florida (6);
East North Central States, Ohio (23), Indiana (14), Illinois (24), Michigan (39), Wisconsin (0);
Pacific Coast States, Washington (26), Oregon (17), California (57).

(Table 2)

Pears: Pacific Coast Production by States and Varietal Groups,

Average 1929-1933 and 1934-1938

Period and Varietal Group	California		Oregon	
	Production	Percentage by Varietal Groups	Production	Percentage by Varietal Groups
	1	2	3	4
	1,000 bushels	per cent	1,000 bushels	per cent
Average 1929-1933				
Bartletts	8,476	88.8	1,298	46.2
Other Varieties	1,067	11.2	1,509	53.8
Total	9,543	100.0	2,807	100.0
Percentage by States	58.0		17.0	
Average 1934-1938				
Bartletts	8,359	87.8	1,394	39.7
Other Varieties	1,158	12.2	2,119	60.3
Total	9,517	100.0	3,513	100.0
Percentage by States	51.5		19.0	

Period and Varietal Group	Washington		Pacific Coast	
	Production	Percentage by Varietal Groups	Production	Percentage by Varietal Groups
	5	6	7	8
	1,000 bushels	per cent	1,000 bushels	per cent
Average 1929-1933				
Bartletts	3,104	75.4	12,878	78.2
Other Varieties	1,011	24.6	3,587	21.8
Total	4,115	100.0	16,465	100.0
Percentage by States	25.0		100.0	
Average 1934-1938				
Bartletts	3,856	70.8	13,609	73.7
Other Varieties	1,589	29.2	4,866	26.3
Total	5,445	100.0	18,475	100.0
Percentage by States	29.5		100.0	

(Table 3)

Pears: Canned Pack and Fresh Fruit Equivalent

1934 to 1938

Year	Canned Pear Pack: Total	Canned Pear Pack: Pacific Coast	Canned Pear Pack: Pacific Coast in Per cent of Total	Canned Fruit Cocktail and Salad
	1	2	3	4
	actual cases	actual cases	per cent	actual cases
1934	6,163,362	5,709,595	92.6	2,549,575
1935	4,766,874	4,409,740	92.5	2,990,454
1936	6,104,365	5,576,021	91.3	3,621,994
1937	5,115,962	4,534,911	88.6	4,408,805
1938	4,848,090	4,282,915	88.3	2,880,269
Av. 1934-1938	5,399,731	4,902,636	90.8	3,290,219

Year	Fresh Fruit Equivalent: Canned Pears/1	Fruit Cocktail/2	Fruits for Salad/2	Total
	5	6	7	8
	short tons	short tons	short tons	short tons
1934	157,200	6,000	8,300	171,500
1935	120,600	8,400	8,000	137,000
1936	154,400	11,100	8,800	174,300
1937	128,300	16,100	7,500	151,900
1938	131,000	9,900	4,600	145,500
Av. 1934-1938	138,300	10,300	7,440	156,040

/1. Actual cases converted to standard cases of 24 No. 2-1/2 cans; 38 standard cases per ton of fresh fruit rounded to the nearest hundred tons.

/2. Actual cases converted to standard cases of 24 No. 2-1/2 cans; fresh pears required in fruit cocktail 10 pounds per standard case of 24 No. 2-1/2 cans, in fruits for salad 12 pounds per standard case of 24 No. 2-1/2 cans.

(Table 4)

Pear Trees: Total Bearing and Non-Bearing Trees by Census Years, and the Percentage of Trees of Bearing and Non-Bearing Age

Year	All Ages	Bearing Age	Non-Bearing Age	Percentage of Bearing Age	Percentage of Non-Bearing Age
	1	2	3	4	5
	1,000 trees			per cent	
1900	/1	17,716	--	--	--
1910	23,975	15,171	8,804	63.3	36.7
1920	20,700	14,648	6,052	70.8	29.2
1925	23,198	/2	--	--	--
1930	21,271	16,043	5,228	75.4	24.6
1935	19,436	16,695	2,741	85.9	14.1

/1. Only trees of bearing age were supposed to be tabulated but probably some non-bearing trees were included.
/2. Only the total number of trees was reported.

Source of data: Compiled from Census Reports rounded to thousands.

(Table 5)

Pears: Average Prices to Growers by Principal States

Region	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
	1	2	3	4	5	6	7	8	9	10
	- - dollars per bushel - -									
United States										
Crop Year	0.76	0.60	0.41	0.58	0.70	0.64	0.69	0.69	0.55	
September 15	0.87	0.78	0.55	0.60	0.78	0.74	0.90	0.75	0.55	0.80
New York/1										
Crop Year	0.90	0.90	0.46	0.85	0.85	0.90	0.90	0.95	0.75	
September 15	0.95	1.00	0.46	0.95	1.00	1.10	1.05	1.10	0.70	0.90
Illinois & Michigan										
Crop Year	1.02	0.54	0.47	0.77	0.61	0.62	0.76	0.60	0.73	
September 15	1.10	0.69	0.56	1.01	0.78	0.80	0.91	0.90	0.82	0.72
Oregon & Washington										
Crop Year	0.75	0.57	0.34	0.42	0.60	0.52	0.94	0.66	0.62	
September 15	0.74	0.70	0.41	0.46	0.58	0.47	0.79	0.65	0.43	0.77
California										
Crop Year	0.56	0.67	0.33	0.52	0.77	0.69	0.64	0.68	0.35	
September 15	0.70	0.80	0.60	0.50	0.80	0.80	0.95	0.65	0.44	0.80
	- - dollars per short ton - -									
Pacific Coast										
Pears for Canning	26.00	19.60	12.80	15.20	29.20	22.00	22.80	22.40	13.20	30.00

/1. Prices in New York State were considered the most significant of the Middle Atlantic States--New York, Pennsylvania, and New Jersey.

(Table 6)

Pears: Total volume of exports and value per bushel of fresh exports, average 1930-31, annual 1935 to 1938 seasons

Season	Pear Exports in Fresh Fruit Equivalent			Total Exports in Percent of Production	Total Declared Value of Fresh	Unit Value of Fresh Exports
	Fresh	Canned, Dried, and Fruit Mixtures	Total			
	1	2	3	4	5	6
	1,000 bushels			percent	1,000 dollars	dollars per bu.
Average: 1930-31 to 1934-35	2,228	2,509	4,737	18.7	4,410	1.98
Annual:						
1935-36	2,483	2,853	5,336	21.1	4,801	1.93
1936-37	2,626	2,422	5,048	18.7	4,867	1.85
1937-38	2,694	2,127	4,821	16.3	5,031	1.87
1938-39	3,419	2,990	6,409	19.7	5,933	1.74

Source of data: Official records of the Bureau of Foreign and Domestic Commerce, U. S. Dept. of Commerce.

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THE DRIED PRUNE OUTLOOK FOR 1940

Summary

Very low prices for dried prunes in recent years have caused a decrease in bearing acreage in each of the producing states, namely, California, Oregon, and Washington. Moreover, the present bearing acreage will probably continue to produce more prunes than can be sold at prices which will induce growers to maintain the present acreage and the high production level of recent years.

The total supply of dried prunes in the United States for 1939-40 is between 265,000 and 270,000 tons, or about 10,000 tons smaller than the 5-year, 1933-37, average and approximately 10 percent below the large supply of 1938-39. With the large European production in 1939 the world supply of dried prunes is equal to that of last year, but somewhat larger than the average of the past 5 years. Large supplies over the last several years have depressed prices to a very low level. Immediately after the start of the European war, prices rose rapidly. Recently, however, they have declined though not to the low levels existing prior to the start of the war.

The export demand for United States dried prunes is uncertain as a result of war conditions. Large United States supplies and increased European consumption of dried fruits in recent years favor an increase in exports; on the other hand, a heavy European production of dried prunes plus governmental control of prices and imports in certain countries may have a decidedly unfavorable effect.

Historical Review

In the 6 crop years since 1933, the dried-prune industry has been confronted with four large crops which were considerably in excess of annual requirements in both domestic and foreign markets. In no year has production been below the disappearance into regular commercial markets. Furthermore, large supplies of prunes have been carried over from one marketing season into the next, with the result that total supplies each season have been substantially in excess of trade requirements. Large quantities of dried prunes have been bought for relief distribution or have been diverted into byproducts since 1933. These programs have materially reduced carry-overs. However, even with this assistance, supplies have been larger than could be moved at a price which would assure satisfactory returns to growers, as indicated above, and prices to growers have been low.

Production for the 5 years, 1933-37, averaged approximately 29,000 tons in excess of annual disappearance into all channels, including relief and byproducts. In 1938, the largest crop of prunes on record was produced in California, but owing to market conditions and an industry control program, the equivalent of about 60,000 dry tons was not harvested. Furthermore, about 10 percent of the crop was of substandard quality and was diverted in accordance with an industry diversion program.

Since 1933, the production of dried prunes in Oregon and Washington has been below the average for the preceding 10 years though a very large crop was produced in 1935. In Eastern Washington and Oregon, prunes are marketed almost entirely for fresh consumption, while that portion of the crop produced in the western parts of these two states is utilized for either canning or drying. In 1937 and 1938, the production of dried prunes was very small in these two states, largely, it is believed, because of the very low market prices.

United States Supply for 1939-40 Above Average

The 1939 production of dried prunes in California is indicated at 184,000 tons as compared with an average production for the 5 years, 1933-37, of 204,000 tons and a total crop of 288,000 tons in 1938, of which only 224,000 tons were harvested. The indicated production of dried prunes in Oregon and Washington is 28,400 tons, which is the largest crop since 1935 and about 6,000 tons larger than the average for the 5 years, 1933-37. Indicated production plus the carry-over of supplies in California will give a total domestic supply of prunes in the United States of 267,000 tons. This supply will be about 10,000 tons smaller than the average for the 5 years, 1933-37, and over 30,000 tons below the very large supply available for the 1938-39 marketing season.

Prices to Growers

Prices to growers for the last several years have been very low, averaging about $65 per ton for all grades and sizes. With the very large crop in prospect in Europe, total world supplies of prunes available for 1939 will be about 330,000 tons, or 20,000 tons larger than the 5-year average and about equal to the supply in 1938. Under these conditions, it was anticipated early in the season that prices to growers would be relatively low. This was expected notwithstanding the small crop of prunes indicated for California. Immediately following the start of the European war, however, speculative influences increased substantially the field prices for dried prunes. Field prices since that time have declined, though at the present time they are above the prices existing before the start of the war.

Acreage Trend is Downward

Very few new plantings have been made in Washington and Oregon in recent years, while the numbers of trees pulled out and orchards neglected have been substantial. Very low returns to growers have been the primary cause for this decrease in acreage. The downward trend in the acreage of prunes in those states is expected to continue. In California, prune orchards generally have been well taken care of and are in fairly good condition. Because of low price levels, new plantings have been light and have not equaled the acreage taken out of production. The preliminary estimate for bearing acreage in 1939 is 151,600 acres, showing a decrease of 2,200 acres since 1938. It is anticipated that the bearing acreage in 1940 will be slightly below the 1939 figure. Nonbearing acreage has been declining steadily since 1936, indicating the reduction of new plantings. In 1939, the nonbearing acreage was approximately 7,200 acres, as compared with 9,964 acres in 1936. In spite of the reduction of prune acreage in California, the present acreage will produce more prunes than probably can be sold at prices that will assure

growers a satisfactory return, particularly during years of favorable weather conditions.

Dried-Prune Export Outlook Uncertain in 1939-40

Conditions created by the war in Europe make the export outlook for United States dried prunes very uncertain. In recent years foreign markets have taken from 40 to 45 percent of our crop. Europe has taken between 80 and 85 percent of the total exported, and the United Kingdom and France together have taken nearly 40 percent.

Dried fruit is the cheapest and most concentrated form in which fruit can be transported, stored, and marketed, and prunes are one of the best known and least expensive dried fruits consumed in large quantities in Europe. It seems reasonable to assume, therefore, that if European countries take any fruit from the United States under the abnormal shipping conditions and limitations on imports that may prevail during war times, dried fruits, and particularly prunes, are likely to be favored by both the belligerents and the neutrals. With its large supplies the United States is in a position to supply a large tonnage to these markets. However, regimentation or government control of foreign purchases of food might greatly affect European demand for our prunes. Although the exportable surplus of prunes in the Balkans is much greater than last year, it is likely to continue to be consumed largely in Germany and the countries adjacent to the prune-producing areas unless there is a violent and unpredictable shift in the most logical and usual markets and trade routes for the product.

Although France is on an import basis with regard to prunes, that country has re-exported United States prunes to central Europe in recent years; but this trade is expected to cease so long as hostilities continue. In view of the larger 1939 crop, domestic French supplies will be somewhat larger, and prospects for exports of United States prunes to France seem somewhat less favorable than they were a year ago.

Exports to the rest of the continent of Europe are expected to be below the level attained in recent years. Naval operations in the Baltic are expected to curtail the movement to the Scandinavian and Baltic countries. Shipments to central Europe will probably be very small until hostilities cease. In Belgium and the Netherlands the movement is expected to be maintained, provided these countries remain neutral and shipping facilities are available.

Dried Prunes: Production, United States and Europe, Average Farm Price and Exports, 1919-1939

Crop Year Beginning Sept. 1	Harvested Production				Average Farm Price	Exports /1	European Production
	Total U. S.	California	Washington	Oregon			
	1	2	3	4	5	6	7
	tons	tons	tons	tons	dollars per ton	tons	tons/2
1919	158,800	140,000	3,300	15,500	253	53,562	5,800
1920	117,400	98,000	4,400	15,000	146	35,340	66,900
1921	113,700	100,000	1,700	12,000	138	46,476	32,400
1922	161,100	126,000	5,000	30,000	144	39,296	58,100
1923	141,500	114,000	5,000	22,500	105	71,795	85,000
1924	164,000	139,000	5,000	20,000	117	83,781	11,500
1925	161,500	146,000	3,000	12,500	113	72,845	50,000
1926	192,500	151,000	6,500	35,000	105	84,516	61,400
1927	248,800	225,000	3,300	20,500	72	130,089	40,100
1928	228,900	221,000	900	7,000	102	131,375	23,400
1929	160,100	103,000	7,400	49,700	135	69,535	17,000
1930	285,200	261,000	4,100	20,100	57	148,913	26,900
1931	242,400	214,000	4,500	23,900	57	117,363	13,900
1932	194,500	168,000	2,900	23,600	55	89,903	33,600
1933	205,500	182,000	1,900	21,600	81	94,447	35,300
1934	201,100	171,000	4,500	25,600	66	76,950	34,800
1935	297,300	258,000	6,300	33,000	57	109,675	33,000
1936	184,300	159,000	1,300	24,000	78	77,970	55,300
1937	255,700	249,000	600	6,100	55	106,572	6,200
1938	238,300	224,000	1,000	13,300	44/3	101,768	31,600
1939/4	212,400	184,000	1,800	26,600			62,100/3

/1. Approximate unprocessed weight.
/2. Production in France, exports only from other areas. Includes Bulgaria and Rumania since 1929.
/3. Preliminary estimates.
/4. October 1 indications.

Source of data: U. S. Dept. Agr., Bur. Agr. Econ.

Dried Prunes: Domestic shipments and exports

1927-1938

Crop year beginning Sept. 1	Total	Domestic shipments/1	Exports/2					
			Total	France	United Kingdom	Germany	Other Europe	Other outside Europe
	1	2	3	4	5	6	7	8
	- - - 1,000 tons - - -							
1927	256	126	130	16	21	40	34	19
1928	232	101	131	27	20	38	30	16
1929	159	89	70	5	14	20	18	13
1930	268	119	149	23	19	50	43	14
1931	236	119	117	22	21	29	32	13
1932	199	109	90	21	16	18	22	13
1933	198	104	94	13	15	29	24	13
1934	202	125	77	14	16	5	27	15
1935	216	106	110	24	23	13	31	19
1936	177	99	78	20	15	5	22	16
1937	201/3	94/3	107	22	19	8	39	19
1938	203/3	101/3	102	19	21	6	41	15
Av. 1933-37	199	106	93	19	18	12	28	16

/1. Excluding relief and diversion.
/2. Exports converted to approximate unprocessed basis, calculated at 2.5 per cent less than the declared net export processed weight.
/3. Preliminary estimate.

Source of data: Domestic Shipments: Compiled by Shear, S. W., Giannini Foundation of Agricultural Economics, College of Agriculture, University of California.
Exports: Official records, Bur. of Foreign and Dom. Commerce.

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THE GRAPE OUTLOOK FOR 1940

Summary

Average production of grapes in the United States during the next few years is likely to be larger than the 1928-37 average of 2,215,000 tons, but smaller than the indicated average of 2,686,000 tons for the last three years, 1937-39 inclusive. Most of the change is expected in California, with a gradual decline in production taking place in other states. The carry-over of grape products (raisins, wine, and brandy) into the 1939 season was extremely large and, unless consumption of these products during the 1939-40 marketing season is increased materially over present expectations, inventories of these products at the beginning of the 1940-41 season will also be very large.

Preliminary estimates indicate that the 1939 bearing acreage in California will be about 490,000 acres divided according to varieties (based upon principal use) as follows: Raisin varieties, 240,000 acres; wine varieties, 170,000 acres; and table varieties, 80,000 acres. Although the acreage of bearing grape vines in California during the next few years will be smaller than the average acreage for the 10 years, 1928-37, the average annual production from this smaller acreage will probably exceed the 1928-37 average of 1,934,000 tons, but may be less than the average of 2,120,000 tons for the bumper crops of 1937, 1938, and 1939. This larger than average production from smaller than average acreage is expected because moisture conditions, age, and general condition of the vines will probably give higher yields per acre than the 1928-37 average. There has also been a shift from non-irrigated land with low-producing vines to higher producing varieties on irrigated land.

The 1938-39 crop year was another difficult marketing season for the California raisin industry. The 1938 crop was the largest on record. This record crop, together with the carry-over from the previous year, gave the largest total supply of raisins since 1928. While this supply was substantially reduced by diversion and by relief purchases, nevertheless, the large crop in prospect for 1939 plus the carry-over from the 1938 season will still give total supplies for the 1939-40 marketing year considerably in excess of normal trade requirements. The increasingly important export market has been made very uncertain by the European war.

Stocks of wine, particularly of sweet wine, have been reduced from the high levels existing at the start of the 1938 vintage season. Stocks of dry wine are much larger in relation to consumption than stocks of sweet wine. Wine consumption has increased steadily since the repeal of prohibition with the exception of a few months in the early part of 1938, and it is anticipated that this increase will continue, provided consumer incomes are maintained. Based upon the probable utilization of the indicated grape crop, the production of wine in 1939-40 will likely be larger than consumption. Therefore, larger stocks of wine can be expected at the beginning of the 1940 vintage season.

Stocks of beverage brandy as a result of the large production under the 1938 prorate program are at an all-time high, being approximately five times larger than at any previous time on record and equivalent to more than 12 years' supply at the average annual rate of disappearance of beverage brandy since the repeal of prohibition. The marketing of this large amount of beverage brandy will undoubtedly cause difficulty in the future even though it is strongly controlled and marketed, as planned, on a definite schedule over a period of years.

Supplies of table grapes in California, including Thompson Seedless, will probably show an increase in the next few years owing to relatively large plantings of the Emperor variety in 1937 and 1938 and of the Thompson Seedless variety in 1938. Effects of this expansion will probably be seen in the production of 1940.

Exports of American grapes to Europe have expanded rapidly in recent years, reaching an all-time high in the 1938-39 season. The re-entry of Spain in the fall and winter grape deal together with the effects of the European war indicates that exports of California grapes to Europe are likely to be considerably reduced. However, it is expected that shipments to Western Hemisphere markets will remain at about the levels of recent years.

There has been no pronounced trend in the acreage of grapes in principal producing regions outside of California although some decline will probably occur in the next few years. Production of grapes outside of California during the next few years is expected to average slightly less than the 1928-37 average of 281,000 tons. Reports from all regions, excluding California, indicate few plantings in recent years.

Bearing Acreage and Probable Production of California Grapes

Acreage

The bearing acreage of California grapes was estimated in 1939 at 489,000 acres. This compares with 487,000 acres in 1938 and is practically the same as the average for the years 1933 to 1937. Total bearing acreage of all varieties of grapes in California reached a high point in 1926, with 647,000 acres, decreasing to 468,000 acres in 1936. Since 1936, there has been a slight upward trend of bearing acreage which is expected to continue for the next several years. New plantings dropped sharply in 1936 and 1937, but in 1938 they again increased to the levels existing from 1932 to 1935, namely, about 11,000 acres per year.

The estimated bearing acreage of grapes in 1938 and 1939 and the acreage of non-bearing vines in 1938 are given in the following table:

	Bearing Acreage		Non-Bearing Acreage	Percent 1938 Non-Bearing Acreage of Bearing Acreage
	1938	1939/1	1938	1938
	1	2	3	4
	acres	acres	acres	percent
Raisin	238,387	239,500	11,367	4.77
Table/2	79,240	79,300	5,451	6.87
Wine	169,826	170,400	5,767	3.40
Total	487,453	489,200	22,585	4.63

/1. Preliminary.
/2. Acreage of Thompson Seedless used for fresh shipments is included in acreage of raisin varieties.

Production

The volume of grape production in California during the three seasons 1937-39 averaged 2,420,000 tons, about 486,000 tons or 25 percent above the 1928-37 average. The following are some of the more important factors that account for this increased level of production: (1) The heavy decrease in acreage after 1926 consisted in large measure of low-yielding vineyards; (2) damage from vine leaf-hoppers was heavy in 1933 and 1934 causing partial defoliation of the vines and reduction in yields; (3) ample rainfall during recent years, except for the winter of 1938-39, has helped to replenish the water table and to store up moisture reserves; (4) adequate care of vineyards, together with greater maturity of vines, has served to increase their bearing capacity; and (5) expansion of bearing acreage has continued. Plantings since the repeal of prohibition have been largely of Thompson Seedless, Emperor, and other heavy bearing varieties on irrigated land. This has meant a shift from low producing to high producing vines and land.

The extreme variation in the state average annual yield of grapes per acre renders it difficult to forecast probable future production. The light rainfall in the winter of 1938-39 decreased underground water supplies, and this fact, together with three successive large grape crops, indicates the possibility that the 1940 crop may be somewhat smaller than the average for recent years, even though a slight increase in bearing acreage is in prospect. It would seem, however, that the annual average production of California grapes during the next few years will exceed the 1928-37 average production of 1,934,000 tons, but may be less than the indicated average of 2,421,000 tons for the bumper crops of 1937, 1938, and 1939. No major changes in the relative quantities of the different types of grapes are expected. The distribution of the average California grape crop of the last 3 years classified according to principal use is roughly as follows: Raisin varieties, 1,400,000 tons; wine varieties, 620,000 tons; and table varieties, 400,000 tons.

California Raisins

Supply, consumption, and carry-over of raisins 1938-39 season

The 1938-39 California raisin marketing season was another difficult one with a record production of 292,000 dry tons plus a carry-over of 85,000 tons of old raisins (including about 10,000 tons which had been purchased for relief distribution) giving total visible supplies of 377,000 tons, the largest quantity available since 1928 and about one-third greater than the average of the preceding five years. However, 20 percent, or 52,000 tons, of the 1938 crop of natural raisins were placed in the surplus pool of the Raisin Prorate Zone and have been diverted from regular trade channels into stock feed and brandy. Total shipments of California raisins during the marketing season beginning September 1, 1938, into regular trade channels were between 210,000 and 215,000 tons, with 10,000 tons additional distributed for relief. In addition, the 52,000-ton prorate surplus pool was diverted, or contracted for diversion, into stock feed and brandy. The Federal government has agreed to purchase the tonnage remaining unsold in the 1938 commodity loan pool for distribution in relief channels. This will amount to over 30,000 tons.

It appears, therefore, that unshipped stocks of raisins in California on September 1, 1939, were about 105,000 tons, of which over 30,000 tons are to be purchased by the Federal government for relief purposes, leaving 75,000 tons in packers' hands available for movement into regular trade channels. A carry-over on September 1 of from 50,000 to 60,000 tons is generally considered necessary to take care of shipments during September and the early part of October before the new crop becomes available. This carry-over, plus estimated production for 1939 about 10 percent less than for 1938, indicates that supplies of California raisins available to packers and the trade for the 1939 marketing season are only about 10 percent less than the unusually large supply of 367,000 tons available for the 1938 marketing season.

Increased exports were responsible for a total 1938-39 movement into regular trade channels about 5 percent greater than the average for the preceding 5 years. Exports for 1938-39 were about 85,000 tons as compared with 77,000 tons in 1937 and a 5-year average of 60,000 tons (sweat-box weight). Between 125,000 and 130,000 tons of raisins moved into domestic consumption through regular trade channels and at least 10,000 tons additional through relief channels, a total nearly as great as domestic movement into regular and relief channels during 1937-38 and almost as large as the 5-year average movement into regular domestic channels.

Raisin export outlook 1939-40 uncertain

Exports in the 1938 season totaled close to 85,000 tons (sweat-box basis) as compared with 77,000 tons in 1937 and an average of 57,000 tons for the 5 years, 1932-36. Most of the increase over the previous year occurred in the shipments to Belgium, the Netherlands, and the Scandinavian countries. All of these countries, together with the United Kingdom, have been importing much greater quantities of raisins from the United States in recent years than they did in the world war period, 1914-18. United States exports to Canada, on the other hand, have declined materially.

Crop prospects in foreign producing areas indicate a combined supply of raisins and currants in 1939 about equal to that of last season. Raisin production probably will be reduced slightly because of a sharp reduction in the Australian crop. Currant production has increased sharply in Greece.

In recent years, Australia, aided by Imperial preference, has displaced the United States as the chief source of Canada's raisin imports. Should the movement of Australian raisins to Canada be curtailed, it is possible that United States exports to that country may expand considerably during the coming season.

Turkey, on the other hand, normally markets most of the Smyrna raisins in Germany and it is possible that this trade will be curtailed in the 1939-40 season. If this occurs, more Turkish raisins will be available for shipment to the United Kingdom, which in recent years has taken close to 30,000 tons of American raisins.

The volume of Australian raisins that can be shipped to the United Kingdom during the present emergency, the volume of Mediterranean raisins reaching the United Kingdom as a result of the Anglo-Turkish and Anglo-Grecian trade pacts, and Britain's policy of economic warfare will be the significant factors determining the quantity of United States raisins which can be exported to that country. In addition, the exchange rate and foreign exchange position will be important in affecting the United Kingdom imports of American raisins. Any estimate of the effect of these factors made at this time must be highly conjectural. Should the war interfere with Mediterranean shipping, for example, the United States raisin outlook would be improved, whereas a heavy movement of Turkish and Grecian raisins to the United Kingdom might seriously affect the prospects for exports.

Exports of California raisins to Belgium and the Netherlands have expanded in recent years and prospects of exporting to those countries are favorable, provided the countries remain neutral and shipping facilities are available. Curtailment of shipments to the Scandinavian countries as a result of naval operations in the Baltic Sea and the re-entrance of Spain into the raisin-export deal are expected to affect United States exports to Europe unfavorably.

Prospective Situation 1939-40

Although the domestic consumption of raisins will probably be larger than the small consumption in 1938-39, even if exports are equal to average, it seems improbable that sales of raisins in the 1939-40 marketing season will be in sufficient volume to prevent a rather large carry-over in the fall of 1940, unless substantial relief purchases and sizable diversions into byproducts are made. Returns to raisin producers in 1938-39 were quite low despite the $50 loan on the free tonnage which acted as a price stabilizing factor. Prices even advanced above the loan value, but, under the California prorate program, growers were able to sell only 80 percent of their crop, the balance being diverted to byproducts. Therefore, returns to growers on their entire crop were lower than the $50 figure would indicate. Preliminary estimates indicate an average farm price for raisins in 1938-39 of $47 per ton. This compares with $62 per ton average for the 5 years, 1933-37.

It is probable that with the very large supplies available for the 1939-40 marketing season prices will again be low unless export demand is greater than now anticipated.

California Winery Grapes

Wine and Brandy Supplies Large

The carry-over from last year of grapes in the form of wine and brandy is large in relation to disappearance into consuming channels. The carry-over of wine on June 30, 1939, is somewhat less than at the same time the preceding year. Nevertheless, it still constitutes a supply equivalent to approximately one and one-half years' requirement. A carry-over of wine equal to approximately one year's consumption is probably necessary for ageing purposes.

Stocks of dry wine are much heavier in relation to consumption than are stocks of sweet wine. On June 30, 1939, stocks of dry wine totaled about 40,000,000 gallons, as compared to consumption for the preceding 12 months of 22,000,000 gallons. Consumption of dry wine has been increasing slowly in the past 3 years. This increase is expected to continue over the next several years unless consumer income declines drastically. Consumption of dry wine is not subject to variation due to fluctuations in consumer purchasing power to the same degree as sweet wine. This probably is due to the fact that dry wines are used as an adjunct to meals, while sweet wines are consumed by many as a substitute for beverages of higher alcoholic content. Nevertheless, the large stocks of dry wine will undoubtedly cause difficulty in the marketing of wine grapes in those areas which are strictly dry wine producing districts.

Sweet wine stocks a year ago were large in relation to consumption. Under the 1938 wine grape proration program, however, the production of sweet wine was slightly less than consumption during 1938 and 1939. Stocks on June 30, 1939, totaled about 55,000,000 gallons, with consumption totaling 45,000,000 gallons in the preceding 12 months. This is a decrease of 7,000,000 gallons of the stock inventory from the previous year while consumption showed an increase of about 5,000,000 gallons. Except for the period from November 1937 to May 1938, the consumption of sweet wine has increased at a rapid rate since 1934. A further increase in the consumption of sweet wine in the 1939-40 season is likely if there is an increase in consumer activity and consumer income. With a prospective increase in consumption the present stocks of sweet wine should not prove burdensome because, as indicated previously, fairly substantial stocks are required for ageing purposes.

As a result of the production of over 9,000,000 gallons of beverage brandy under the 1938 wine grape prorate program, present stocks of beverage brandy are entirely out of line with current consumption requirements, which are probably not more than 1,200,000 proof gallons. Whether this large stock of brandy can be disposed of at profitable prices remains to be seen. In the meantime, it would seem that with such large supplies of brandy on hand, there would be no incentive to utilize very large quantities of grapes in the production of beverage brandy in 1939. It is planned that the marketing of the brandy made under the 1938 prorate program will be regulated and that it will be disposed of over a period of several years.

On the basis of indicated production of grapes in California on October 1 and the probable utilization of grapes for raisins and table purposes, it is estimated that there will be available for crushing into wine approximately 700,000 tons of grapes. In addition, the fresh grape equivalent of about 100,000 tons of grapes in the form of fortifying brandy will be available from the 1938 grape and raisin prorate pools. From this 800,000-ton supply at least 75,000,000 gallons of wine could be produced, which in itself is somewhat more than one year's consumption of wine. If this takes place, the carry-over stocks into the 1940 marketing season will be heavier than at the present time.

Wine consumption increasing

The upward trend in wine consumption since the repeal of prohibition, which was broken only during the second half of the 1937-38 marketing season, continued through the 1938-39 marketing season, with consumption for the past year over 5,000,000 gallons larger than at any time since prohibition. Consumption of wine in the past has been affected so much by fluctuations in consumer purchasing power that with increase in consumer purchasing power, which is anticipated during the ensuing marketing season, a further increase in the consumption of wine will probably take place. An extensive advertising program, financed through funds obtained under a State marketing agreement, is intended to increase the consumption of wine by developing greater familiarity of consumers with this product. A financing program, involving a number of smaller independent wineries and the California banks, has also been adopted in order to stabilize wine prices as well as the prices received by wine-grape growers.

The acreage planted to wine grapes in California in 1938 was practically double the average of the preceding two years. These plantings were principally of the finer dry wine varieties. There have been very few new plantings of the more common varieties of wine grapes.

Prices of wine grapes in California in 1938 averaged $13 per ton, or $4 per ton under the average for the preceding 5 years, and $25 per ton below the average for the years 1924-28. Reports from the field indicate that grape prices for the 1939 season will be slightly higher than in 1938.

California Fresh Shipping Grapes

Supplies, prices, and domestic demand

Supplies of table grapes, including Thompson Seedless, in California will probably show an increase in the next few years owing to relatively large plantings of the Emperor variety in 1937 and 1938 and of Thompson Seedless grapes in 1938. The first effects of this expansion of production are expected in 1940.

In addition to grapes classified as table varieties, California grape shipments consist of those varieties the major use of which is raisins and wine. Large quantities of wine grapes are shipped fresh to eastern markets where they are used in the home manufacture of wine. This market is a continuation of the market developed during the prohibition era and normally

takes about 200,000 tons of grapes. The substantial increase in California carry-over stocks of grape products in the last few years, together with the prospect of continued large carry-overs of these commodities at the end of the 1939-40 marketing year, will tend to intensify the pressure of supplies seeking a market outlet through fresh channels in the 1940 season.

The demand for fresh shipping grapes is directly dependent upon consumer income. The upward trend in consumer income at the present time should be reflected in higher prices for California grapes in eastern markets in 1940 if extended through that time. The supply of fresh grapes, however, will continue to be affected by the supply and demand for grapes for other purposes.

Returns to growers in 1938 from grapes shipped fresh were only slightly below the average price of $20 per ton received during the preceding 5 years. Auction prices in the eastern markets to date indicate that the present crop is selling at practically the same price as that received in 1938. With the increased production of certain varieties of table grapes, particularly Emperors and Thompson Seedless, returns probably will be lower than those now prevailing.

Exports

Exports of American grapes to Europe, particularly of the Emperor and Ribier varieties, have expanded rapidly in recent years, reaching an all-time high of over 40,000 tons in the 1938-39 season. This is practically double the average for the preceding 5 years. Reduction of the supplies of Spanish Almerias, and their uncertain condition just preceding and during the recent war period in Spain, have been chiefly responsible for the increase in California exports to Europe. This year Spain re-enters the fall and winter grape deal and, despite war damage and neglect to the vineyards, is expected to have a considerable quantity of grapes for export. It seems probable, therefore, that demand for California grapes will be reduced.

In the United Kingdom, the most important European fresh-grape market, grapes are among the commodities for which licenses must be procured for importation. Imports from the United States are now being restricted under licenses to 25 percent of last year's import value in terms of sterling. If this restriction is maintained, it will mean that fresh-grape exports in 1939-40 to the United Kingdom will be curtailed possibly to levels that obtained before 1936. Also, with the re-entry of Spain into the fresh-grape shipping deal, part of the export market undoubtedly will be lost to California grapes. Swedon, Norway, and Finland are the only other important European markets for California grapes. Since naval operations in the Baltic Sea will disturb shipping in that area, it is anticipated that the volume of grapes moving to the Scandinavian countries will be curtailed.

Exports to Europe normally account for only about one-third of the total United States grape movement into export. Canada is usually by far the most important export market and shipments to that country are expected to be maintained during the coming season. Exports to other Western Hemisphere countries are also expected to be maintained. Therefore, it would

appear that, while exports to Europe are likely to be severely curtailed, shipments to Western Hemisphere markets should remain at the high levels of recent years. But total exports are expected to be below the level of the 1938-39 season.

Grapes in Other States

The 1939 production of the labrusca, or "Eastern", type of grape in the States other than California is estimated at 300,000 tons for 1939, or about 80 percent greater than the short crop of 1938 in these same states, and almost as large as the record 323,000-ton production of 1937. Acreage trends vary in the principal producing areas for Eastern grapes, but are generally on the decline, owing to unsatisfactory prices and returns to growers during the last few years. The large crop of 1939, with its comparatively low prices, will tend to check further expansion.

In recent years, an average of approximately 10 percent of the Eastern grape crop has been used by commercial concerns for making wine and about the same percentage for unfermented grape juice. Allowing for small quantities used by commercial preserving companies, it appears that roughly 75 percent of the total grape crop in these producing areas is ordinarily used in private homes for fresh use, for home manufacture of wines, and for preserving. The Concord variety comprises 80 to 90 percent of Eastern grapes.

New York, Michigan, Ohio, and Pennsylvania are the principal grape-producing States outside of California. Missouri is gradually coming into prominence, whereas production in Arkansas has slowly declined in recent years. A record production of 12,000 tons is estimated for Ohio in 1939. New York and Michigan are also expected to market large supplies of grapes in 1939 at prices approximating the low levels of 1937. This may result in the neglect or non-replacement of vines in 1940 and succeeding seasons.

Table 1. - Grapes: Production by States, Averages 1928-37 and 1933-37, and annual 1936-39

State and Variety	Average 1928-37	Average 1933-37	1936	1937	1938	1939/1	1939 as a Percentage of 1938	1939 as a Percentage of 1928-37 Av.
	1	2	3	4	5	6	7	8
	- - - 1,000 tons - - -						percent	
Calif., all	1,934/2	1,944	1,714	2,454	2,531	2,279	90.0	117.8
Table	346/2	346	324	416	447	380	85.0	109.8
Wine	466/2	514	472	631	641	562	87.7	120.6
Raisin	1,122/2	1,084	918	1,407	1,443	1,337	92.7	119.2
All States excl. Calif.	281/2	272	202	323	173	299	172.8	106.4
N. Y.	73/2	71	49	89	56	75	133.9	96.2
Mich.	63/2	58	39	67/2	17	60	352.9	95.2
Ohio	29	31	26	38	10	42	420.0	144.8
Pa.	23	21	16	26	16	24	150.0	104.3
Mo.	10	10	6	12	6	13	216.7	130.0
Ark.	11	10	7	13	5	8	160.0	72.7
Other States	67/2	71	59	78	63	77	122.2	114.9
U. S. Total	2,215	2,216	1,916	2,777/2	2,704	2,578	95.3	116.4

/1. Indicated October 1, 1939.
/2. Includes some quantities not harvested because of market conditions.

Source of data: U. S. Dept. of Agriculture, Agricultural Marketing Service, Crop Reporting Board.

Table 2. - Grapes: Season average price received by growers, selected states, 1935-1938 and 1933-37 average

States	Average 1933-37	1935	1936	1937	1938/1
	1	2	3	4	5
	- - - dollars per ton - - -				
California/2	17	13	19	19	14
New York	29	25	41	30	36
Michigan	24	20	36	23	50
Ohio	31	25	37	33	42
Pennsylvania	29	23	40	31	40
Missouri	38	35	50	35	40
Arkansas	28	30	35	28	40

/1. Preliminary. /2. For detailed breakdown of prices by varietal groups see table 4.

Source of data: U. S. Dept. of Agriculture, Bur. Agr. Econ.

Table 3. - Grapes, California: Utilization of harvested production of all varieties, 1927-1938

Year	Harvested Production	Dried /1	Table Stock/2	Crushed by Commercial Wineries	Otherwise Used as Juice Stock/2	Canned
	1	2	3	4	5	6
	- - - 1,000 tons - - -					
1927	2,307	1,104	383	75	743	2.4
1928	2,213	1,008	405	103	695	1.6
1929	1,827	824	320	51	630	2.3
1930	1,748	731	316	74	625	1.3
1931	1,310	640	235	35	400	.3
1932	1,772	1,012	230	99	430	.5
1933	1,657	756	201	444	255	1.0
1934	1,700	679	263	530	225	2.2
1935	2,194	809	253	887	244	2.4
1936	1,714	728	290	494	199	3.2
1937	2,454	994	310	911	231	7.5
1938	2,531	1,169	293	862	202	5.0
1939/3	2,279					

/1. Fresh basis; excluding dried used for juice.
/2. Estimates made by the Giannini Foundation of Agricultural Economics, University of California, and based upon reports of the California Cooperative Crop Reporting Service and of the Federal-State Market News Service.
/3. Production indicated on October 1, 1939.

Source of data: Reports of the California Cooperative Crop Reporting Service, except as otherwise designated.

Table 4. - Grapes, California: Season average price received by growers, 1919-1938

Crop Year	All Varieties	Wine Varieties	Table Varieties	Raisin Varieties		
				Marketed	Fresh	Dried
	1	2	3	4	5	6
	- - - dollars per fresh ton - - -					dollars per dry ton
1919	55	50	75	--	56	210
1920	65	75	75	40	63	235
1921	62	82	80	40	51	190
1922	41	65	60	30	28	105
1923	22	40	40	20	12	45
1924	33	63	40	20	19	70
1925	28	60	20	20	21	80
1926	25	45	25	20	19	70
1927	24	45	26	23	16	60
1928	16	25	26	10	11	40
1929	24	35	35	20	16	61
1930	16	20	21/2	13/2	16	59
1931	20	19	35	25	16	60
1932	12	12	16	19	10	39
1933	16	20	15	17	15	57
1934	17	15	23	20	17	64
1935	13	12	14	12	15	56
1936	19	17	25	19	19	70
1937	19	21	22	21	17	63
1938/3	14	13	19	15	13	47
Av. 1933-37	17	17	20	18	17	62

/1. Column 6 divided by 3.75.
/2. Includes returns from Control Board for unharvested grapes as well as returns from fresh raisin grapes actually marketed.
/3. Data for 1938 are preliminary.

Source of data: U. S. Dept. of Agriculture, Bureau of Agricultural Economics.

Table 5. - Still Wines: Production, withdrawals, and stocks on hand 1933-34 to 1938-39

Year Beginning July 1	Wine Removed from Fermentors/1	Production			Tax-paid Withdrawals			Stocks on Hand June 30		
		Under 14 Percent	Over 14 Percent /2	Total	Under 14 Percent	Over 14 Percent	Total	Under 14 Percent	Over 14 Percent	Total
	1	2	3	4	5	6	7	8	9	10
	- - - thousands of wine gallons - - -									
1933-34	77,778.	22,000	19,000	41,000	5,053	9,472	14,525	30,504	19,664	50,168
1934-35	91,930	15,000	29,000	44,000	12,146	23,271	35,417	32,898	23,579	56,477
1935-36	170,903	15,000	59,000	74,000	15,790	31,694	47,484	31,385	47,087	78,472
1936-37	122,045	16,000	41,000	57,000	20,994	41,041	62,035	25,739	42,369	68,108
1937-38	223,726	32,000	64,000	96,000	21,353	39,823	61,176	40,152	61,865	102,017
1938-39/3	231,986	25,000	43,000	68,000	22,457	44,912	67,369	39,664	55,197	94,861

/1. Represents quantities removed from fermenters, including distilling material intended for use in the production of brandy.

/2. Total of wine fortified after addition of brandy.

/3. Preliminary.

Data compiled as follows: Col. 2: 1933-36, estimates made by Oakey, Gordon E., Bur. Agr. Econ.; 1937, 1938, estimates made by Rush, Donald R., General Crops Section, based on reports of Bureau of Internal Revenue and of the Wine Institute, San Francisco, California.

Cols. 1, 3, 5, 6, 7, 8, 9, and 10: 1934, 1935, 1936, 1937, and 1938, U. S. Treasury Dept., Bureau of Internal Revenue, Alcohol Tax Unit, Statistics on Wine, Fiscal Year Ending June 30; 1938-39, U. S. Treasury Dept., Bureau of Internal Revenue, Alcohol Tax Unit, Comparative Statistics on Still and Sparkling Wine for June and for the Fiscal Years 1939 and 1938.

Col. 4: Col. 2 plus Col. 3.

Table 6. - Production, disappearance, exports, and prices of domestic raisins and foreign production of raisins and currants, 1921-1939

Season Beginning Sept. 1	Domestic Production	Disappearance			Price to Growers	F.C.B. Price Choice Bulk Thompsons	Foreign Raisin and Currant Production
		Domestic /1	Exports	Total			
	1	2	3	4	5	6	7
	- - - short tons/2 - - -				dollars per ton	cents per lb.	tons/3
1921	145,000	125,200	29,800	155,000	190.00	14.0	237,567
1922	237,000	135,000	55,000	190,000	105.00	10.5	256,400
1923	290,000	149,400	45,600	195,000	45.00	7.3	244,200
1924	170,000	167,600	52,400	220,000	70.00	7.4	387,300
1925	200,000	168,000	72,000	240,000	80.00	7.3	343,600
1926	272,000	162,300	82,700	245,000	70.00	6.8	318,800
1927	285,000	178,000	107,000	285,000	60.00	5.6	366,300
1928	261,000	171,000	119,000	290,000	40.00	4.4	347,400
1929	215,000	148,600	66,400	215,000	61.00	4.9	356,100
1930	192,000	148,200	66,800	215,000	59.00	4.7	332,700
1931	169,000	124,100	60,900	185,000	60.00	5.1	245,100
1932	262,000	155,300	64,700	220,000	39.00	3.3	343,100
1933	195,000	137,500	52,500	190,000	57.00	4.2	340,600
1934	171,000	141,800	48,200	190,000	64.00	4.3	364,300
1935	203,000	154,100	60,900	215,000	56.00	4.1	429,200
1936	182,000	140,900	59,100	200,000	70.00	4.8	369,700
1937	247,000	147,300	76,700	224,000	63.00	4.0	339,800
1938/4	292,000	138,000	84,000	222,000	47.00	3.8	403,400
1939	260,000/5						398,200/4

/1. Does not include diversions into by-products. Includes the following relief shipments: 1937 - 15,000; 1938 - 10,000 tons.
/2. Sweat-box basis.
/3. Dried basis.
/4. Preliminary.
/5. Estimates by D. R. Rush, General Crops Section, Division of Marketing and Marketing Agreements.

Source of data: Cols. 1 to 6: compiled by Shear, S. W., Giannini Foundation of Agricultural Economics, University of California.
Col. 7: compiled from data by Bauer, W., and Shear, S. W., Giannini Foundation of Agricultural Economics, University of California.

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November 13, P.M.

THE STRAWBERRY OUTLOOK FOR 1940

Summary

October estimates indicate about 197,000 acres of strawberries for picking in 1940. The indicated acreage is the largest since 1929, and 9 percent above the 1928-37 average; but it is only about 2 percent larger than the 1939 harvested acreage. Should yields in 1940 be average, production would be somewhat less than in 1939 when the per acre yield was about 10 percent above average. Higher consumer incomes in 1940 probably will result in a better demand for strawberries than existed in 1939.

Increases in 1940 over 1939 acreages are indicated in the late and intermediate States. In the second early and the early States some decrease in acreage is expected.

During the last decade acreage has increased markedly in the late States and in 1940 is expected to be the largest on record. The upward trend in acreage in the intermediate States is expected to continue in 1940. In the early States acreage has declined somewhat while in the second early States there has been no pronounced acreage trend in recent years.

Regional Prospects

In the early States (Alabama, Florida, Louisiana, Mississippi, and Texas), a 3-percent decrease in acreage is anticipated in 1940. Practically all of the decrease in acreage is expected to be in Florida. With average yields, production in the early States in 1940 should be materially less than the 1939 production, which was influenced by especially high yields per acre. Also with higher consumer incomes anticipated, demand for early strawberries in 1940 should be improved over a year earlier.

In the second early States (Arkansas, California (southern district), Georgia, North Carolina, South Carolina, Tennessee and Virginia) October reports indicate a decrease of 7 percent from the 1939 acreage. Acreage reductions are confined largely to North Carolina and Arkansas. In the other States the forecasted 1940 acreage varies but little from the 1939 harvested acreage. The anticipated 1940 acreage in the second early States is about 9 percent below the 1928-37 average.

In the intermediate States (California, (exclusive southern district) Delaware, Illinois, Kansas, Kentucky, Maryland, Missouri, New Jersey, and Oklahoma) a 6-percent increase in acreage is forecast for 1940. Most of the increase is indicated for Missouri, New Jersey, and Maryland. The expected

1940 acreage in these States is the largest in years and about 20 percent above the average of 1928-37.

In the late States (Indiana, Iowa, Michigan, New York, Ohio, Oregon, Pennsylvania, Utah, Washington, and Wisconsin) where acreage has been increasing in recent years, the indicated 1940 acreage is about 7 percent above the record harvested acreage of 1939, and 30 percent above the 1928-37 average. Increases are indicated for most States but are most pronounced in Michigan and Oregon.

General Situation, 1939 Marketing Season

Strawberry acreage in 1939 was the largest since 1929 and with yields per acre more than 10 percent above average, production was unusually large, being about 22 percent above the average of 1928-37. Yields per acre in 1939 were especially high in the early and late States. In the intermediate States yields were below average.

Prices to growers for the country as a whole were about 10 percent below the 1938 prices and more than 10 percent below 1928-37 average prices. Prices were especially low in the late States where production increases have been most pronounced. But prices in the intermediate and early States were also lower than 1938 prices. In the second early States 1939 prices were above those of 1938 and above the 1928-37 average.

The bulk of production in most States is sold for fresh consumption. In Oregon and Washington, however, a substantial part of the crop is sold to processing plants for cold packing, quick freezing, and canning. In some other areas small quantities of strawberries are utilized for cold packing and quick freezing, but only about 5 percent of the United States production of strawberries in recent years has been utilized for these purposes.

Storage reports indicate that the quantity of strawberries used for cold packing and quick freezing in 1939 was about the same as in 1938 but was considerably less than in 1937. Total cold storage holdings, September 1, 1939 of 47.1 million pounds compares with 44.6 million pounds a year earlier. Quick-freeze strawberries are packed principally in containers of less than 30 pounds and cold-pack strawberries in containers of 30 pounds or more. Storage holdings September 1, 1939 of strawberries in small containers amounted to 15.8 million pounds compared with 12.7 million pounds a year earlier. September holdings of strawberries in large containers amounted to 31.3 million pounds, or slightly less than the holdings of a year earlier.

Cold-pack strawberries are largely utilized by preservers and by the ice cream trade. Quick-freeze strawberries are sold for consumption through retail outlets.

Strawberries: Acreage, production, and prices to growers

Group	Acreage harvested			Production			Average prices to growers		
	10-year average 1928-37	1938	1939	10-year average 1928-37	1938	1939	10-year average 1928-37	1938	1939
	Acres			1,000 Quarts			Cents per Quart		
Early	35,620	35,110	34,850	55,800	48,192	62,448	16.6	14.6	14.0
Second-early	53,120	46,650	52,200	74,544	66,888	75,720	9.5	10.2	10.5
Intermediate	45,240	44,330	51,300	67,824	69,360	75,144	10.1	11.3	10.4
Late	46,450	53,900	56,400	73,656	90,816	116,952	10.7	10.2	8.0
Total	180,430	179,990	194,750	271,824	275,256	330,264	11.4	11.2	10.2

Acreage harvested 1931-1939 and acreage intended for picking in 1940

Group	1931	1932	1933	1934	1935	1936	1937	1938	1939	Intended for 1940
Early	35,920	39,220	38,360	35,880	33,550	29,300	31,850	35,110	34,850	33,850
Second-early	38,070	55,570	64,830	65,870	44,450	45,830	39,750	46,650	52,200	48,450
Intermediate	34,150	42,400	46,800	47,150	39,800	43,050	37,600	44,330	51,300	54,300
Late	45,680	52,620	45,260	47,280	45,080	47,400	48,100	53,900	56,400	60,550
Total	153,820	189,810	195,250	196,180	162,880	165,580	157,300	179,990	194,750	197,150

Cold storage holdings of strawberries on first day of month, 1937-39 1/

Month	1937	1938			1939		
	Total	Large containers 2/	Small containers 2/	Total	Large containers 2/	Small containers 2/	Total
	1000 lbs.	1000 lbs.	1000 lbs.	1000 lbs.	1000 lbs.	1000 lbs.	1000 lbs.
January	11,444			28,019	25,091	10,811	35,902
February	10,399			25,352	21,443	12,243	33,686
March	9,831			24,321	18,935	10,450	29,385
April	8,594			22,678	16,313	9,442	25,755
May	5,364			20,166	14,121	7,984	22,105
June	16,250			22,151	21,711	11,010	32,721
July	34,529	38,352	9,862	48,214	33,430	16,370	49,800
August	36,930	33,700	12,583	46,283	34,648	16,353	51,001
September	36,198	31,984	12,654	44,638	31,305	15,809	47,114
October	34,707	29,865	13,094	42,959			
November	31,804	27,710	12,122	39,832			
December	31,697	27,939	11,176	39,115			

1/In addition some strawberries were in cold storage but reported in unclassified products.

2/Large containers of 30 lbs. and more; small containers of less than 30 lbs. Reports of holdings were not segregated by large and small containers prior to July 1, 1938. A large part of the berries in large containers is "cold pack" and a large part of those in small containers is "quick freeze".

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November 13. P.M.

THE OUTLOOK FOR TREE NUTS FOR 1940

Summary

The basic trend in production of tree nuts is expected to continue moderately upward during the next few years.

Combined 1939 production in the United States of walnuts, almonds, pecans, and filberts is expected to amount to approximately 111,900 tons. This is 20 percent more than the 1938 total crop, and 18 percent more than the average for the 5 years 1933-37.

Prices received by growers for tree nuts fell to low levels in 1930 and 1931. Although almond prices have made a substantial recovery since then, they remain well below pre-depression levels, and prices of other nuts still average approximately as low as in the depression years.

Inasmuch as further increases are expected in the production of tree nuts, it does not seem probable that prices received by growers during the next few years for their nut crops will average much, if any, higher than they have in the last few years.

Foreign demand is an unfavorable factor in the present outlook for tree nuts. It may be expected that the European belligerents will drastically curtail imports of nuts, unless these are obtainable at very low prices. With a reduced European demand, United States export programs for walnuts and pecans would be adversely affected, and it also seems probable that the United States market would be called on to absorb at least part of the large volume of Brazil nuts normally exported to Germany and the United Kingdom.

Consumption and imports.- In a comparison of the period from August 1925 to July 1930 with the period from August 1934 to July 1939, imports of tree nuts into the United States are 20 percent less in the latter period. A large increase in imports of cashew nuts was more than offset by large decreases in imports of walnuts, almonds, and filberts. Reflecting the decreases in imports, apparent consumption of these three kinds of nuts in the United States declined substantially between the two periods in the face of increasing domestic production of walnuts and filberts and of large almond crops in 1937 and 1938. Current total apparent consumption of tree nuts is at a level below that of the 1920's but above the depression level.

The basic trend in the production of English walnuts continues upward. A crop of 59,500 tons is expected in 1939, or 17 percent more than in 1938.

The production of improved (budded) varieties of pecans is expected to continue to increase gradually during the next few years, given average growing conditions. The 1939 crop is expected to amount to about 10,700 tons, 22 percent more than in 1938.

The seedling pecan crop varies greatly from year to year; practically no trend is discernible through the last 15 years. The basic tendency in production is believed to be stationary or slightly upward. A crop of about 19,200 tons, 19 percent more than in 1938, is expected in 1939.

An almond crop of 19,000 tons is expected in 1939 - 1,000 tons short of the record 1937 crop. Given average growing conditions, an average production in the neighborhood of 18,000 tons seems probable for the next 5-year period. New plantings have been heavy in the last 5 or 6 years, and most of them have been made on irrigated land, where growing conditions are favorable. Apparent consumption of almonds ranged between 0.23 pound and 0.30 pound per capita annually during the 1920's, but for the last 7 years it has ranged between 0.10 pound and 0.17 pound per capita annually (shelled basis). The difference is accounted for by a large decrease in imports.

The commercial production of filberts is a young and rapidly expanding industry. From 60 tons in 1927, the first year officially reported, United States production has increased to an expected 3,500 tons in 1939. A crop as large as 5,000 tons is possible by 1945. Apparent consumption of filberts, like that of almonds, is at a low level. Since the marketing year 1931-32, it has ranged between 0.03 pound and 0.05 pound per capita annually, as compared with an average of approximately 0.10 pound during the 1920's (shelled basis). The increase in domestic production has not been sufficient to offset a rapid decline in imports.

Survey of Important Trends in General Situation

The war in Europe an unfavorable factor.- It is expected that the European belligerents, in rationing imports, will curtail the volume of nuts permitted to be brought in. This would affect the tree-nut situation in the United States in two ways. First, it would mean the loss of about half of the export market that has been developed in recent years, with the aid of Federal payments, for approximately 10 percent of our production of walnuts and improved varieties of pecans. Second, over half the crop of Brazil nuts is usually marketed in Germany and the United Kingdom. If these markets are closed, a large surplus over the usual volume might seek an outlet in the United States at reduced prices. On the average, during the last 4 years, Brazil nuts have made up about 25 percent of our imports of tree nuts and about 12 percent of total consumption of tree nuts in the United States.

The depreciation of some of the European currencies is a second factor that may be expected to tend to limit the export market for United States walnuts and pecans and to direct a larger proportion than usual of the world nut crops into the United States market. The outlook in respect to imports into the United States of walnuts, almonds, and filberts from the Mediterranean countries and the Balkans (these imports account for about 10 percent of the tree nuts consumed in the United States) is highly uncertain because the supply may become involved in the economic warfare between Germany and the United Kingdom.

Imports of cashew nuts into the United States will probably not be much affected by the War. Europe normally takes only about 12 or 14 percent of the output from India. India is the only country in the world that prepares these nuts in commercially important quantities.

Statistics on the quantity and value of tree nuts imported into the United States from 1909 to 1918 do not reveal any perceptible effects traceable to the World War. However, the current situation differs from the situation of 25 years ago, in that the United States now exports walnuts and pecans, and in that the United Kingdom did not then curtail imports of nuts.

Tree-nut prices low since 1931.- Prices to growers for almonds dropped very sharply in 1930, and prices to growers for other tree nuts dropped very sharply in 1931. There has been no recovery from the depression level in the case of walnuts and the improved varieties of pecans. Almond prices, which recovered sharply in 1935 and 1936, dropped back in 1937 and 1938; and although they did not return to the depression level, they remain much below pre-depression figures. It is noteworthy that the high prices for almonds occurred in 1935 and 1936 during the last 2 years of a series of constantly diminishing crops, while the low prices for improved pecans and walnuts have been accompanied by record high crops.

Production and prices to growers of tree nuts in the United States, before and after the depression

Period	Walnuts		Improved pecans		Seedling pecans		Almonds	
	Production	Price to growers	Production	Price to growers	Production	Price to growers	Production	Price to growers
	1,000 tons	Cents per lb.	1,000 tons	Cents per lb.	1,000 tons	Cents per lb.	1,000 tons	Cents per lb.
Average 1925-29	35.0	20.0	6.7	33.4	23.8	13.6	10.8	18.4
Average 1934-38	51.0	10.2	9.4	13.2	22.5	7.8	12.6	14.0
Percentage of increase (+) or decrease (-)	+ 46	-49	+ 40	-60	-5.5	-43	+ 17	-24

1938 prices up from 1937.- With crops of tree nuts smaller in 1938 than in 1937, average prices to growers were higher, except in the case of almonds. Prices for almonds were somewhat lower under pressure of a crop which was large even though smaller than the preceding one.

Prices to growers for tree nuts produced in the United States; 1938 compared with previous years

Kind of nut	Average 1931-35	1937	1938
	Cents per pound	Cents per pound	Cents per pound
Walnuts	10.3	9.1	11.4
Pecans, improved	13.6	11.1	12.2
Pecans, wild and seedling	6.4	5.8	7.3
Almonds	9.9	13.7	12.9
Filberts	12.1	10.7	11.0

Production to increase moderately.- The combined production of all tree nuts in the United States will probably continue to increase moderately during the next 5 years. The basic trend is still strongly upward for walnuts and slightly upward for improved varieties of pecans. Recent new plantings of almonds are expected to result in a substantial increase in total productive capacity. Production of filberts in the United States is a young and rapidly growing industry. The size of the Oregon and Washington crops has increased from 60 tons in 1927 to an expected 3,440 tons in 1939, and a continued rapid increase may be expected.

United States nut production, 1939 compared with previous years

Kind of nut	Expected 1939	1938	Average 1933-37	Expected as a percentage Of 1938	Expected as a percentage Of average
	1,000 tons	1,000 tons	1,000 tons	Percent	Percent
Walnuts	59.5	50.8	47.5	117	125
Pecans, seedlings	19.2	16.1	24.4	119	79
Pecans, improved varieties	10.7	8.8	9.4	122	114
Almonds	19.0	15.0	12.1	127	157
Filberts	3.5	2.2	1.6	159	219
Combined production	111.9	92.9	95.0	120	118

Total imports lower than 10 years ago.- In spite of the heavy imports of cashews in recent years, and increases in imports of Brazil nuts and some of the less important nuts, total imports of tree-nuts have decreased substantially.

Imports of tree-nuts into the United States, before and after the depression 1/

Kind of nut	5-yr. average 1925-26 to 1929-30	5-yr. average 1934-35 to 1938-39	Percentage of increase(+) or decrease(-)
	1,000 pounds	1,000 pounds	Percent
Cashews	2,091	24,277	+ 1061
Brazil nuts	14,592	17,841	+ 22
Pignolias and Pistachios	1,404	2,222	+ 58
Chestnuts	16,482	14,777	- 10
Walnuts	26,631	4,687	- 82
Almonds	19,341	5,947	- 69
Filberts	10,280	3,091	- 70
Pecans	267	176	- 34
Total	91,088	72,958	- 20

1/ Imports for consumption. Nuts imported in shell have been converted to a shelled basis in making up this table.

Domestic production now exceeds imports.- Domestic production and imports are compared over a 17-year period in the following table. In the early 1920's, imports were roughly two and a half times as great as domestic production, but production has increased and imports have decreased to the point where production now exceeds imports.

Trends in United States tree-nut production and imports

Crop year (Aug.-July)	Production: Unshelled basis	Production: Shelled basis	Imports for consumption (shelled basis)
	1,000 tons	1,000 tons	1,000 tons
Average			
1922-23 to 1924-25	54.2	22.4	54.2
1925-26 to 1929-30	76.4	31.4	45.3
1930-31 to 1934-35	83.1	34.3	31.1
1935-36 to 1938-39	101.5	41.9	37.8

Consumption of tree nuts up from depression level.- The total apparent per capita consumption of tree nuts in the United States is now well above the depression level, but has not recovered to the level of the years before the depression. It is perhaps significant that apparent per capita consumption of tree nuts showed a downward trend during the 1920's.

Apparent per capita consumption of tree nuts in the United States
(shelled basis)

Kind of nut	1925-26 to 1929-30 1/	1930-31 to 1934-35 1/	1935-36 to 1938-39 1/
	Pounds	Pounds	Pounds
Total nine nuts 2/	1.29	1.02	1.18
Walnuts	.47	.31	.33
Pecans	.20	.20	.20
Cashew nuts	3/	.10	.20
Almonds	.24	.15	.14
Brazil nuts	.12	.12	.14
Filberts	.09	.04	.04

1/ August to July year.
2/ Walnuts, pecans, almonds, filberts, cashew nuts, Brazil nuts, chestnuts, pistachios, and pignolias.
3/ Negligible.

Walnuts first in volume of consumption; pecans and cashews second and third.- With respect to volume of consumption, walnuts are by far the most important tree nut. Pecans and cashews compete closely for second place, and Brazil nuts and almonds are close rivals for fourth place. Cashew nuts, practically unknown to United States consumers before 1928, have steadily grown in popularity since that time. It is estimated that United States consumers ate a little over one-fifth of a pound of cashew nuts per person during 1938-39.

Apparent consumption of tree-nuts in the United States
(Average for the four seasons August 1935-July 1939)
(shelled basis)

Kind of nut	Consumption			Percentage of total consumption of all tree nuts
	Of nuts produced in the U. S.	Of imported nuts	Total	
	1,000 tons	1,000 tons	1,000 tons	Percent
Walnuts	19.1	2.2	21.3	27.8
Pecans	12.8	.1	12.9	16.9
Cashew nuts	-	12.8	12.8	16.7
Almonds	5.8	3.3	9.1	11.9
Brazil nuts	-	9.1	9.1	11.9
Chestnuts	-	7.7	7.7	10.1
Filberts	.9	1.5	2.4	3.1
Pistachios	-	1.0	1.0	1.2
Pignolias	-	.2	.2	.3
Total	38.6	37.9	76.5	100.0

The Outlook for English (Persian) Walnuts

Production continues to increase.- A crop of approximately 59,500 tons of English (Persian) walnuts is expected in 1939. This figure is slightly less than the 1937 figure of 60,100 tons, the highest on record. It is 17 percent above the figure for 1938 and 25 percent above the 1933-37 average.

The basic trend of United States walnut production continues strongly upward. A large percentage of the trees are still young and have not yet reached full bearing capacity. Bearing acreage in California is expected to increase during the next few years, although by 1942 the rate of increase will probably be very small. New plantings have been light since 1931 and in the last 3 or 4 years have been limited to replacements.

In Oregon, a severe freeze in the fall of 1935 and a lighter one in the fall of 1936 caused considerable damage to the productive capacity of the walnut groves. However, Oregon production appears to have resumed its upward trend. The 1938 crop in Oregon amounted to 5,500 tons, as compared with an average of 2,100 tons for the preceding 5 years, and 1939 production is expected to reach 4,200 tons.

Under average growing conditions, United States production will probably average in the neighborhood of 56,000 tons during the next 5 years, as compared with an average of 51,000 tons in 1934-38. It seems probable that the record crop of 1937 will be exceeded during the next 5 years.

Prices continue low.- Prices to growers for walnuts dropped to a low level in 1931 and have remained there.

Price to growers for English walnuts

Average			
1923-26	1927-30	1931-34	1935-38
Cents per lb.	Cents per lb.	Cents per lb.	Cents per lb.
22.3	18.5	10.4	10.4

As continued heavy production of walnuts as well as of other tree nuts is expected, it does not appear probable that in the next few years, at least, walnut prices will recover any large fraction of the ground they lost in 1931 - provided there is no radical change in some other factor affecting tree-nut prices.

The marketing agreement.- Since October 1933 the walnut industry has been operating under a marketing agreement. Protection of the domestic market for unshelled walnuts has been the chief aim of the control program instituted under the agreement. It has been accomplished by diverting part of the marketable crop into the export market and the domestic shelled market, sales in these markets being made at prices lower than those prevailing in the protected market. Under the control program, beginning with the 1935 crop, the Federal Government has made payments to the industry of approximately 5 cents a pound on the quantity diverted from the domestic unshelled market. Exports of unshelled walnuts under the control program have averaged approximately 5,800 tons annually.

The War.- See the discussion on page 3.

The Outlook for Pecans

Production of improved varieties expected to continue to increase.- The 1939 production of improved varieties of pecans is expected to amount to approximately 10,700 tons. This is 22 percent above the 1938 production and 14 percent above the 1933-37 average. On the other hand, 1939 production of seedling pecans is expected to be about 19 percent above the 1938 figure but 21 percent below the 1933-37 average, the expected 1939 production being approximately 19,200 tons.

About 90 percent of the improved varieties of pecans are produced in the South Atlantic and East Gulf Coast States. The bulk of the pecans of this type are sold to the ultimate consumer in the unshelled form. About 75 percent of the seedling crop is produced in Texas and Oklahoma. Pecans of this type are shelled for the most part. Large quantities of them are used by confectioners and bakers.

It is difficult to ascertain the probable trend of future production of pecans. No survey of pecan-tree numbers and ages has been made since 1929. What relevant information is available points to a continuation of the upward trend in the production of improved varieties, with perhaps a slight upward trend in the production of seedlings. It is known that in the States east of the Mississippi River there has been considerable neglect of orchards in some sections, particularly along the Gulf Coast, while in other sections orchards are receiving good care and are being thinned out to increase their productivity. An increasingly greater proportion of the crop will probably be produced by the more efficient growers. In Texas and Oklahoma, top-working of seedling trees with improved varieties has been carried on and some new plantings of improved varieties have been made. In these States there has also been extensive thinning of native stands. Throughout the South, more attention is being given than formerly to spraying of pecan orchards to control pests and diseases.

Pecan production, 1924-38

Item	Average		
	1924-28	1929-33	1934-38
Total production (tons)	29,100	31,500	31,900
Production of improved varieties (tons)	6,400	7,100	9,400
Production of seedling pecans (tons)	22,700	24,400	22,500
Production of improved as a percentage of total production	22	23	29

Prices continue low.- Low prices for improved pecans have ruled since 1930. The price to growers varied between 45 cents and 27 cents a pound between 1922 and 1930; since 1930 it has varied between 16 cents and 11 cents. Prices for seedlings have also been low, but not so low in relation to their former level as prices for improved varieties.

Prices to growers for pecans

Item	Average			1938
	1927-29	1931-33	1934-37	
	Cents per lb.	Cents per lb.	Cents per lb.	Cents per lb.
Improved varieties	32.2	13.4	13.4	12.2
Wild and seedling sorts	12.9	5.4	7.9	7.3

In view of the prospects for increasing production of improved pecans as well as of other tree nuts, it does not seem probable that the next few years, at least, will see any substantial recovery in the prices of improved varieties of pecans, as long as there is no radical change in other relevant factors.

Exports being stimulated.- During the 1935-36 marketing season the Federal Government undertook to aid in developing an export market for unshelled pecans by making payments to exporters on the volume of unshelled pecans they sold abroad. This program has been continued, and during the four seasons of its operation up-to-date payments averaging approximately 5-1/4 cents a pound have been made on a total of roughly 4,100 tons. In the 1938-39 season, pecans for export were purchased from growers by a cooperative association specially organized for the purpose, in accordance with a schedule of prices fixed by the Secretary of Agriculture. The average price received by growers for these pecans was approximately 10 cents per pound.

In the 1937-38 marketing season, a program was carried out for shelled pecans, under which payments of about 12 cents a pound were made on exports of approximately 300 tons of kernels.

The War.- See the discussion on page 3 .

The Outlook for Almonds

Heavy production of almonds in prospect.- Another bumper crop of California almonds is in prospect for 1939. It is expected that production will reach 19,000 tons as compared with the record 1937 crop of 20,000 tons. In comparison 1938 production was 15,000 tons, and the average for the 5 years, 1933-37, 12,100 tons.

The almond crop varies greatly in size from year to year because it is very sensitive to weather conditions. The basic trend in productive capacity appears to have been slightly upward over the last 12 years or so. Bearing acreage has increased slightly, and the proportion of trees of full-bearing age has increased substantially.

The trend of future production, furthermore, appears to be strongly upward. New plantings have been heavy during the last 5 years, and they have been made largely on irrigated land, where conditions are favorable to good yields. A survey made in 1938 showed non-bearing acreage to be nearly 20 percent of the total acreage of 89,565. Given normal growing conditions, almond production in the next 5 years may be expected to average around 18,000 tons.

Almond prices depressed less than those of other tree nuts.- Prices to growers for almonds fell sharply in 1930 and remained low for 4 more years. However, in 1935 and 1936, the last 2 years of a series of successively smaller crops, prices recovered sharply. They declined again in 1937 and in 1938 under pressure of large crops but did not return to the depression level.

Consumption of almonds down.- Formerly almonds were consumed in the United States in greater quantities than any other tree-nut except walnuts. During the years 1919-20 to 1923-24 (August to July) apparent consumption average 0.28 pound per capita annually (shelled basis). But imports of almonds have steadily declined, (from an average of approximately 39,000 tons, unshelled basis, in 1919-20 to 1923-24, to an average of about 10,000 tons, unshelled basis, in 1934-35 to 1938-39) and only since 1937 has domestic production shown a tendency to increase. Accordingly, consumption of almonds has steadily fallen, until for the period 1934-35 to 1938-39 the average apparent consumption was only 0.13 pound per capita annually (shelled basis). On the basis of the average of the last 4 years, United States consumers have eaten more pounds of cashew nuts, pecans, and walnuts, respectively, than they have of almonds, and about the same number of pounds of Brazil nuts as of almonds. The downward trend in almond consumption has persisted over a long period, and it does not seem probable that almond consumption will increase materially in the near future. It may be pointed out, however, that almond consumption in the United States has been sufficiently high to absorb all of our domestic production, plus a varying quantity of imports. For example, the annual apparent United States consumption in the last 3 years, 1936-37 to 1938-39 (August to July) averaged approximately 22,700 tons (unshelled) as compared with average domestic production the same 3 years of 14,200 tons and with the bumper 1937 California crop of 20,000 tons.

The War.- See the discussion on page 3.

The Outlook for Filberts

Trend of production sharply upward.- The 1939 crop of filberts is expected to amount to approximately 3,500 tons. This is well above the previous record of 2,570 tons, reached in 1937. Filbert production has been increasing very rapidly in Oregon and Washington.

Production of filberts in Oregon and Washington

Item	1927-29	1930-32	1933-35	1936-38	1939 expected
Average annual production (tons)	150	400	1,170	2,300	3,500

Production of filberts is a new industry in the United States and official estimates of production were not made before 1927.

Oregon and Washington are the only States in which filberts are grown on a commercial scale. According to the Census of 1930, the two States combined contained 98 percent of the filbert trees in the country. A detailed survey made in 1934 and 1935 showed approximately 850,000 trees in 18 Oregon counties and approximately 183,000 trees in 13 Washington counties. All the important producing areas were covered by the survey.

It is clear from the survey that plantings already made by 1935 will result in a continued rapid increase in production up to 1945, provided no development now unforeseen occurs, such as unusual weather or the appearance of a serious disease or pest. Of the trees standing in 1935, 97 percent had been planted after 1919, and 76 percent, after 1926; 47 percent had been planted after 1930. No survey has been made since 1935, but it is reported that plantings continue at a fairly rapid, though somewhat reduced, rate. It is well within the realm of possibility that by 1945 a crop of 5,000 tons or more may be produced.

Consumption low.- Formerly, practically all of the filberts consumed in the United States were imported from the countries surrounding the Mediterranean. During the 5-year period from August 1919 through July 1924, United States consumption averaged approximately 0.24 pound per capita annually. Imports have steadily fallen off since then, however, (from an average of approximately 13,000 tons annually, unshelled basis, in the period August 1919 to July 1924 to an average of approximately 3,400 tons annually, unshelled basis, August 1934 to July 1939) and even though domestic production has increased, consumption in the last 2 years has averaged only about 0.07 pound per capita. In 1938-39 (August through July) imports were 2,187 tons, or 0.033 pound per capita, while the 1938 domestic crop of 2,240 tons represents 0.034 pound per capita. (All figures are on an unshelled basis.)

Prices.- The season average prices to growers for Oregon filberts, reported each year since 1929, have fluctuated between $200 and $340 per ton. The average for the crops of 1929-37 was $259 per ton. The 1938 crop brought $220 per ton.

The War.- See the discussion on page 3.