PART III
REPORT OF THE SUBCOMMITTEE ON AGRICULTURAL PRODUCTION POLICY

The committee responsible for planning the program on Agricultural Production Policy decided that a general and somewhat theoretical discussion of agricultural production policy would be less useful to extension workers than a more specific treatment of production policy with respect to particular commodities or types of farming. The presentation of one dealing with cotton and one with crops in the Corn Belt may provide suggestions for analysis of situations with other crops or livestock enterprises in other areas and serve as a guide in adult education on production problems and policy as they develop in these sections of the country.

Maurice C. Bond, Cornell University, Chairman
Frank V. Beck, Rutgers University
Virgil Gilman, Extension Service, USDA
C. B. Ratchford, North Carolina State College

AGENDA

TIME ALLOTTED	
120 minutes	Production Trends and Problems of Cotton as Related to Public Policy - C. B. Ratchford
60 minutes	Discussion
75 minutes	Appraisal of Production Trends and Problems in the Corn Belt as Related to Public Policy - H. C. M. Case
30 minutes	Discussion

PRODUCTION TRENDS AND PROBLEMS OF COTTON AS RELATED TO PUBLIC POLICY

Presented by C. B. Ratchford 1/

I. THE COTTON SITUATION

An appraisal of production policy for a commodity depends in a large measure on the economic characteristics of the commodity and of the units producing, processing, and using the commodity. Included in the situation are a description of a typical cotton farm, a theoretical analysis of demand and supply for cotton, a study of trends in the cotton industry, and some conclusions about the future.

A. Description of a Typical Cotton Farm

In 1940 the average size of a farm in the South was 131 acres, of which 59 acres were open and 40 were actually used for crops and pasture. If

1/ Material prepared by C. B. Ratchford and Rudolf Freund, North Carolina State College.

Texas and Oklahoma are excluded, the acreage size is considerably smaller. The land is low in fertility, and the fields are small. If the land is rolling, considerable erosion will have taken place. The land can be made quite productive, more productive than it has ever been, with the application of modern technology and with large amounts of capital.

The total investment per farm in 1940 was $2,721, and the value of operating capital was $508. The per capita investment was $486 as compared to $1,843 on farms outside the South. The average number of persons per farm in 1946 was 5.6 people.

As a rule, the labor force in the South is underemployed due to the small acreage and seasonal labor requirements. On a cotton farm everyone is busy for four months, there is some employment for six months, and nothing to do the rest of the year. The labor force is poorly educated and is not trained in the use of mechanical equipment. Experience in industry shows, however, that given training in the use of modern equipment, Southern labor can be as productive as any other in the country.

Production techniques are generally poor. The exception is production practices on cash crops. A North Carolina Experiment Station study of 1946 indicated that net income from cotton could be increased only 8.5 percent if recommended production practices were used by all farmers. On the other hand, if all farmers used recommended production practices, net income could be increased 663 percent on corn, 214 percent on oats, and 563 percent on milk. Farmers have been very slow in substituting mechanical equipment for workstock and in changing farming systems.

A small income would be expected from the system of farming just described. In 1945 the per capita cash farm income was $452 in North Carolina and income was even lower in several other states.

Many problems are apparent from the preceding discussion. Several of the more important problems include:

1. A high ratio of labor to land and capital.
2. The employment of antiquated farming methods.
3. Partial employment of land and labor resources.
4. Capital rationing.
5. A low level of management skills.

The typical Southern farmer has been and remains an economic problem, recognizing that at times he has been a more serious problem than at others. Various government programs may improve his status. Only by solving the fundamental problems, however, will the Southern farmer cease to be a problem. The causes and remedies of the bad situation should be considered in any kind of program or policy.

B. Theoretical Analysis of the Demand for and Supply of Cotton

In discussing cotton it is important to remember that the cotton industry is composed of about one and a half million independent producers operating under conditions closely resembling pure competition.

The demand curve for an individual producer is a horizontal line. The demand curve for the industry, however, is not so simple. The demand curve for the industry is the sum of the domestic and foreign demand, each of which is influenced by different factors.

The domestic demand is a function of price, textile activity, economic conditions, and the price and availability of substitutes (assuming that imports are excluded). The price of cotton is not too important in the short run. This is indicated by the fact that the highest consumption occurred in years of highest prices for cotton. The price becomes more important in the long run. Plants processing cotton cannot switch to synthetics without completely remodeling or constructing new plants. In the long run, the price of cotton in relation to its competitors will have an important influence on the demand for cotton. Until fairly recently, synthetics did not compete seriously with cotton. Synthetic fiber was more expensive than cotton fiber and catered to specialized markets. The elasticity of substitution was low. The elasticity of substitution is such at the present time that the relative prices of cotton and synthetic fibers do affect the demand for cotton. In the long run it may prove to be the most important factor in determining the demand for cotton. In the short run, and perhaps in the long run, the most important factor affecting the demand for cotton is the level of textile activity.

Foreign demand is a function of price, of textile activity abroad, of foreign production of cotton, of foreign policies, of dollar balances, and a host of other factors. Until between 1935 and 1940, prices, level of textile activity abroad, and foreign production were the important factors. Since 1940 cotton exports from this country have depended almost entirely on government policy. For example, today the quantity of cotton exported would be negligible except for loans, the Marshall Plan, and reciprocal trade agreements.

In the short run the demand for cotton is quite inelastic, at least price wise. Elasticity of substitution is also low. In the long run, and particularly as the elasticity of substitution of synthetics increases, the elasticity of demand may increase. The inelasticity in the short run means that high production may result in a lower gross income than a smaller production and that the market cannot be expanded sharply through lowering prices.

The supply curve for cotton does not have the same elasticity throughout its length. The lower end of the supply curve is quite inelastic in the short run. Unless the expected prices were so low that out-of-pocket costs were not recovered, a considerable quantity of cotton would still be produced. (As out-of-pocket costs can be quite low on a cotton farm, for all practical purposes the price cannot become low enough to keep some producers from growing cotton). The lower part of the curve is inelastic because many farmers have no effective alternative due to size of farm, limited knowledge, skills, specialized equipment, and lack of capital, either to reorganize the farm or to move out of agriculture. A general collapse of demand, such as occurred during the thirties, would prevent some farmers from shifting from cotton even over a period of quite a few years. If alternatives are available, either within or outside of agriculture, the time required for farmers to shift out of cotton production would be much shorter. The elasticity of the middle part of the curve--perhaps between ten and sixteen million bales--probably approaches unity.

The upper part of the supply curve -- above sixteen million bales -- becomes inelastic due to limited land and labor resources in the areas suited to cotton production. In the long run, however, the upper part of the curve could become more elastic.

The characteristics of the supply curve indicate that within a wide range, and fortunately within the usual production range, cotton production does vary with expected prices.

In a discussion of the production programs one must take into consideration the characteristics of the supply and demand curves of the commodity.

C. Trends in the Cotton Industry

1. *Domestic Consumption.* Total domestic consumption, while varying sharply with economic conditions, increased until 1941 (Figure 1). Domestic consumption reached a peak of 11.2 million bales in 1941. A slight downward trend has been evident since 1941. There has been a steady decrease in per capita consumption since 1942 from 41.56 pounds to 25.58 pounds in 1949. Considering both a falling per capita consumption and a growing total population, what is the total domestic demand likely to be in the near future? It appears that population growth will just about offset the decrease in per capita consumption. This means that domestic demand will be between eight and ten million bales.

2. *Exports.* Exports have been decreasing over a period of years (Table 2). Exports have decreased from eight to nine million bales in an average pre-depression year to five to six million bales during the thirties, to two to four million bales since the beginning of World War II. Since 1940 the quantity of cotton exports has depended almost entirely on government policy. Exports have been curbed at times, particularly in 1950-51, by export restrictions. Foreign production rose sharply from 1920 to 1937, but fell off sharply during the war years. Production is once again rising and will probably exceed prewar production in a few years. If World War II years are excluded, foreign cotton consumption has remained remarkably steady for many years. An additional factor which should be considered in the study of cotton exports is the Point IV program, which should stimulate foreign production and our foreign trade policy of correcting the dollar shortage of foreign countries which means that we may stop "forcing" foreign countries to buy United States cotton. Considering all factors, what are total exports of cotton likely to be? It appears that the best we can hope for is the maintenance of the present level of two to four million bales.

3. *Competition from Synthetics.* Production of synthetic fibers has risen sharply in both the United States and foreign countries. In the United States there has been a steady rise in production from the equivalent of twenty-four thousand bales in 1920 to over two million bales in 1949. World production has increased from the equivalent of seventy-eight thousand bales of cotton in 1920 to over six million in 1949. There are many indications that production of synthetics will continue to increase. Over a period of years the price of cotton yarn has risen whereas the price of synthetic yarn has fallen (Figure 2). Since the end of World War II, rayon yarn has been ten to thirty cents

cheaper per pound than cotton yarn. The chances of rayon prices remaining below cotton prices are good, as the possibilities of technological improvements and of economies of scale are better in the synthetic than in the cotton industry. Per capita consumption of synthetics has steadily increased. In 1949 per capita consumption was about seven pounds. As their quality improves, synthetics will make further inroads into the cotton market if prices of synthetics remain below cotton prices.

4. *Total Demand.* It appears from the preceding analysis that the demand for cotton will not likely exceed fourteen million bales. It could easily fall to ten million bales. Thus our expected range of demand is ten to fourteen million bales of cotton. In the analysis of domestic demand we assumed essentially full employment. If there was a large number of unemployed, domestic demand could fall considerably below eight million bales and total demand accordingly would be lower.

5. *Production or Supply.* There have been tremendous variations in cotton production in the United States but no definite trend toward a lower or higher production (Table 1). The smallest crop since 1920 was the eight million bale crop in 1921 and the largest was the 18.3 million bale crop in 1937. Variations in production were due to weather, insects, prices, and control programs. Total production has been maintained through an increase in per acre yields (Figure 3). There has been a consistent upward trend in yields since 1934. The average yield in the last ten years was about double the yield from 1910 through 1919.

6. *Regional Shifts in Production.* There have been shifts between regions and within regions. There has been a definite trend downward in acreage in the Southeast (Figure 4). On the other hand there has been a definite trend upward in the West. The Delta area has maintained its acreage and has increased production, although its relative position at present is lower than it was during the late twenties and early thirties. Acreage in the Southwest declined sharply from the late twenties to the end of World War II. Since the end of the war, there has been a very sharp increase reflecting changed economic conditions and new technology in cotton production. Mechanical equipment for producing cotton has changed the relative profitableness of enterprises in the area and is adding incentives to cotton production.

7. *Quality.* Many people have contended that the Southeast could continue to produce cotton with hand labor and compete with mechanized production areas because the Southeast would have higher quality cotton. The statistics indicate that quality in the Southeast is no higher than elsewhere (Table 3). Furthermore quality is dropping faster in the Southeast than elsewhere.

8. *Mechanization Situation.* Cotton can now be produced and harvested with mechanical equipment. The introduction of mechanical equipment promises to add sharply to the efficiency of the cotton industry. Labor requirements are reduced sharply with mechanization. A study by the Texas Experiment Station indicates that an acre of cotton can be produced with 8.1 hours of man labor in unirrigated sections of the high plains. A study from Louisiana indicates that 152.5 hours of labor are required per acre when 1/2 row mule equipment, the most inefficient type of equipment, is used in producing cotton. Cost per bale is reduced in areas where mechanical equipment is suitable; and prospects

are good for further reducing costs by reducing grade and field loss of cotton and by reducing ginning costs. Mechanized picking, however, is profitable only under certain conditions. A considerable number of bales must be harvested with a machine before it becomes cheaper than hand picking. Also weather conditions must be favorable. Neither the scale of operations nor the weather conditions are favorable for mechanical harvesting on most farms in the Southeast. Conditions are much more favorable for mechanization in the Delta, Southwest, and West. In some areas much of the cotton will be produced mechanically in a few years and will be produced at a lower cost than in areas depending on hand labor.

D. Conclusions on Production

What finally happens in production depends in a large part on alternatives of producers within and without agriculture. If there are no alternatives, the present production situation will continue with respect to both geographical areas and production methods. Assuming a reasonably peaceful situation, essentially full employment, and no production control program, the picture of the future production situation is fairly clear.

Areas which can mechanize harvesting can produce the ten to fourteen million bales that we need. Given several years in which to add machinery, these areas will produce the cotton we need even at prices below present support prices. Yet in the Southeast (nonmechanized area) there is little if any true "profit" at present prices. Certainly if prices drop relative to present levels, the nonmechanized producers in the Southeast must stop producing cotton or make cotton a supplementary enterprise.

Without any kind of government program, prices of cotton will drop below the level at which nonmechanized farmers can afford to produce cotton. Thus the nonmechanized farmer faces the alternative of going out of cotton and/or agriculture or of securing a government program which will permit him to produce cotton at a profit.

Figure 1. Consumption of Cotton and Rayon in the United States, 1920-1949

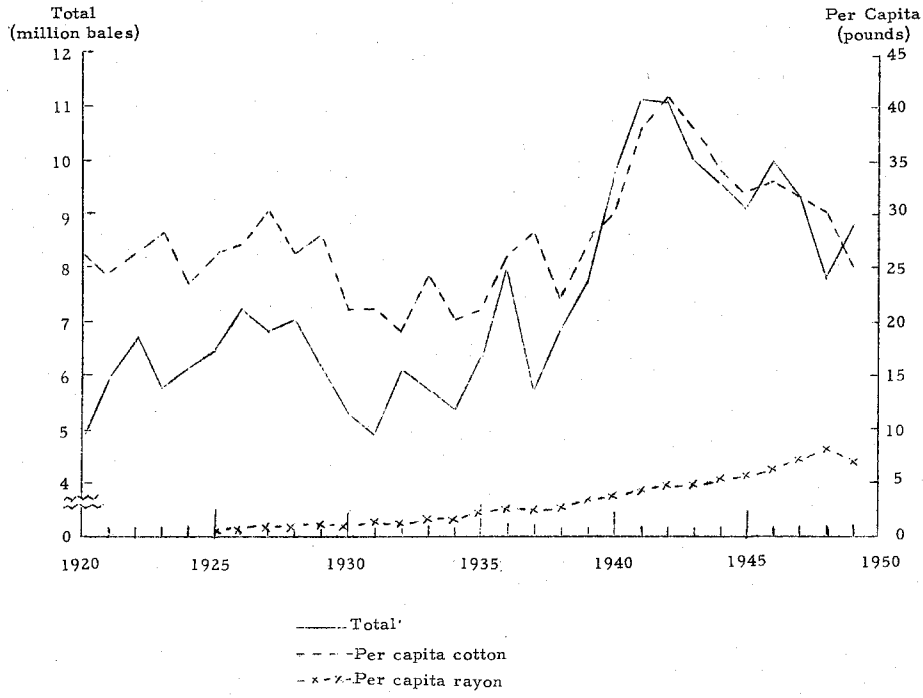


Figure 2. Price Per Pound of Cotton and Rayon Yarn

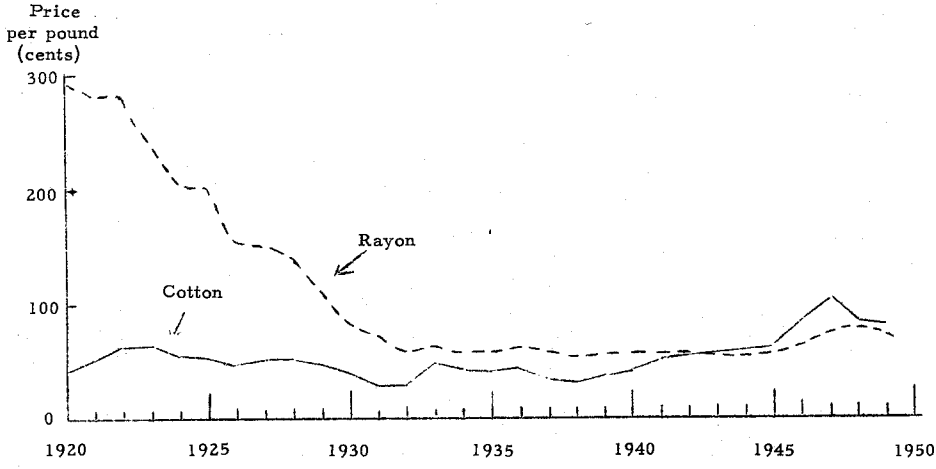


Figure 3. Per Acre Production in United States and North Carolina
(Harvested Acres)

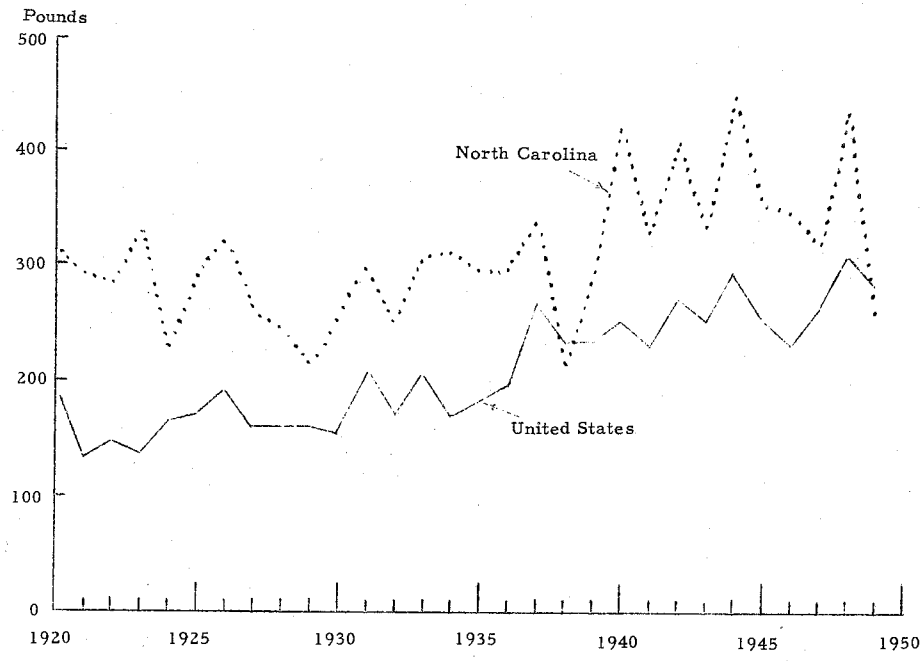
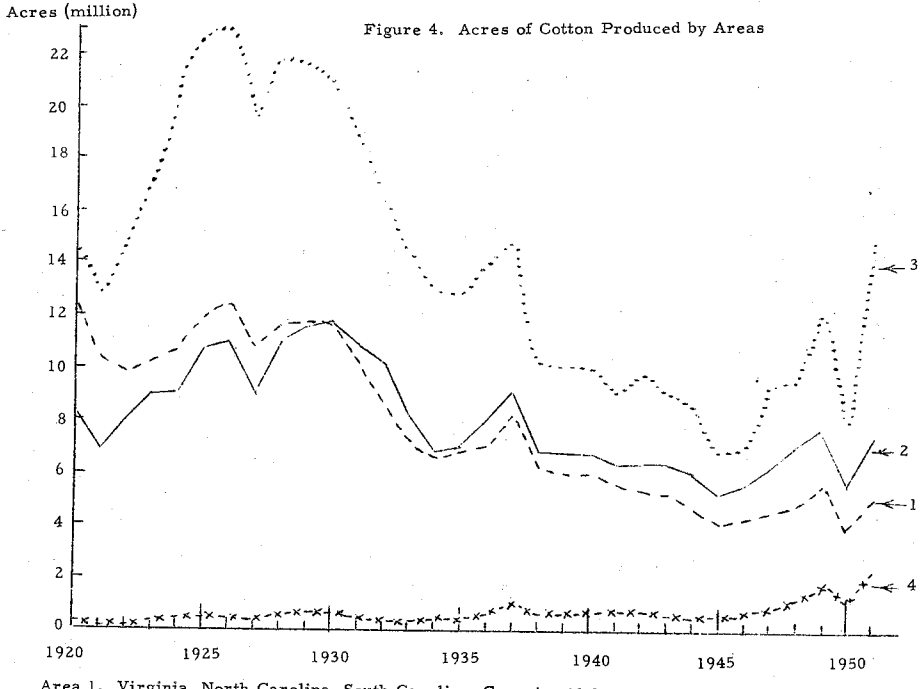


Figure 4. Acres of Cotton Produced by Areas



Area 1. Virginia, North Carolina, South Carolina, Georgia, Alabama, Florida
2. Mississippi, Louisiana, Tennessee, Arkansas, Missouri
3. Oklahoma, Texas
4. New Mexico, Arizona, California

TABLE 1

AVERAGE PRICE, CARRY-OVER, AND PRODUCTION OF COTTON IN THE UNITED STATES FROM 1910 TO 1950

Program or condition	Year	Season average price received by farmers	Beginning carry-over (1,000 bales)	Production (1,000 bales)
	1910	14.87		11,609
	1911	10.85		15,693
Base years for parity	1912	12.29		13,703
	1913	13.21	1,511	13,983
	1914	8.89	1,366	15,906
War in Europe	1915	11.98	3,936	11,068
	1916	19.28	3,140	11,364
U. S. participation in World War I	1917	27.09	2,720	11,248
	1918	28.88	3,450	11,906
Postwar inflation	1919	35.34	4,287	11,326
Postwar adjustment	1920	15.89	3,563	13,271
	1921	17.00	6,534	7,978
	1922	22.88	2,832	9,729
Roaring Twenties. Generally good economic conditions but cotton farmer has his problems	1923	28.69	2,325	10,171
	1924	22.91	1,556	13,639
	1925	19.61	1,610	16,123
	1926	12.47	3,543	17,755
	1927	20.19	3,762	12,783
	1928	17.99	2,536	14,297
Stock market crash	1929	16.79	2,312	14,548
	1930	9.46	4,530	13,756
Great depression	1931	5.66	6,370	16,629
	1932	6.52	9,678	12,710
AAA plow up	1933	10.17	8,165	12,664
Bankhead Cotton Act	1934	12.36	7,744	9,472
	1935	11.09	7,208	10,420
Supreme Court invalidated Bankhead Act. Soil Conservation and Domestic Allotment Act	1936	12.33	5,409	12,141
	1937	8.41	4,499	18,252
AAA of 1938	1938	8.60	11,533	11,617
War in Europe	1939	9.09	13,033	11,420
	1940	9.89	10,564	12,318

TABLE 1 (Cont'd)

Program or condition	Year	Season average price received by farmers	Beginning carry-over (1,000 bales)	Production (1,000 bales)
	1941	17.03	12,166	10,552
World War II	1942	19.04	10,640	12,496
U. S. participation	1943	19.88	10,657	11,083
	1944	20.73	10,744	11,924
End World War II	1945	22.52	11,164	8,852
145,000 bales in loan	1946	32.60	7,326	8,574
280,000 bales in loan	1947	31.93	2,530	11,860
4,966,000 bales in loan	1948	30.38	3,080	14,877
3,190,150 bales in loan	1949	28.10	5,287	16,128
8,005 bales in loan	1950		6,846	10,012

TABLE 2

FOREIGN PRODUCTION AND CONSUMPTION OF COTTON AND UNITED STATES EXPORTS

Year	Foreign production (1,000 bales)	Foreign consumption (1,000 bales)	U. S. exports (1,000 bales)
1920	7,921	12,258	5,973
1921	8,025	13,868	6,348
1922	9,545	14,671	5,007
1923	9,880	14,346	5,815
1924	11,530	16,541	8,240
1925	12,135	17,712	8,267
1926	10,942	18,489	11,299
1927	11,934	18,608	7,857
1928	12,403	18,687	8,419
1929	12,035	18,769	7,035
1930	12,298	17,169	7,133
1931	10,723	18,023	9,193
1932	11,297	18,514	8,895
1933	13,873	19,902	7,964
1934	14,174	20,119	5,037
1935	16,877	21,178	6,267
1936	19,952	22,688	5,689
1937	20,059	21,825	5,976
1938	18,017	21,649	3,512
1939	17,818	20,712	6,501
1940	18,639	16,873	1,174
1941	17,161	13,863	1,162
1942	14,528	13,193	1,498
1943	14,208	12,623	1,146
1944	12,585	12,636	1,909
1945	12,110	13,947	3,678
1946	12,950	16,045	3,656
1947	13,380	16,898	2,025
1948	14,253	18,747	4,961
1949	15,147		6,002
1950	17,466		

TABLE 3

QUALITY OF COTTON PRODUCED IN THE UNITED STATES

(Grade Index for Acres)

Area	1943	1946	1949
1	96.2	95.1	93.8
2	96.1	94.1	93.8
3	95.8	94.0	93.7
4	98.5	96.4	96.2

Area 1 - Virginia, North Carolina, South Carolina, Georgia, Alabama, Florida

Area 2 - Mississippi, Louisiana, Tennessee, Arkansas, Missouri

Area 3 - Oklahoma, Texas

Area 4 - New Mexico, Arizona, California

Source: Figured from production record in USDA, BAE Bulletin 99 and USDA, PMA Bulletins 86 and 94.

II. WHAT THE GOVERNMENT DID TO COTTON (A Digest of Production and Marketing Programs, and Their Effects, from 1929 to Date)

A. A Bird's Eye View of the Cotton Situation Under Government Programs from 1929 to Date

Periods and government programs 1/	Acres harvested 2/	Production 2/ (bales)	Carry-overs 3/ (bales)	Price per pound (cents)	Crop value 2/ (dollars)	Government payments 3/ (dollars)
	000,000	000,000	000,000		000,000	000,000
1. *1920 through 1932.* Agricultural Marketing Act administered by the Federal Farm Board. Orderly marketing and price stabilization through (national) cooperatives, special stabilization corporations, and loans from a "revolving" fund.	40.0	14.7	2.3 to 8.2	16.8 to 6.5	703	--
2. *1933 through 1935.* Agricultural Adjustment Act (First AAA) and Bankhead Cotton Act. Acreage reductions and marketing quotas for the "basic" crops on individual and historic basis. "Plowing under," strict controls, government payments for not planting, and "parity."	27.9	11.1	8.2 to 5.4	10.2 to 11.1	616	162
3. *1936 and 1937.* Soil conservation legislation. Balanced farming by reduction of soil depleting crops and by encouragement of soil-building practices. Special acreage bases for cotton as control substitute. Government payments for "diversion" and "practices."	29.8 and 33.6	12.4 and 18.9	5.4 to 11.5	12.4 to 8.4	766 and 796	127 and 69
4. *1938 through 1940.* Agricultural Adjustment Act (Second AAA) and soil conservation. Acreage allotments for						

the "basics" and farmer-approved quotas to adjust production to national needs. Government payments on allotments. Loan policy tied to parity.	23.9	11.8	11.5 to 12.1	8.6 to 9.9	558	226
5. (a) *1941 through 1945.* Wartime legislation. 90 percent parity minimum support level for the "basic" commodities and for other agricultural products, the production of which would be increased for war needs.	20.6	11.2	12.1 to 11.1	17.0 to 22.5	1,111	113 4/
(b) *1946 through 1948.* Wartime legislation continued for two years after the formal declaration of the cessation of hostilities in order to ease transition to peacetime conditions.	20.7	11.8	11.1 to 3.1	32.6 to 30.4	1,854	--
6. *1949.* 90 percent parity support continued for the "basics," modified for other products. (Agricultural Act of 1948).	27.2	16.1	5.3	28.7	2,305	--
1950. (Agricultural Act of 1949). 90 percent parity support for the "basics," if acreage allotments in effect. Under special law, farmers approve cotton allotments and sharp cuts.	17.8	9.9	6.8	38.3	1,723	--
1951. Large increase in production urged for defense needs.	29.5 5/	17-18	?	?	?	--

1/ Periods are in crop years, beginning August 1 of the years indicated. 2/ Underlined figures are averages for the period. 3/ Carry-overs are for the beginning of the first crop year of the period and for the end of the last crop year of the period; for 1949 and 1950 figures are for carry-overs at the beginning of the crop year. 4/ Through 1943 only, three years' average.
5/ Acres planted July 1.

B. Federal Legislation, Its Application to Cotton and the Appraisal of Effects by Periods

1. *1929 through 1932:* Market stabilization through cooperatives. (Hoover Administration. Severe business depression here and abroad.

a. LAWS AND PROVISIONS. The Agricultural Marketing Act, April 1929, intended to promote orderly marketing by strengthening the position of farmers' cooperatives in the agricultural markets of the country. A Federal Farm Board and an Advisory Commodity Committee for each of the major crops were set up in order to guide cooperatives and their efforts in coping with national market problems. The same agencies were also authorized to set up special Stabilization Corporations, cooperatively owned, to act in cases of market and price emergencies, and to help cooperatives to overcome difficulties.

The Federal Farm Board was put in charge of a $500 million revolving fund, appropriated by Congress, from which advances could be made to cooperatives at special interest rates for their activities.

The experiences of the Farm Board were of great importance for the different ways in which subsequent legislation tried to cope with the problem of cotton surplus production.

b. APPLICATION TO COTTON. During August and September 1929, cotton cooperatives could borrow enough money from the Board to bring their advances on member cotton farmers up to 90 percent of the market price. In October, the loan rate was set at a flat 16 cents per pound. The cooperatives acquired such large stocks that arrangements had to be made in January 1930 to transfer 1.4 million bales to the newly created American Cotton Cooperative Association and from it to the Cotton Stabilization Corporation, which the Board set up in June 1930, in order to free the cooperatives from their burden. This enabled the cooperatives to advance again up to 90 percent of the market price on the new 1930 crop, assisted by the Farm Board and the ACCA. Cooperative holdings rose sharply by another 2 million bales, so that at the end of the crop year 3.4 million bales had accumulated. The Board then decided to discontinue its market operations, but agreed to withhold its holdings from sales in order to facilitate bank loans to farmers. In 1931 the Board permitted small market sales and disposed of larger quantities outside commercial channels (Red Cross, China, barter). About half of the stocks were liquidated, and approximately 1.4 million bales were eventually transferred to the Farm Credit Administration in 1933.

c. EFFECTS ON COTTON. The price "pegging" activities of the cooperatives were fairly successful in 1929, less so in 1930, though cotton prices might have dropped still lower without them. The withholding of stocks in 1931, however, was without any noticeable effect on the market, which was then completely demoralized by the world-wide, and prolonged, depression.

Lesson: Attempts at stabilizing prices through market operations alone will not be successful under conditions of a severe business recession. Heavy stocks will inevitably accumulate in government hands and prevent a price recovery, even though these stocks are not allowed

to enter the market. After stocks reach a certain size, further stockpiling must cease because of the high costs involved. It follows that market manipulations of this sort call for a reduction in actual production, and not merely for the withholding of supplies from regular market channels. It should be realized, however, that the Agricultural Marketing Act was passed before the depression hit; and it is doubtful whether any type of program directed at the stabilization of individual commodities could have done much good under the conditions of 1929-32.

2. *1933 through 1935:* Acreage reductions and marketing quotas; first AAA. (Roosevelt Administration. Bank holiday and dollar devaluation in 1933. New Deal legislation: NRA, PWA. Recovery underway through period.)

a. LAWS AND PROVISIONS. The Agricultural Adjustment Act (AAA), 1/ passed in April 1933, was an emergency law intended to help farmers regain price parity for the "basic" commodities - cotton, wheat, corn, tobacco, hogs, and milk through the reduction of actual supplies of these crops. The Secretary of Agriculture was authorized to sign individual contracts with growers who agreed to reduce their crop acreage in return for "benefit" or "rental" payments. The Secretary could also make "parity" payments for the domestically sold part of the crop. These payments were financed through special excise taxes collected from the first processor of the product.

The Commodity Credit Corporation (CCC) was established in October 1933, as a government owned business enterprise for the purpose of advancing money to farmers on properly stored crops.

The Bankhead Cotton Act of April 1934 1/ provided for controls of the volume of cotton marketed (in addition to acreage allotments). A national marketing quota was established for 1934 at 10 million bales and apportioned to growers on the basis of their 1928-32 production. Any excess marketings were taxable at 50 percent of the current price. If quotas were to be continued for 1934, growers had to approve by a two-thirds majority.

b. APPLICATION TO COTTON. 1933: When the AAA was passed, 40 million acres were already planted in cotton. More than 1 million farmers agreed to plow under 10 million acres in return for rental payments from $7 to $20 per acre, or lower rentals plus an option on government owned cotton for the amount not raised.

1934 and 1935: (1) Contracts were signed with 1 million farmers for planting less cotton than they planted in 1928-32; reduction was 35 to 45 percent for 1934, and 25 to 35 percent for 1935. Rental payments per acre not planted were set at 3.5 cents per pound on the average yield of

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1/ The Hoosac Mills Case decision of the Supreme Court, January 1936, invalidated the control and tax features of the AAA and Bankhead Act. This decision terminated the original adjustment program on the ground that the national government could not constitutionally control local production. But substantially the same kind of program was sustained three years later as a valid exercise of the government's power over interstate commerce.

that acre. In addition, farmers received parity payments of one cent per pound in 1934, and 1.25 cents in 1935, on 40 percent of their 1928-32 production. (2) Marketing quotas in 1934 (Bankhead Act) amounted to about two-thirds of the 1928-32 average production. Excess marketings were taxed at 5.7 cents per pound. In 1935, a referendum indicated that farmers favored the continuation of the quota system on the same basis as in 1934.

Loan policy: On 1935 cotton, the CCC advanced 10 cents per pound, on 1934 cotton 12 cents, later reduced to 10 cents, and kept there through 1935. Loans were made on a non-recourse basis, that is, needed no repayment, if the cotton price dropped below the loan rate; the CCC then took over the cotton. If the cotton price went above the loan rate, the farmer would redeem the loan, sell the cotton, and benefit from the price advance. Loans were available to cooperators only.

c. EFFECTS ON COTTON. The control program reduced the cotton acreage from 40.5 million acres in 1928-32 to 27.9 million acres in 1933-35, and production from 14.7 million bales to 11.1 million bales. But the large carry-over was reduced by only 2.5 million bales because exports dropped off and domestic demands recovered sluggishly. Cotton prices advanced from their low of 6.5 cents in 1932 to 10.2 cents in 1933, and to 12.4 cents in 1934, but dropped to 11 cents in 1935. Incomes to farmers from their crops rose from $425 million in 1932 to $600 million in 1933-35, and were supplemented by rental and parity payments of more than $100 million each year. On the option plan, farmers netted approximately $70 million.

Lesson: Acreage allotments, with additional and separate quotas, proved quite effective in cutting back production, but the importance of cotton as a cash crop put a limit to the cut. The goal of raising prices nearer parity made the loan policy an indispensable tool, the use of which tended to curtail domestic and, especially, foreign purchases. Total supplies, therefore, were not brought in line with demand, though carry-overs did decline. The destruction of part of the 1933 crop, and payments for not producing cotton were resented by parts of the public at a time when millions needed clothing and mills stood idle.

3. *1936 and 1937:* The soil conservation legislation. (New Deal programs continued. Business recovery maintained, but recession started in 1937 and continued through 1938.)

a. LAWS AND PROVISIONS. The Soil Conservation and Domestic Allotment Act was passed in 1936. It substituted net income parity for price parity and provided for the participation of the states, counties, and farmers in carrying out conservation measures. The act amended the Soil Conservation Act of 1935, which created the Soil Conservation Service (SCS); thus, the same Act established two soil conservation programs, the one on the more technical side (SCS), the other geared to adjustment. The two have remained distinct in objectives, methods, and personnel until very recently. We deal here with the Agricultural Conservation Program (ACP) of the AAA (later PMA) only.

The main purpose of the Act was to help farmers achieve a proper balance between soil-depleting crops, mostly of the row cultivation

type, and soil-conserving crops, like legumes, grasses, and green manure crops on their farms. Farmers joined on their own initiative and for the entire farm, not just special crops, as under the AAA.

For each signed-up farm, a base acreage of soil-depleting crops was figured from its 1932 record, except for cotton, tobacco, sugar cane, beets, and rice, which received special bases (see b. below for cotton). For every acre diverted from this base, the farmer received $6.60 in "diversion" payments up to a maximum percentage specified for different crops. In addition, payments were made for increases in the acreage of soil-conserving crops at the rate of $3.30 per acre; these were called "practice" payments. For the proper handling of the farm land, standard conservation practices were worked out for the nation, from which state and county authorities with farmer participation selected practices suitable to the farm community. Practices and diversions determined the amount of "units" which the farmer could earn.

b. APPLICATION TO COTTON Cotton farmers were assigned special soil-depleting bases for their cotton, equal to their 1928-32 average acreage. As diversion payments farmers received 5 cents in 1936 and 5.5 cents in 1937, for each pound of the yield which would have been harvested from the acres diverted from the base acreage, and up to 35 percent of that acreage. In this way, the allotments and rental payments of the defunct AAA were continued and were supposed to act as a check on overproduction. (Marketing quotas were not revived, however.) The newly prescribed practice payments were figured on the basis of the cotton acreage and that of the open land and could be earned only if cotton acreage was diverted from the base. On the other side, diversion payments were made regardless of whether soil conservation practices were carried out.

Southern farmers responded to the new program fairly well in 1936, but much less so in 1937, when over one third of their crop land remained outside of any kind of program against one fourth in 1936.

Loan policy: By way of winding up the older loan program, farmers received "adjustment" payments for the unsold part of the 1935 crop, in order to make up the difference between the original loan rate of 12 cents and the later one of 10 cents per pound. No loan program was announced for the 1936 crop. With the huge crop of 1937 coming on, the loan program was re-instated, and loans were made at the rate of 9 cents per pound.

c. EFFECTS ON COTTON More cotton was planted and larger yields were obtained in 1936 than in 1933-35, yet prices advanced from 11 cents to 12.4 cents per pound due to better demand conditions. Farmers received $766 million from their crop, $87 million from conservation payments, and $40 million from "adjustment," a total of over $900 million. These good results led farmers to plant even more cotton in 1937; with good yields, the largest crop on record, nearly 19 million bales was harvested. Prices dropped sharply to 8.4 cents. The value of the crop was $796 million, only slightly higher than for the shorter crop of 1937. Conservation payments amounted to $69 million. The carry-over increased by 6 million bales to a total of 11.5 million bales at the end of the crop year. Supplies were again a heavy drag on the market, especially since business conditions turned unfavorable in 1937.

Lesson: Strong arguments can be made in favor of having some kind of public program to check erosion and soil depletion. Under the program, recommended conservation practices favored pasture and more livestock on farms, and were thus in line with the necessary adjustment of agricultural production to apparent consumption trends. However, the program was not suited to controlling the supplies of cotton. The round-about way in which conservation was coupled with acreage control made farmer participation and compliance uncertain. Even when acreage was reduced, the diversion of poorer land and the greater care for land remaining in cotton resulted in higher yields and partly cancelled out acreage cuts.

4. *1938 through 1941:* Long-range production adjustment and soil conservation. (Business recession in 1938. War in Europe after fall of 1939. Increased business activity in United States.)

a. LAWS AND PROVISIONS. The Agricultural Adjustment Act of February 1938 was often amended, but its main provisions, as well as those of the Soil Conservation Act, are still valid. The Act applied to the "basic" commodities -- cotton, tobacco, wheat, corn, and rice, with peanuts added later. The need for ample reserves against sudden ups and downs in production and demand was emphasized, and farmers were induced to store up parts of their crops on the farms (sealed bins) and in the soil (diversion and conservation practices). Direct production controls were re-introduced, with long-range adjustments to demand conditions, the attainment of parity prices, and the stabilization of gross incomes in view. The following were the main measures in that respect.

(1) The Secretary of Agriculture proclaimed for each basic crop a yearly national acreage allotment of such size that the anticipated crop plus carry-over ("total" supply) would suffice to provide "normal" supplies for domestic use, exports, and reserves. The national allotment was apportioned to farmers on the basis of their crop acreage during recent years. Farmers who stayed within their allotments were eligible to receive government payments, and non-recourse loans at full rates.

(2) If the Secretary of Agriculture found that the total supply was much in excess of the normal supply, he announced a national marketing quota for the succeeding year. From this total, farm marketing quotas were figured differently for each of the basic crops because of different storage provisions, but in no case was the sale of the crops raised on the acreage allotment materially restricted. (For cotton see b. below) Marketing quotas went into effect only when approved by two thirds of the growers.

(3) Conservation payments were based on the size of the allotment and the carrying out of practices, as before. Parity payments could be made for adjusting prices, if funds were available.

(4) Loan policy: The Act prescribed loan rates at 75 percent of the parity price, when the supply was normal, and market prices dropped below 75 percent of parity. The rates moved downward to 52 percent of parity, when the total supplies exceeded the normal supplies. The Secretary set the exact rates (except for corn).

(5) Surplus disposal: Various measures were authorized for channeling stocks into non-commercial uses and exports, financed through a special fund equal to one third of the yearly customs receipts.

b. APPLICATION TO COTTON

(1) The national cotton acreage allotment was set at approximately 27.5 million acres for the year 1938 and was kept at this figure for the years 1939, 1940, and 1941. Farm acreage allotments were figured from the average production and the acreage of the last five years. If the farmer overplanted knowingly, he lost all the benefits from the program.

(2) The large carry-over at the end of the 1937 crop year made the announcement of farm marketing quotas mandatory. The growers approved by a large majority. Since carry-overs remained large, marketing quotas were again voted into effect in 1939, 1940, 1941, and even 1942. Farm marketing quotas were figured on the basis of either the normal, or the actual yields from the allotment, whichever was higher, so that the entire crop could be marketed without fear of penalty (2 cents per pound of excess ginning), provided the farmer stayed within his allotment.

(3) Conservation payments of 2.4 cents per pound were made on the normal yields of the farmer's allotment in 1938, 1.8 cents in 1939, 1.44 cents in 1940, and 1.37 cents in 1941. Parity payments in 1938 were 3 cents per pound on the 1937 acreage, provided the farmer joined the new program; payments were 1.6 cents in 1939, 1.55 cents in 1940, and 1.38 cents per pound in 1941 on the normal yield of the allotment. In 1941, Congress raised CCC loan rates, cotton prices rose, and after this year parity payments were discontinued.

(4) Loan rates were in 1938, 8.6 cents; in 1939, 8.95 cents; in 1940, 9.15 cents; and in 1941, 14.2 cents. Most of the pledged cotton of these years was redeemed by farmers since prices advanced, but in 1942 the CCC still owned 4.2 million bales from 1937 loans, plus 1.2 million from 1934 loans.

(5) Surplus removal: In 1940 limited amounts of cotton goods were distributed free through the Stamp Plan Program. In 1940 and 1941, the Cotton Mattress Program helped to provide low-income farm families with home-made mattresses and comforters. Also, the processing of cotton into bags and road mats was encouraged. In the fall of 1939, the export of cotton was subsidized at the rate of 1.5 cents per pound and a total amount of 5.7 million bales was exported, some of it at lower rates, however.

c. EFFECTS ON COTTON. During the crop years 1938 through 1941, cotton acreages and crops kept a fairly even level of about 24 million acres, and between 11 and 12 million bales. This represented a decrease of about one fourth from the level of 1936 and 1937 for the acreages as well as the crops, indicating that the good yields of 1936 and 1937 were maintained in the after years.

At the beginning of the crop year of 1938 the supply situation was burdened with unsold stocks of 11.5 million bales. With fairly good crops coming on, the situation improved little. The demand for cotton

was sluggish because of the business recession in 1938, because of the loss of export markets after the bar broke out in Europe, and because of the increased competition from rayon.

Despite these unfavorable market conditions, the loan policy of the CCC gradually forced prices up from 8.4 cents in 1937, to 8.6 cents in 1938, to 9.1 cents in 1939, and to 9.9 cents in 1940. The result was that carry-overs at the end of the 1938 crop year were 13 million bales, the highest on record, and 10.6 and 12.1 million bales at the end of the 1940 and 1941 crop years. Such heavy stocks might have wrecked the program in peacetime, but they proved an asset under the ensuing war conditions.

Farmers' incomes from cotton crops averaged between $500 and $600 million in 1938, 1939, and 1940, but rose above the $900 million mark in 1941, because cotton prices jumped to 17 cents under the impact of the war and a relatively short crop. Government payments added about $200 million to crop receipts each year.

Lesson: The programs in effect from 1938 through 1941 proved inconsistent in themselves when viewed from the goal of adjusting cotton supplies to peacetime demands. Acreage allotments alone will not do the job. Neither will marketing quotas, which allow the sale of the entire crop regardless of yields. To complicate matters further, the conservation payments and practices of the program tended to keep yields high. Finally, a loan policy which raises cotton prices in the face of unfavorable market conditions must lead to excessive stock-piling, too costly in peacetime, and more effective competition from cotton substitutes.

5. *1942 through 1948:* All-out war effort and transition to peace. World War II, 1942-45. Short reconversion recession. Quick recovery. Full employment and inflationary pressures in 1947-48.

a. LAWS AND PROVISIONS The special wartime legislation of July 1941 and October 1942 (so called Steagall Amendment) made 90 percent of parity the mandatory minimum support level for the basic commodity prices. The same support level could be announced by the Secretary of Agriculture for any agricultural commodity, the increased production of which was thought necessary for the war effort. Also, no price ceilings on farm products were allowed below 110 percent of parity, but this was modified in 1942. The purpose of the special legislation was to assure farmers continued good prices, even if production were increased materially.

The Congress provided that the price support features of the Steagall Amendment should remain in force for two years after hostilities were officially declared terminated by Presidential announcement. Expiration date: December 31, 1948.

b. APPLICATION TO COTTON Acreage allotments for cotton were droped in 1943, and no diversion payments were made afterwards (but practice payments continued). Cotton prices were supported at 90 percent of parity in 1942 and 1943, at 95 percent in 1944, and at 92.5 percent from 1945 through 1948. The corresponding loan rates rose from 17.2

cents in 1942 to 21 cents in 1944 and 1945 and to 24.4 cents, 27.9 cents, and 30.7 cents in the years 1946, 1947, and 1948. Market prices were fairly well in line with these rates from 1941 through 1944, and relatively large amounts of cotton entered the loan (to be mostly redeemed because of rising prices). In 1945, and especially in 1947, however, prices rose above the loan rates, little cotton entered the loan, and the CCC could dispose of most of its holdings. In 1948, prices moved again close to the loan rate, and stocks began to accumulate again.

c. EFFECTS ON COTTON. The war years: After their sharp increase in 1941, cotton prices continued to rise gradually to 22.5 cents in 1945 and to 32.6 cents in 1946. Despite this, acreage declined to 17 and 18 million acres in 1945 and 1946, with crops of only 9 and 8.6 million bales harvested. Yields per acre, however, held up well. The decline in acreage was due to better alternatives, a sharecropper shortage, and high wages. Incomes to farmers were between $1.0 and $1.4 billion in the years 1942 through 1946. Carry-overs went down to 2.5 million bales at the end of the 1946 crop year.

The postwar years: After 1946, acreages and crops increased sharply to 23 million acres and to 15 million bales in 1948, thanks to the high support levels. Prices decreased slightly to 30.4 cents per pound in 1948, so that the good crop of that year brought cotton farmers an income of $2.3 billion. Carry-overs increased to 5.3 million bales at the end of the 1948 crop year.

6. *1949 through ? :* Short-lived peace adjustment and new war efforts. (Some downward adjustments in 1949, but reversal in early 1950. Outbreak of the Korean War, and large defense program underway in 1951.)

a. LAWS AND PROVISIONS. The Agricultural Act of 1948 extended price support levels of 90 percent parity into the crop year 1949 for the "basic" crops, dairy products, hogs, chickens, and eggs. Other wartime supported commodities had to be supported between 60 percent and 90 percent of parity, if production expansion had been specified as reason for support. Title II of the Act contained a long-range policy program (so-called Aiken Bill) with flexible support provisions for 1950 and after.

Title II was repealed and replaced by the Agricultural Act of 1949, the currently valid law. This Act provided that in 1950 only the basic commodities must be supported at 90 percent parity, if acreage allotments or marketing quotas were in effect. Certain other commodities were "designated" to be supported at price levels between 60 to 90 percent of parity (principally wool and Irish potatoes), or 75 to 90 percent of parity (principally milk and dairy products). Other commodities could be supported under specified conditions, and if funds were available. In 1951, basic commodities must be supported at levels between 80 to 90 percent of parity. In 1952 and after, supports must be at levels between 75 and 90 percent of parity, sliding downward relative to the excess of actual supplies over normal supplies. Supports were by means of CCC loans to cooperators who stay within their allotments or marketing quotas. For the designated and other commodities the provisions for 1950 were continued, and the CCC was authorized to conduct support operations.

Both Acts contained provisions for the modernization of the parity formula by which the Department of Agriculture figures parity prices. The index numbers of prices received by farmers were revised by computing "adjusted" base prices which reflected the relationships of agricultural prices to each other during the most recent ten-year period (instead of that of 1910-14). The index numbers of prices paid remained on the old basis, but wages of farm labor were included in the computation. Under the new formula, parity prices were lower than under the old formula for all basic commodities and potatoes, except for tobacco, and higher for livestock and livestock products, reflecting favorable demand and price trends for the latter.

b. APPLICATION TO COTTON. During the crop year 1949, a loan rate of 27.2 cents was in effect, reflecting 90 percent of the parity price of August 1, 1949, as prescribed by law. Approximately 3.2 million bales entered the loan, little of which was redeemed during the crop year, because market prices declined; the surplus problem reappeared.

For the crop year 1950, the law made the continuation of 90 percent parity supports contingent on acreage allotments or marketing quotas being in effect. Special laws were passed in August 1949 and March 1950 amending the pertinent provisions of the 1938 Act. The national marketing quota for 1950 was set at a minimum of 10 million bales, and the national acreage allotment at 21.5 million acres. The apportionment to farmers followed a complicated formula; the acreages of the years 1945 through 1948 was the basis for figuring the allotments, but the actual acreages assigned by PMA and the county officials were adjusted to a county-wide percentage of the cotton acreage (and that of other basic crops) to the total of open land; furthermore, no allotment could be smaller than 5 acres, or below the smallest acreage in the base period. County and state acreage allotments were also adjusted for shifts in production and for needed reserves. As in the former legislation, the marketing quota of the farm was equal to the actual production; excess planting was penalized at 50 percent of the parity price, figured on the yield.

The allotments had to be approved by a two-thirds majority of the growers, and were so approved by a referendum.

In consequence, non-recourse loans at a rate of 29.45 cents per pound of 15/16 inch cotton, equal to 90 percent of the parity price of August 1, 1950, were made available to farmers, but practically no cotton entered the loan because of a sharp advance in the cotton price.

c. EFFECTS ON COTTON. In 1949, the cotton acreage increased to 27.7 million acres, and the crop to 16 million bales. While prices declined somewhat from 30.3 cents in 1948 to 28.6 cents in 1949, farmers' incomes remained at approximately $2.3 billion in each year. Price supports led to an increase in CCC loans, and the carry-over rose from 5.3 million bales to 6.8 million bales during the crop year of 1949.

Farmers planted only 18.6 million acres in 1950, or 9 million acres less than in 1949, thus staying well within their allotments. The crop amounted to less than 10 million bales, due to boll weevil damages and poor weather conditions as well as reduced plantings. The poor crop and the outbreak of the Korean War made cotton prices jump from

30 cents in June 1950 to 41 cents in November and to 43 cents in April 1951. Farmers received about $2 billion for their crop. The carry-over declined to only 2 million bales in August 1951.

Under these conditions, the government took two steps. First, in March 1951, a ceiling price of 45.76 cents per pound of 15/16 inch cotton was set. Second, the Secretary of Agriculture called on farmers to increase their cotton acreage to a total of 28.5 million acres, that is, by 10 million acres more than were planted in 1950. Farmers responded willingly, and are expected to harvest a crop of at least 17 million bales in 1951. With this large increase in prospect, cotton prices began to fall sharply after July 1951, and the announced loan rate of 90 percent of the parity price of August 1, 1951 (34 cents) may yet provide a needed price floor.

III. OBJECTIVES FOR A PRODUCTION POLICY

A. Secure a production which meets the needs of the country and at the same time does not encourage production of a surplus. The "needs" of the country include domestic and export requirements plus a reasonable carry-over plus a stockpile for national security in some cases.

B. Avoid the need for drastic increases or decreases in production in the short run. Drastic changes are difficult to make on many farms, are costly to the farmer and society, and frequently are in conflict with the long-run goals.

C. Encourage efficiency in production and marketing. Efficiency depends not only on the use of the optimum amount of materials such as fertilizers but upon the use of methods which reduce costs (mechanical cotton pickers, for example), the scale of operations (size of farm), and upon the optimum combination of labor and capital.

D. Encourage production in areas and on farms which can place the commodity on the market at the lowest price.

E. Consider the effect of technological advances and geographical shifts in production and provide assistance to those adversely affected to reorganize the farms or to move out of agriculture.

F. Encourage adoption of enterprise combinations which give the maximum income and are in line with consumer preference. For example, if in order to increase income farmers should stop producing a commodity or increase the amount of that commodity, the policy should encourage the change. Also if the country needs meat, the program should encourage the production of meat.

G. Encourage conservation of resources so that productivity and income will be sustained over a period of years.

H. Keep farm income high enough to give the farmers standards of living equal to those for the rest of the nation.

I. Keep farm income stable.

J. Be consistent with policies for other commodities, with domestic policies regarding consumption, distribution of income, and defense

programs, and with national policies regarding international trade, peace, and development of foreign countries.

K. Be administratively feasible and simple and costs should be commensurate with the benefits to the nation.

IV. AN EVALUATION OF THE GOVERNMENT COTTON PROGRAMS IN TERMS OF THE OBJECTIVES OF A PRODUCTION POLICY

The eleven objectives for a production policy in cotton, which were discussed earlier, are used as criteria for evaluating the several cotton programs in the first part of the following remarks. Conclusions of a more general nature are presented in the second part. Data are not available for conclusively evaluating the programs. The authors have tried to give an objective appraisal based on data that are available. It is admitted that there are grounds for disagreeing with conclusions reached by the authors.

A. The Evaluation in Terms of Objectives

1. *Production Should Be in Line with Needs or Demand.* During the majority of the years that cotton programs have been in effect, the problem has been to reduce production. Only during 1946, 1947, and 1951 was there some need to stimulate production. The programs have not been too successful in keeping production in line with demand. Of course the production control schemes of either acreage allotments or marketing quotas could have reduced production to any desired level, but it was not politically feasible because farmers might not have gone along with the program.

Most people feel that the programs did reduce production somewhat. The possibility that production would have been decreased even more without any kind of specific program for cotton, or with some other type of program, must be considered.

On the other hand, the programs have permitted, and indeed have encouraged, an increase in production when it was needed. Undoubtedly supporting prices at 90 percent of parity has encouraged an increase in production. The conservation activities connected with the programs have also served to stimulate production.

One lesson which the programs have taught is that, when reducing production is the goal, some kind of production control measures must be used when prices are supported at levels above the normal market price.

2. *The Need for Drastic Increases or Decreases in Production in the Short Run Should Be Avoided.* The several programs have not avoided the need for drastic increases and decreases in production. Sharp decreases were needed and were made in 1938 and in 1950. A sharp increase was needed in 1951 and was secured. The sharp short-run changes have been a contributing factor to the instability of income of Southern farms, have helped prevent desirable long-run adjustments in cotton acreage and in farming systems, have prevented labor from moving from farms, and have slowed down the adoption of mechanized equipment. The sharp changes have created a need, or at least given an excuse, for farmers to ask the government to make additional payments to those for

making the shifts in production.

Proponents of existing cotton programs argue that drastic shifts are not inherent in the program but are due to poor judgment on the part of administrators. These criticisms must be considered partly in the light of the power struggle within agriculture. But it should also be noted that the cotton programs involve centralizing important decisions -- or attempting to centralize them. These are decisions that once were made in the impersonal market. It is imperative that the people who make these decisions be kept accountable and that there be ways to replace them with others through some orderly processes. At the same time, some mistakes in judgment by administrators are probably inherent in such programs. It may be necessary to change programs and to reshuffle those "in charge" -- but can these things be demanded by people and organizations who at the same time admit that they are also partly responsible for the mistakes they now want to correct?

3. *Efficiency in Production and Marketing Should Be Encouraged.* The effects of the programs on efficiency are mixed. While marketing quotas were in effect in 1934 and 1935, it is doubtful if there was any conscious effort to increase efficiency. There were incidental results that did increase efficiency. The reduced acreage resulted in land better suited for cotton being planted to cotton, the development of rotations, and an increase in soil conserving crops. Acreage allotments without marketing quotas did result in an increase in efficiency. As long as a farmer did not exceed his allotted acreage he could sell all that he produced. This encouraged farmers to use better varieties, more fertilizer, and better cultural practices to increase per acre yields. The soil conservation activities connected with the cotton programs also contributed to higher yields. Farmers were quite successful in increasing yields.

The programs have tended to keep efficiency low in several very important ways. They have deterred mechanization. For example in North Carolina, and probably for the whole Southeast, a mechanical cotton picker is profitable only if it be used to pick 100 or more bales. The allotments imposed in 1950 prevented practically all farms from planting an acreage large enough to justify mechanical pickers. This is one reason that farmers in the Southeast discontinued buying pickers and sold the ones that they owned to farmers with larger acreages in the Southwest. 1/

The programs have probably kept more people on farms than would have stayed if there had been no program. Sharp reductions in acreage, such as occurred in 1934 and 1938, should have helped move people, particularly cropper families, off the farms. Even though there were few nonfarm employment opportunities, the acreage reductions probably caused some families to turn to nonfarm employment. On the other hand, the programs have deterred mechanization, which in turn has helped prevent the movement from farm to nonfarm employment. Also the program has given many small and inefficient farmers just enough help to enable them to "hang on" instead of forcing them either to enlarge their business or to move out of agriculture. Land values were increased by the programs and this also made the consolidation of units more difficult.

1/ Low yields and unfavorable weather conditions during harvest season were other important reasons for the decrease in the number of mechanized harvesters.

While the programs have increased efficiency in some respects, the more important causes of inefficiency have not been removed. Indeed, they have been entrenched.

4. *Production Should Be Encouraged in Areas and on Farms Which Can Place the Commodity on the Market at the Lowest Price.* A broad geographical shift was taking place when the programs started. Cotton was shifting from the Southeast to the Delta states, the Southwest, and Far West, which were more "economical" production areas. The geographical shift was not stopped but it was slowed down. Each year that acreage allotments were not in effect (except during the late war years) there was a relatively sharp increase in acreage and production in areas to which cotton was shifting, and a relatively sharp decrease when allotments were put into effect. For example the acreage decrease by areas in 1938 over 1937 was 24.6 percent in Area I; 25.9 percent in Area II; 30.0 percent in Area III; and 40.8 percent in Area IV (see Figure 4 for a definition of areas). On the other hand, the increase in 1951 over 1950 was 38.7 percent in Area I; 39.3 percent in Area II; 63.4 percent in Area III; and 87.3 percent in Area IV. 1/ The programs have kept the shift from being as smooth as desired, which is costly to farmers and society, and may have prevented a more pronounced shift.

Of equal importance as regional shifts are shifts within regions. Cotton had been shifting in North Carolina to farms where cotton could be produced efficiently and to farms with no good alternatives to cotton. The 1950 allotments disrupted this pattern. Farms which were specializing in cotton had allotments far below the acreage planted the preceding year, whereas many farms going out of cotton received an allotment as large as the acreage planted in any of the immediate preceding years.

5. *Consideration Should Be Given to the Effect of Technological Advances and Geographical Shifts in Production and Assistance Should Be Provided to Those Adversely Affected.* As previously indicated the geographical shift has been gradual and probably not as pronounced as it would have been without the cotton programs. Hence this criterion is not applicable. It might become applicable to many farmers in the Southeast in the event that cotton was successfully mechanized in the Delta, Southwest, and West and that there was no type of program for cotton.

Sharp changes in acreage have been brought about, however, by the control program. Such changes affect the farmer in somewhat the same manner as a technological advance which forces him out of cotton production. The government provided assistance in the form of conservation payments, parity payments, and support prices when a sharp reduction in acreage was made by means of acreage allotments or marketing quotas. These payments have, or at least could have, helped farmers reorganize

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1/ The trend to the West other than to Area IV has not been constant. Area III (Texas and Oklahoma) decreased acreage and production sharply during the World War II years. During this period the Southeast held its position and the Delta gained relative to other areas. The increase in the number of irrigated areas and the use of mechanical harvesters in the Southwest has once again established a trend toward the Southwest and West.

their farms so that they would not need to depend so heavily on cotton. The assistance did not help the farmers move out of agriculture, which was the best alternative in many cases.

6. *Enterprise Combinations Which Give the Maximum Income and Are in Line with Consumer Preference Should Be Adopted.* Parts of the cotton programs have encouraged adoption of good enterprise combinations while other parts have discouraged the adoption. The reduction in cotton acreage, the payment of subsidies which could be used to reorganize the farm business, and the payment for conservation practices, which in turn encouraged enterprises other than cotton, encouraged improvement in enterprise combination.

The programs discouraged the adoption of more desirable enterprise combinations in several ways. Until 1936 farmers were penalized for planting the diverted cotton acreage to crops which would be sold. Obviously the measures which increased the price of cotton kept many farmers from shifting to other enterprises. Because they were afraid that the allotment might be lowered or lost, some farmers continued to plant the full allotment even though it did not give as high income as a lower acreage in combination with other enterprises. This in turn would decrease the value of the farm. Also the farmer would not be able to resume planting cotton in case he wanted to. On some farms the most profitable enterprise combination would have included a larger cotton acreage. The allotments prevented such an adjustment. Allotments have not been in effect for the entire period. The possibility of allotments, however, had an effect akin to actual allotments.

7. *Conservation of Resources Should Be Encouraged.* The several programs have undoubtedly encouraged conservation of the land resources. The conservation payments which were associated with the cotton programs encouraged the use of lime, fertilizers, soil conserving crops, and conservation practices, such as terracing and strip cropping. Farming systems which are more soil conserving than cotton farming were encouraged at times and by part of the programs. Another factor responsible for greater conservation is the higher incomes which the programs gave to farmers.

8. *Farm Income Should Be Kept High Enough to Give Farmers Standards of Living Equal to Those for the Rest of the Nation.* Incomes from cotton have certainly been increased by the programs, both directly by government payments and indirectly through higher prices. The annual report of the AAA for 1937 and 1938 estimated that the total gain in income from cotton during the five years from 1933 through 1937 was $876 million making the income 24 percent higher than it would have been without programs. Government payments in these years totalled $614 million. The authors feel that appraisals of this sort are one-sided. In the higher cotton prices, for instance, consumers paid the "costs" of preventing a shift of cotton to areas and farms better suited to produce cotton. It is admitted that such costs are impossible to ascertain in dollars and cents, but it is clear that they did offset some of the gains which accrued to the special group of cotton growers.

The distribution of income is another important consideration. The gains have not been evenly distributed. Farmers who already had a good income benefited relatively much more from the programs than their low

income colleagues. Dr. Schultz found that operators in Mississippi with incomes above three thousand dollars received more than one thousand dollars in AAA payments, as compared to only fifty-five dollars received by operators with less than one thousand dollars income. Also, the higher income group gained more from the higher cotton prices, since farms in that group were larger and raised and sold more cotton. Thus much of the increase in income went to farmers who already had a good income and a standard of living comparable to that in other segments of the economy.

On the other side, the cotton programs may be held partially responsible for the persistence of low incomes on most cotton farms (certainly in the Southeast), because the programs prevented an increase in the size of farms, the adoption of new technology, and the addition of capital.

This does not detract from the success of the cotton programs in improving somewhat the standard of living among cotton farmers, as compared to that of other groups. But the fact remains that the gap between the incomes of cotton farmers and those realized in other segments of agriculture (let alone industry) has been narrowed but little.

9. *Farm Income Should Be Kept Stable.* On their relatively low levels, cotton incomes were somewhat more stable on account of the programs. As for the price component, loan rates put a floor under the market, and CCC stocks acted as a ceiling when prices rose. Disposal programs, and especially the handling of the export valve, had similar effects (export subsidies in 1940, restrictions in 1950). As for the volume component, the programs probably prevented even sharper fluctuations in production than actually occurred. The combination of both contributed to a greater stability of income, which must be counted as a gain to producers as well as to society.

10. *The Program Should Be Consistent with Programs for Other Commodities and with Other Domestic and Foreign Policies.* There have been many inconsistencies in the cotton program itself, e.g., the continued high support prices in 1949 when it was obvious that there would be an overproduction in cotton. Other inconsistencies appeared in the field of foreign economic relations. We have a foreign policy of helping the European countries reduce their unfavorable balance of trade. Yet United States cotton is forced on these countries through tied loans, the Marshall Plan and other programs. It must be acknowledged that making all programs consistent is perhaps an impossible task, particularly in a country where pressure groups can get action.

11. *The Program Should Be Administratively Feasible and Simple and the Costs Should Be Commensurate with the Benefits to the Nation.* One great advantage of the past cotton programs is that they were administratively feasible and their basic provisions relatively simple. Whether the administrative costs have been commensurate with the benefits cannot be answered because all costs and benefits cannot be determined.

B. An Appraisal of Some Basic Concepts of the Cotton Programs

The cotton programs contain certain basic concepts which the criteria may not have covered adequately. The following remarks are offered in the

form of criticisms of some of these concepts (whether stated explicitly or only implied in the programs) and to round out the analysis.

1. *The Demand for Cotton.* One of the goals (stated at times and always implied) of the cotton programs was increasing demand. The programs have undoubtedly decreased demand.

The cotton programs were based upon the assumption that demand for cotton does not expand or contract sharply when prices rise and fall, i.e., demand is inelastic with respect to prices. When the demand is inelastic, a smaller production gives a larger income than a larger production. Insofar as the domestic demand is concerned in the short run, the assumption of an inelastic demand is sound. When acreages and marketings were reduced in 1933 and 1934, cotton prices rose from 7.2 cents in 1932 to 12.4 cents in 1934 (72 percent); but domestic mill consumption decreased only from 6.1 million to 5.4 million bales (12 percent). A 25.9 percent smaller crop in 1934 than in 1932 brought a 53 percent higher income in 1934 than in 1932. Conversely, the drop in prices from 12.7 cents in 1936 to 9.0 cents in 1938, due largely to the bumper crop of 1937, failed completely to stimulate mill takings. Larger incomes were again realized from the smaller supplies in 1936 than from the larger ones in 1938.

In the long run, however, the assumption of an inelastic demand is not altogether sound as substitutes enter into the picture. The 90 percent of parity guarantee has undoubtedly been one factor responsible for the sharp increase since the late thirties in total and per capita consumption of synthetic fibers while total consumption of cotton has remained steady and per capita consumption has decreased. While the demand is fairly inelastic, it is sufficiently elastic in the long run so that relatively high prices will prevent an expansion in domestic demand and perhaps cause a contraction. Because the assumption of an inelastic demand is not altogether sound, the program of restricted output and high prices has decreased domestic demand.

Domestic demand, however, is only one part of the picture. Before the control programs, more than half of the United States production went to foreign countries. The foreign demand reacted much quicker to United States price increases than domestic demand. Exports after 1933 went down and other cotton producing countries took advantage of the situation by increasing their production and exports. Foreign countries also redoubled their efforts in the field of synthetic fiber production.

When both foreign and domestic demand are considered, demand is sufficiently elastic that the effect of various cotton prices on demand must be considered. As a result of the effect not being considered, the cotton programs have caused a reduction in demand.

2. *Parity Prices.* Obtaining parity for farmers has been the stated or implied goal of all the programs. The ideal of parity for farmers is very appealing and has been established in many minds as simple economic justice. Efforts to translate the ideal of parity for farmers into legislation to bring it about have resulted in the original concept of parity being distorted. The Congress decided that farmers were on a parity with other groups in 1910-14. They then decided that the way to give farmers parity in any year thereafter was to give them the same

prices as earned in 1910-14, adjusted for current cost of production and living. There are several defects in this idea.

First, relating parity to a historical base presupposes that the distribution of income within and between groups was "correct or desirable" and should be perpetuated. This assumption certainly is not true.

Second, relating parity to a historical base assumes that there is either no progress or that all groups progress at the same rate. This assumption is not true. For example, greater technological improvements have been made in the production of wheat than in the production of cotton since 1910. The result of giving the same relative prices for wheat and cotton today as during 1910-14 is high incomes for wheat producers relative to those of cotton farmers.

Third, relating parity to a historical base assumes that the relative prices and production between commodities were correct and should be maintained. Several examples indicate that the assumption is not true. Recent efforts to support potato prices at 90 percent of parity caused a tremendous overproduction. During 1910-14 soybeans were practically unknown in this country and cottonseed was used largely for fertilizer. Largely, as a result of technological advances in processing oil, of the application of scientific work to animal feeding, and of technological developments in production, the demand for oil and meal has expanded sharply.

Fourth, income, which is the important consideration, is the result of price times quantity. Correct parity prices would not result in parity income if the quantity was not the same during any year as during the base period.

Fifth, when prices are used as goals, the underlying maladjustments which are reflected in prices are hidden. The symptom is mistaken for the basic cause, and as a consequence, little or nothing may be done toward finding a reasonable, permanent solution. The function of prices is to direct and regulate economic processes. Technological advances which lower production costs should be reflected in prices as a guide to consumers and producers. Using prices as goals robs them of their directive power.

3. *Monopoly.* To the extent that cotton control programs were effective, they tended to give cotton growers with a historical allotment base monopolistic advantages, at least for the time being. If control programs of this sort are in effect long enough, the monopolistic advantages are capitalized in the value of the farm. For the economy in general, monopolies of any sort tend toward a poor allocation of resources and stabilize the status quo.

The cotton programs have not been an unqualified success. Advantages derived from the programs have been offset by losses. The fundamental problem of low incomes, to many cotton producers, has not been solved.

The results of the programs raise several important questions. Is the existing program the best possible program? What are alternative solutions? Is any kind of program likely to produce desirable results all around? Or should we throw out any and all government interferences?

Before answering these questions, the probable effects of new courses of action, or inaction, should be examined in the same manner as we have examined programs of the past and present.

V. ALTERNATIVE POLICY PROPOSALS

Numerous proposals have been made for changing the production and marketing programs now in effect. We classified most of these proposals with respect to whether they advocate one of the following basic alternatives:

A. Scrap all domestic production and price programs.

B. Retain price programs, but scrap parity and production controls. In this group are proposals for:

   1. Forward prices and compensatory payments
   2. National marketing quotas
   3. Subsidies for domestic consumption
   4. Subsidies for exports

C. Modernize parity and revise its application to support programs. In this group are proposals for:

   1. Flexible supports
   2. Income parities
   3. Income support standards

By adopting this classification, we hope to facilitate the presentation and appraisal of the most important proposals. We realize, however, that the list above is not all-inclusive. Nor could we indicate sufficiently, how several proposals could be linked together.

In our appraisal of the alternative programs we shall again use the criteria employed in our criticism of the present program. In addition, we shall make the following assumptions:

(1) Essentially full employment will be maintained in the economy with good alternatives for resource utilization both inside and outside of agriculture. The possibility of a major business depression, however, must be constantly kept in mind.

(2) No sudden changes will take place in production techniques or in consumer demands so that present price levels and price relationships will be approximately maintained.

(3) Exports of cotton will be at a level between two and four million bales, regardless of the type of agricultural program advocated. The possibilities of increasing or decreasing exports under various programs will be indicated.

(4) Soil conservation programs will be continued at about the present level, regardless of the type of production and marketing program proposed.

It is recognized that an agricultural program might have some effects on employment levels. However, since the major influences on employment levels originate outside the farm sector, anticipated fluctuations must be dealt with by an over-all program of fiscal and monetary nature. This does not mean, of course, that no thought should be given to the consistency of agricultural programs with other economic policy measures.

A. **First Alternative: Scrap All Domestic Production and Price Programs.** Under this proposal there would be no price supports and production controls, and no special subsidies for the export of cotton. Assistance programs for foreign nations of a general nature, however, would be continued, together with efforts toward a freer world trade, so that exports could be maintained at a level of between two and four million bales.

a. EFFECTS OF THE PROPOSAL

(1) The price of cotton would fall probably to around 25 cents. The price might fall much lower than this, especially when snags in the foreign assistance programs develop and if a depression should occur.

(2) Production would be between 10 and 14 million bales, unless cotton prices dropped below 25 cents.

(3) There would be an increase in the rate at which cotton production is mechanized.

(4) There would be a pronounced shift in cotton production from the Southwest and West, and further shifting within areas.

(5) The inroad of the synthetics into the cotton market would be stopped, unless the synthetics improve substantially in quality.

(6) In the long run, exports of United States cotton might increase, if the low-cost producers expand production considerably, and if the European countries get back on their feet. Under these assumptions, competition in foreign markets would have a pronounced influence on the cotton price.

b. APPRAISAL UNDER OUR CRITERIA

(1) The over-all criticisms of the present programs do not apply to the proposal of "no program."

(2) The proposal would bring production into line with demand and keep it there as long as alternatives within and outside agriculture are available. Under severe business recessions, however, overproduction would occur.

(3) Because of weather conditions and fluctuating prices, sharp increases and decreases in production would result.

(4) Efficiency in cotton production and marketing should be encouraged through the adoption of efficient farming systems and practices and through wider mechanization. The proposal should also help consolidate farms by causing some people to move off farms and by giving others incentives to increase the size of their farm enterprises. Progress in these directions, however, would be slow, since there is a time-lag in recombining factors. Nothing in this program would decrease the lag. Also, the problems of small farms and insufficient capital would not be attacked directly.

(5) The proposal would encourage production in areas and on farms which could produce the commodity at the lowest price.

(6) Some farmers would be stranded, lacking the resources with which to move out of agriculture or to adjust to a farming program not requiring cotton. For some years, these farmers would continue to produce some cotton even though they earned only five to ten cents per hour for labor and lived off the depreciation of resources and accepted a lower standard of living.

(7) The adoption of enterprise combinations which assure maximum income and a more desirable aggregate product would be encouraged. Many farms might not have enough income for reorganization or the purchase of additional land.

(8) The effect of "no program" on conservation would be mixed. Soil conservation would be encouraged on farms which could reorganize and maintain or increase incomes and size. Greater amounts could be spent for lime, fertilizers, terraces, and ditches. Farms going out of cotton would have better soil conserving farming systems. The price of cotton would be low enough to discourage production on submarginal cotton land.

Soil conservation would remain a problem on farms that should have gone out of cotton and/or reorganized their business but did neither. A problem in water conservation might arise in the West, where a sharp expansion in cotton might seriously deplete water resources.

(9) In the long run, the adjustments in production volumes, technology (mechanization), and management should permit the efficient cotton farmer to equalize his income with other farm and nonfarm groups, provided other groups were not enjoying monopolistic advantages, and capital and labor resources were fairly mobile.

However, there is no assurance that even the most efficient cotton producer would earn a good income every year. Because of the price inelasticity of cotton, prices might fall so sharply during one production and marketing cycle, that production outlays could not be met.

(10) Incomes could not be expected to be stable. Aside from disturbances originating on the demand side, there would be changes in production due to weather conditions, and readjustments to low prices and/or yields from one year to the next.

(11) "No program" could, under certain conditions, be in conflict with the policies designed to maintain full employment. If the income from cotton should fall suddenly, this could help precipitate a depression if the whole economy were already on the verge of a depression. Also persisting depression for one group would not be conducive to recovery if the country were in a depression.

C. SHORTCOMINGS

We may briefly summarize the shortcomings of the no-program proposal under the following points:

(1) Prices of cotton might fall so low in some years that even the efficient producer could not meet expenses already incurred.

(2) Instability of income would be increased.

(3) Adversely affected farmers would not be helped to secure other alternatives inside or outside of agriculture.

(4) The major problems of small farms and limited access to capital would not be attacked.

(5) Supply could not be kept in line with demand all the time. Private storage activities and hedging might be relied upon to smooth out some fluctuations, but there is no assurance that this would be sufficient.

(6) Depressions might be accentuated.

d. SUGGESTED REMEDIES

From the foregoing appraisal we may conclude that some assistance to cotton farmers is desirable, even though a no-program policy would have advantages over the present system. Such a minimum program would include:

(1) Price supports at "rock-bottom" level which would insure efficient growers out-of-pocket production expenses.

(2) A storage or stock-piling program to help iron out fluctuations in supplies and to help stabilize prices and incomes.

(3) Production controls plus subsidy payments if monetary and fiscal policies do not prevent a general collapse in demand.

(4) Programs such as the following to help those driven out of cotton and to attack directly the problem of small farms and insufficient capital: (a) Shifting farm people into nonfarm employment by providing training, by furnishing job information, and perhaps by paying moving and housing costs; (b) making adequate credit available for increasing and improving farms through modified FHA, or similar agency; (c) providing additional information through Extension Service or through other agricultural groups; (d) increasing ACP grants, but being more selective in providing grants; (e) giving direct subsidies to farmers who would agree to change their farming systems for a reasonable period of time.

B. **Second Alternative: Pricing Programs Without Parity and Production Controls.** Even if it is believed that production adjustments should come about in response to price changes alone, and not by government fiat, is the character of these price changes such that they can always be relied upon to guide production properly? The negative answer to this question points to the erratic ups and downs in agricultural prices, particularly with respect to the business cycle. It has been proposed, therefore, to build correctives into the pricing system of agricultural products which would smooth out excessive price fluctuations, and mitigate their influence on farmers' incomes. At the same time, the directive function of price changes would be preserved, and even strengthened.

The correctives proposed usually take the form of support prices at certain levels, or within ranges. This poses, of course, the old problems of (1) the level of support and (2) the method of supporting prices. Our present and past programs solved the first problem by the parity formula, and the second by non-recourse loans and direct pur-

chases which raised the market price to the supported level. These methods were criticized as leading to overproduction, at least in certain products, preventing needed adjustments, reducing demand, and making production controls inevitable. The proposals which we are about to discuss are designed to avoid these criticisms. Two groups of proposals can be distinguished. The first one would discard the parity approach altogether, and is discussed in this section. The second one would retain parity in modified form, and will be discussed as the third alternative.

1. *Forward Prices and Compensatory Payments*

a. CHARACTERISTICS. "Forward prices" derive their name from the idea that they would be announced by the Secretary of Agriculture in advance of the planting or the breeding seasons for agricultural products, and would remain in effect for at least one production cycle. The level of each forward price would be determined with the view of calling forth a volume of production in the longer run which would suffice to fill the anticipated needs for the product. Forward prices would be guaranteed through storage operations and compensatory payments, but not by restrictions in production.

"Compensatory payments" derive their name from the idea that the government should compensate farmers for losses which they suffer from low prices in the market place. These compensations would be made in the form of direct payments and would cover the difference between the unit market price of agricultural products and a predetermined support price. The market price of agricultural products would be allowed to fall until the market would absorb the supplies, and no surpluses would develop. Farmers' incomes would be maintained by government payments instead of a subsidy hidden in the price paid by the consumer.

As a financial device for supplementing farmers' incomes, compensatory payments could be incorporated in practically any income support program. They have been advocated, in particular, as a suitable means for mitigating the effects of business depressions on farmers, and the economy as a whole. Forward prices of the predepression period might be used for this purpose, especially if they have been maintained already by compensatory payments. In each case, farmers would be guaranteed relatively high incomes, and this would help stem the spread of depression.

Forward prices and compensatory payments may, or may not, be connected with each other. Each device, or both together, may also be made a part of programs which otherwise have little in common.

b. EFFECTS ON COTTON. What would happen to cotton, if forward prices and compensatory payments would be made the centerpeices of our agricultural programs? The answer would depend, of course, on the level at which forward prices would be set.

Let us assume, from past experiences, that a price of 25 cents per pound of cotton would equate supplies and demand in the longer run. Under this assumption, the effects would be quite similar to those expected from the no-program proposal as outlined above. However, an income drop below the level indicated by 25 cent cotton would be eased by compensatory payments.

C. APPRAISAL

(1) The proposal would avoid our criticism of parity prices, production controls, reduction in demand, and monopoly creation.

(2) It would keep supply in line with demand, except when there is a general collapse of demand.

(3) It should help avoid the need for drastic increases or decreases in production through the storage operation connected with the program. However, fluctuations due to weather plus possible errors in the forward prices would not completely eliminate variations in production.

(4) Assuming that correct forward prices were set, farmers would be helped considerably in reorganizing their farms in a desirable direction and in increasing their efficiency. Also, as part of the uncertainty is removed, farmers should be more able and willing to secure capital for enlarging and improving the farm business. The forward pricing program would not directly attack the problem of small farms and insufficient capital.

(5) Production of cotton or any other commodity would be encouraged on farms where it could be produced economically.

(6) Some people would be forced out of cotton production and would not have resources to reorganize their farms or move out of agriculture. This program would not offer direct help to those people but would indicate alternatives and remove some uncertainties.

(7) This program should encourage enterprise combinations that would maximize income and give a desirable gross product.

(8) On efficiently organized farms, good incomes and less uncertainties should stimulate conservation, but there would still be a conservation problem on farms which could not reorganize.

(9) Under full employment conditions, incomes would be satisfactory. If market conditions become unfavorable, a floor would be put under incomes. However, this would not help the non-commercial farmer whose welfare would remain an unsolved problem.

(10) The proposal would help to keep farm incomes relatively stable, even under depression conditions.

(11) There are no serious discrepancies between the proposal and other economic policy measures of the government. Of course, a successful anti-depression policy of monetary and fiscal nature would make compensatory payments less important, or even superfluous.

(12) Administrative problems would seem to be the crux of the forward price proposal. Difficulties would arise with respect to: (a) computing and setting the price under "equilibrium" conditions when the factors entering into the picture are hard to appraise, or when they keep changing; (b) doing this not only for one price, and for one crop, but for several, and in such a way that the ratios of these prices to each other make economic sense; this would be quite important in order to induce farmers to choose "good" production alternatives; (c) obtaining

Congressional sanction for the price setting methods and procedures. Past experiences show that the Congress would not readily turn over policy making functions to the administrative branch of the government.

Compensatory payments would add administrative problems, but these would not seem to be more difficult than those connected with the present programs. The costs to the Treasury should be fairly reasonable, though it has been pointed out that a severe depression would require very large payments. On the other hand, surplus disposal problems should be reduced to a minimum.

d. SHORTCOMINGS. Forward prices and compensatory payments would not meet our policy objectives in the following respects:

(1) They would do little toward solving the problems of the small farm with limited capital and resources.

(2) They would not provide help to those adversely affected who ought to make a transition to different farming systems, or to nonfarm employment.

(3) When a sharp depression occurs, the effectiveness of the forward prices would be blunted by compensatory payments, and desired reductions in acreage would not be forthcoming. The same would be true, if we get an overproduction of several agricultural products in the same years, i.e., if we produce too much of every product for which forward prices are set. Perhaps foreign markets and/or storage operations could take care of such a situation, but the proposal itself would not provide corrective features for it.

e. SUGGESTED REMEDIES. We would still need an assistance program of the sort outlined previously, namely, more credit and job training and placement for assisting those who were driven out of cotton production, those who owned insufficient land, and those who had little access to new capital.

2. *National Marketing Quotas*

a. CHARACTERISTICS. A scheme has been proposed which would tie forward prices and compensatory payments to variations in supply. The scheme would in no way restrict production but would establish forward prices and compensatory payments in relation to a national marketing quota; this quota would apply to the crop as a whole and would not be broken down into individual farm allotments or quotas. Farmers would be expected to adjust their production to variations in their gross incomes, and not merely to variations in the prices and payments received. An example for cotton will show how the proposal is supposed to work.

The government would announce, let us say, a forward price of 25 cents on a total production of twelve million bales, and thus guarantee to farmers a total gross income of one billion five hundred million dollars, regardless of how much cotton each farmer would actually produce. If the crop turned out to be fifteen million bales, the price guarantee of 25 cents would apply to only 12/15 of the amount actually sold by each farmer, and only on that amount would the government pay the difference between the market price and the guaranteed price. Assuming that the market

price dropped to 20 cents, each producer would receive five cents in compensatory payments for 12/15, or 80 percent, of the actual poundage sold by him.

The proposal for national marketing quotas also advocated that farmers should have a wide range of choices as to the form in which they would take the compensatory payments (called supplementary payments in the proposal). Instead of being paid in cash, or by check, these payments would be made in the form of grants-in-aid to farmers for approved production practices, somewhat in the manner of the agricultural conservation payments (ACP) of the PMA. In normal years the payments would largely be directed toward helping farmers to carry out needed adjustments in the fields of production, marketing, and consumption. If prices remained depressed over time, the most important use of the supplementary payments would be in helping farmers to shift part of their production to other lines, or even to get out of farming altogether. In short, supplementary payments would be used to attack the production and adjustment problems of particular farms, or regions, or periods.

b. ADVANTAGES. The advantages of this program as compared to the effects of forward prices alone, seem to be:

(1) As long as the cotton crop stays within the size considered necessary for meeting the needs of the market, at the announced price, farmers' incomes would remain stable. When the price fell below the announced level, supplementary income payments would be made.

(2) If too much cotton is being raised over a series of years, the progressively smaller part of the individual crops to which the price guarantee applies would hurt high-cost producers more than low-cost producers, and would help to force the reorganization of the less efficient farms.

(3) By the same token, the low-cost producers and areas would find expansion of production advantageous since they would be penalized only to the extent that the total crop exceeded the normal crop and not with respect to their individual production. Competition would thus exert some of its beneficial influences, yet the shifting process would be slowed somewhat by guaranteeing minimum incomes to the wide range of producers who would produce neither at the highest nor at the lowest cost levels.

The advantages of the program with respect to supplementary payments seem to be the following:

(1) The proposal would attack the production adjustment problems of the individual farms in a direct way by using government payments as a lever for guiding farmers in the most efficient use of their resources.

(2) The proposal would have important countercyclical effects, since supplementary payments would be higher in depression years than in normal times.

(3) When supplementary payments are entered as credits to individual farms, a reserve of grants-in-aid would tend to accumulate in good years and be available to draw upon in depression years.

(4) The availability of such reserves would stimulate borrowing at the

time when credit expansion is most needed. The undertaking of land and building improvements would provide employment for nonfarm and farm labor alike.

(5) The proposal would tend to level out production cycles for particular farm products, such as hogs and cattle, by offsetting the low incomes during phases of high production.

c. DISADVANTAGES

(1) The disadvantages of the proposal seem to lie mostly in the political and administrative aspects of its realization. What we said about forward prices in that respect applies here, too, with one important further complication. Farmers and the Congress would be dissatisfied with the idea that the excess ratio of the actual crop over the normal crop should be applied across the board to all cotton producers. This would seem to hit the most "needy" farmers worst. This is the old conflict between the allocative and the welfare implications of all price supporting schemes, but it seems to be intensified here, since non-compliance of the low-cost producers would be encouraged.

(2) The proper handling of the grants-in-aid, into which supplementary payments would be transformed, would necessitate a close cooperation between the government agencies and the farmers in drawing up production plans, selecting practices, securing loans, etc. This would mean a still further expansion of the activities of government agencies and would create difficult problems of coordination.

d. SHORTCOMINGS. Our previous criticisms of forward prices and compensatory payments (see page 99 above) do not apply here in so far as needed help to adversely affected farmers is concerned. This is the less so since the proposal under discussion includes detailed recommendations for "in job" training, public services to the farm population, and assistance to those who should seek nonfarm employment.

We may emphasize that the proposal under discussion seems to be the only one which would meet the needs for an assistance program previously outlined under "suggested remedies."

3. *Subsidies for Domestic Consumption*

a. CHARACTERISTICS. The agricultural problems of the country may be attacked, in principle, from two sides. The first one would use devices operative on the supply side of the markets for agricultural products. The second one would use devices operative on the demand side of farm products. Most commonly, these latter devices would stimulate the demand for farm products by making such products available to special consumer groups at low prices. The ultimate effects would be that agricultural products would move into consumption at two levels of prices; the higher one would determine the prices received by farmers, the lower one would apply to special consumer groups. The difference between the two price levels would be made up by payments from the Treasury, or from special funds.

Consumption might be stimulated by giving price benefits to either of two consumer groups. The one group would consist of American families in low-income brackets who could be presumed to buy more agricultural

products if prices were lower. Precedents for this approach are found in the Food Stamp Plan, the School Lunch Program, and the Mattress Program. In this section we shall deal with the National Food Allotment Plan which would apply the same ideas on a nation-wide, and non-discriminatory basis.

The second group of consumers whose demand for agricultural products may be stimulated by a two-price system are foreign countries which generally would buy more agricultural products from the United States, if these products could be obtained at favorable prices. Precedents for this approach are found in the various schemes under which agricultural products moved into foreign trade under special aubsidies, or general financial arrangements (UNRRA, Marshall Plan). A generally applicable plan for two-price systems in the foreign trade field will be discussed in the next section.

The National Food Allotment Plan, sponsored for several years by Senator Aiken of Vermont, starts from the idea that every American, regardless of income, is entitled to a diet considered adequate by the nutritionists. Low income groups often cannot afford such a diet, even if they spend a comparatively high portion of their incomes, say 40 percent, for food. The plan proposes to "subsidize" the purchasing power of these groups for the adequate diet in this way. Let every family, regardless of its income, have the privilege of exchanging 40 percent of its income for food coupons (let us say, at the post office). The face value of these coupons would equal the retail costs of the adequate diet. The difference between the family's contribution and the actual value of the coupons in retail stores would be borne by the government. People in the higher income brackets, whose income is more than two and a half times the cost of the adequate diet, would have little incentive to buy the coupons, since 40 percent of their income is sufficient for paying the retail prices of the food they want. The benefits of the scheme, though available to everybody, would thus accrue to those families who would have to spend more than 40 percent of their incomes if they had to buy the adequate diet at normal retail costs.

b. ADVANTAGES

(1) The chief merits of the plan would lie in its general welfare aspects. Its costs could be considered as an investment in the human resources of the nation, comparable to those expended for education and public health services.

(2) Agricultural prices would be generally kept at satisfactory levels, bringing into play the latent demand on the part of consumers with urgent needs.

(3) The program would stimulate demand for a greater variety of agricultural products, especially food, in local areas, and thus open opportunities for the diversification of farm production.

(4) The program would seem to be a fairly effective weapon for fighting off general, or over-all, overproduction of agricultural products and for widening the choices for alternative employment of agricultural resources.

c. DISADVANTAGES

(1) Since the program is not directed at specific kinds of agricultural products, surpluses of certain groups of products might still develop.

(2) If successful in stabilizing the general price level of agricultural products, the plan would rob prices of their function to redirect farm production; that function operates through variations of individual farm prices from the general level, some prices falling and others rising.

(3) Agricultural products for which adjustment problems are not urgent are precisely those which play a minor, and probably still decreasing role in the "adequate" diet. It is hardly likely that the demand for such products would increase enough under the proposal to bring it in line with supply. The main adjustments must come on the supply side.

(4) These defects of the plan could be remedied by forcing "surplus" products on the recipients of the benefits under the scheme, that is, reverting to the ideas of the older "stamp" plans. The sponsors of the proposal discard that approach as discriminatory and not conducive to the betterment of diets.

(5) The proposal rests on the assumption that the American people would consume the total output of agricultural products. If this assumption is not true, the program would not attain the desired goals.

4. *Subsidies for Export*

a. CHARACTERISTICS. Two-price systems in the field of foreign trade in agricultural products are not intended to help consumers abroad, but to secure higher prices to the American producer than those prevailing in the world market. Under proposals of that type, exporters are given a subsidy on the commodity exported with the expectation that the exporters would bid up domestic farm prices by the amount of the subsidy. The result would be that the level of prices received by domestic producers and paid by the domestic users of the commodity would be higher than the prices received in foreign markets.

The crucial questions are first, the amount of the subsidy per unit, and second, the financing of the subsidy. On the latter problem, the easiest solution would seem to be outright payment by the Treasury. Another proposal, popular during the twenties and still a live issue with some farm organizations, would finance the export subsidy by a levy on the domestic producers, and figure its amount from supply conditions.

b. ADVANTAGES

(1) The proposal seems to provide an automatic check against overproduction, and would obviate the necessity for production controls. Farmers gain the greatest advantage from the proposal if they reduce their output close to the level of domestic consumption.

(2) Farmers seem to finance their own "relief." The fee collected from the first buyer would almost wholly be passed on to the producer who would thus gain only the difference between the subsidy rate (or

tariff rate) and the rate of the "fee." This feature of the proposal would have considerable political appeal.

c. DISADVANTAGES

(1) The proposal assumes that prices in the foreign markets for United States agricultural products reflect reasonably free interactions between supply and demand. However, this assumption cannot be held valid, when foreign aid programs, tied-in loans, exchange controls, allocation schemes, etc., dominate the flow and direction of exports. Actually, the proposal grew out of the situation in the twenties, and assumed conditions of that period.

(2) The proposal, in effect, makes tariff legislation the main vehicle for agricultural programs. A carefully worked out scale of tariff rates for agricultural products may provide some guidance for production adjustments, but "scientific" tariff making, if possible at all, may be too much to be hoped for.

(3) Higher domestic prices would decrease domestic demand and encourage, in particular, inroads of substitutes in the cotton market.

(4) The proposal would offer the least help to farmers under conditions of a severe business depression which might prevail in other countries.

(5) Fluctuations in yield would make prices and incomes from particular export crops increase and decrease sharply.

(6) The proposal is inconsistent with the general economic policy of the country with respect to foreign trade. No matter how the financing is done, the charge of dumping cannot be denied.

(7) The effect of the proposal on world market prices would be an accentuation of price changes.

C. **Third Alternative: Making Modernized Parity Work.** Some critics of the present tie-in of parity with production and pricing programs maintain that the shortcomings of these programs are not due so much to the parity concept as to (1) the antiquated formula of the parity indices, (2) the far too rigid application of parity to support price levels, e.g., the 90 percent parity loan rate, and (3) the divorce of support price levels from supply conditions. Accordingly, proposals have been made to redefine price parity and to make provisions for greater flexibility. Other proposals would substitute income parity for price parity and apply it to the gross income of farms.

1. *Redefined Price Parities and Flexible Supports*

a. PROVISIONS. This proposal was part of the so-called Aiken Bill (Title II of the Agricultural Act of 1948). The principal points of the original version were:

(1) To bring the parity-price formula up to date by basing it on the most recent ten-year average of prices received by farmers. This has become the present formula (including wages paid in the index of prices paid) and must be regarded as an important step in the right direction.

(2) To announce price support levels in advance of the planting season. This also was incorporated into the law, but it cannot be termed "forward" pricing in the stricter sense of the word, because the support levels are still tied to parity.

(3) To support price levels through non-recourse loans and direct purchases as in the present programs.

(4) To make support price levels vary with supply conditions. When expected supplies are thought to be in line with anticipated demand, prices would be supported at a predetermined level, say at 75 percent of parity. When supplies are expected to be larger than demand by a certain percentage, the support level would move down by a certain percentage, and vice versa.

(5) Originally, the minimum support level of 60 percent of parity was thought to be sufficient for bringing supplies in line with demand. As an afterthought, however, it was proposed that in cases of severe market gluts, such as are caused by business depressions or chronic oversupplies, production controls should be resorted to in the form of marketing quotas. If farmers agreed to those quotas, they would receive higher support prices than otherwise.

b. ADVANTAGES

(1) The determination of support price levels by a formula might yield fairly good results, provided that formula is designed to meet definite objectives. The old conflict between "welfare" goals and production directives appears again.

(2) The Congress and farm people prefer the formula approach and do not seem ready to turn the pricing policy over to government experts. Also, farmers definitely prefer non-recourse loans and purchases to compensatory payments, because the latter makes the subsidy character of supports uncomfortably obvious.

(3) Production would be kept in line with demand, assuming, however, that the formula for computing support prices favors production directives.

(4) The need for drastic increases and decreases should be avoided; however, weather conditions would still cause variations.

(5) The proposed marketing quotas would result in inefficiencies in production and marketing during the time they are in effect. Although superior to the present program, the proposal would not be as effective as forward prices in encouraging reorganization of farms or in causing some people to move out of agriculture. If production control is imminent, it might prevent or deter mechanization. The program does not directly attack the problems of small farms and limited capital.

(6) Production would be encouraged in areas and on farms where cotton could be produced most efficiently unless marketing quotas are in effect.

(7) As in the other proposals, this scheme would cause some people

to go out of cotton production. This program would offer no assistance to the disadvantaged people in reorganizing their business or in moving out of agriculture.

(8) The adoption of desirable enterprise combinations and production of a desirable gross product should be achieved if the program works as expected. If the program overprices some commodities, a malallocation of resources would result. Also, probability of controls might prevent the adoption of desirable enterprise combinations.

(9) Conservation practices should be encouraged due to greater income stability and to higher incomes resulting from greater efficiency in normal times. Disadvantaged farmers probably would do less conservation work.

(10) Incomes should be satisfactory for the commercial farmer even in periods of falling demand, since a price floor is provided. The non-commercial farmers, however, would be offered no help.

(11) Farm incomes would be stabilized to a greater extent than under any other proposal.

(12) There would be no serious discrepancies between this proposal and other policy measures. Anticyclical effects would be only incidental.

(13) The program is administratively feasible. The difficulty is in getting a good definition of normal supplies enacted into law. The cost should be reasonable if the sliding scale is satisfactory. However, the disposal of surpluses might be costly.

c. DISADVANTAGES

(1) Our previous criticism of the parity concept applies less stringently to this method. Even so, prices are being robbed of part of their directive function, since they are not permitted to fluctuate sufficiently for the purpose of encouraging production adjustments at a fairly quick rate.

(2) Consumption is not encouraged as much as it might be under the compensatory payments plan. The subsidy is hidden and acts in a regressive fashion. Stocks of storables would accumulate in government hands, and perishables would have to be destroyed.

d. SHORTCOMINGS

This program falls short of our policy objectives in the following respects:

(1) It would not help solve the problem of the small farmer.

(2) It would not provide a transition for those who shift to new farming systems or to nonfarm employment.

(3) It might not provide sufficient incentives for changing farm production patterns.

(4) It would not provide for the disposition of stocks purchased by the government.

e. SUGGESTED REMEDIES

We would still need an assistance program such as was outlined previously to help the small and the disadvantaged farmers.

We would also need some definite directives for disposing of government stocks. This program would need to be carefully worked out so that conflicts with foreign economic policies could be avoided. Perishables could be channeled into school lunches, food stamp, and other relief measures Storables could be used to alleviate desperate situations in foreign countries.

2. *Parity Income*

a. GOALS

No matter how price parities are defined and put to work, they would always disturb the function of price changes as directives for production adjustments. It has been advocated, therefore, that price support standards, as based on parity, be discarded in favor of income support standards. The proposal would get away from the support of individual commodities and it would support the farm income regardless of what commodities enter into the sales receipts of the individual farm. At the same time, the proposal would not need historical bases for determining the income standards. Instead, a certain ratio of the farm income per capita to the income per capita of the nonfarm population would be used as a measuring stick.

b. METHODS

(1) When prices are too low to provide the average farmer a "fair" share of the national income, the total farm income should be increased by supplementary payments from the government. The percentage by which the farm income should be increased would be determined by the relationship between the per capita income of farmers and the per capita income of nonfarm people.

(2) The same percentage payment should be made to all farmers. The primary purpose of this is not to interfere with the influence of price changes upon the redirecting of agricultural production.

(3) The distribution of the payments among individual farmers would depend upon their incomes for the year. As a basis the farmer's total cash receipts would be used, but purchases of feed and livestock would be deducted, because these latter are not contributions of the individual farm.

c. ADVANTAGES

(1) It would allow freedom in selling agricultural products at whatever prices they would bring in the market, so that prices could perform their normal functions of guiding production and channeling the products into the market.

(2) It would guarantee farmers the approximate share of the national income they would receive in normal times. It would also increase income stability.

(3) It would be anticyclical in its effects because money would be paid out when it was needed to support total income.

(4) It would be comparatively simple to administer and would involve few administrative decisions.

d. DISADVANTAGES

(1) Under our economic system the incomes of farmers do not rise and fall together; indeed, such differences are needed in order to stimulate necessary adjustments within agriculture. The plan would tend to blur the importance of these differences in the farmers' minds.

(2) The personal income distribution within agriculture would be made worse. The commercial and successful farmer would receive a large check from the government, whereas the small and needy farmer would receive little.

(3) Producers of commodities bringing the highest prices would receive the highest payments since their sales receipts would be larger. Perhaps this is desirable because it adds incentives for shifting production, but it is in conflict with welfare considerations.

e. SUGGESTED REMEDIES. The plan is close to the no-program proposal in that it would provide no help to the small farmer, no remedy to capital rationing, and no guidance for farm people who should move out of agriculture. Again, an assistance program would be needed along the lines suggested before.

3. *Income Support Standards*

a. CHARACTERISTICS. The widely discussed program associated with the name of Secretary of Agriculture, Charles F. Brannan, is, in fact, a combination of several proposals which have already been covered. The significance of the program lies in the attempt to combine these features in such a way that they appeal to several politically potent groups all at once. The main points of the program are the following:

(1) Price parities would be discarded in favor of and over-all income standard which is figured from the cash receipts of farmers for the average of the immediately preceding ten years. The level of price supports is derived from that standard, the percentage difference by which prices should be higher being the same for all commodities.

(2) Commodities to be supported would comprise a list of all the important items sold off farms.

(3) The support method would be the same for the storable commodities as under the present program. For perishables, the plan advocates the use of compensatory payments. This is the most conspicuous feature of the program.

(4) Producers would be eligible for the benefits of the support program if (a) reasonable soil conservation practices were carried out, (b) controls were complied with when necessary to keep supplies down and when approved by farmers, and (c) the total sales volume of the farm did not exceed a certain limit.

b. ADVANTAGES

(1) Under the compensatory payments plan prices would fall in the market to levels which would clear the markets, and no surpluses would develop.

(2) Payments for conservation practices would be tied to support programs.

(3) The middle-size farm of the family type would be favored above the big commercial enterprise.

(4) Costs might not be excessive, provided the demand for "perishables" was believed to be less inelastic than the demand for "storables."

(5) Consumers would seem to benefit by the lower prices for perishables, yet farmers would receive a fair price by the addition of cash payments to their market receipts.

C. DISADVANTAGES

(1) Despite the over-all income support standard, the proposal actually would not be different from supporting prices on the basis of price parities. The main difference is that the income standards would figure out in even higher price support levels for most agricultural commodities than those arrived at by the present formula.

(2) If compensatory payments were to be used, there would be little reason for not applying this payment method to all agricultural commodities.

(3) The application of an over-all percentage of support would freeze the present ratios of agricultural prices to each other and thereby rob price changes of their directive function. This would be particularly true where the price relationships of feed grains to livestock products are concerned.

(4) By exempting large-scale farms from the benefits of the program, efficiency might be penalized, and farms might be permitted to stay in production and to continue enterprise combinations when discouragement would be in order.

(5) Production controls must be resorted to sooner or later because of the level of supports. Controls would have to be widespread because of the wide coverage which the program entails.

(6) Insofar as cotton is concerned, the program would tend to intensify the malallocation of resources, slow down mechanization, retard the shifts of cotton production to more economical areas, and hamper still more the competitive position of cotton in the fiber markets.