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WHEAT MARKETING IN THE UNITED STATES

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AS ALL the members of this Conference know, the United States is a very large country with diverse interests. To attempt to thoroughly discuss the subject of wheat marketing in the United States in the time allotted to me is obviously impossible. I have, therefore, selected certain topics from the field which appeared to be of some general interest particularly to our foreign visitors.

The wheat crop of the United States is divided into five important classes, each a more or less distinct commodity from the marketing standpoint. These different classes represent adaptations to the varying conditions of soil and climate under which our wheat is produced.

The relative importance of these different classes of wheat is shown in table 1.

Hard red winter wheat, the most important type, making up about 40 per cent of the total crop, is grown from Texas north to Nebraska, and east to Illinois. It is a staple bread wheat and our most important export class. For the crop years, 1925 to 1929, an average of about 48 million bushels were inspected for export; in addition large quantities were exported in the form of flour.¹ The production of this class of wheat has increased rapidly in recent years with the introduction of the new types of machinery and new methods of production, particularly along the western edge of the wheat belt.

Soft winter wheat, the next most important type, comprising 22 per cent of the total, is grown to the east of the hard winter wheat belt, the area of production extending from Texas and Kansas, east to the Atlantic Seaboard States. The more important states include Missouri, Illinois, Indiana, and Ohio in the Southwestern Corn Belt, and Pennsylvania on the Atlantic Seaboard. This type of wheat is used largely in the domestic market. For the crop years, 1925 to 1929, exports of it averaged only about 11 million bushels and these were made chiefly in 1926, a year when there was a very large crop of this class of wheat. This wheat is starchy

¹ These and similar export figures are based on "Wheat Facts," issued by the United States Department of Agriculture, July, 1930.

and low in protein, is used for pastry and biscuit flours and finds a large market in our southern states. It typically sells at a small premium over the lower protein hard wheat, chiefly, I think, because of a better balance between its production and domestic consumption.

White wheat, which makes up about one-tenth of the national crop, is grown in the Pacific Coast States and also in some of the northeastern states such as Michigan and New York. Exports of this class are quite large in comparison to production, averaging about 22 million bushels or about 25 per cent of the total production for the crop years 1925 to 1929.

Table 1. Average Annual Production of Various Classes of Wheat in the United States, 1925-29*

<i>Class of wheat</i>	<i>Average production</i>	<i>Per cent total</i>
	(millions of bushels)	
Hard red winter.....	321.7	39.3
Soft red winter.....	181.8	22.1
White.....	82.6	10.0
Hard red spring.....	164.5	20.0
Durum.....	71.0	8.6
Total.....	821.6	100.0

* Calculated from data in 1930 Yearbook of United States Department of Agriculture, page 609.

Hard red spring wheat, our third most important class, makes up about one-fifth of the total crop, and is grown in a region extending from the northern edge of the Corn Belt northwestward through the Dakotas into Montana. This is a bread wheat and comparatively little is exported, exports averaging only about 3 million bushels in the crop years, 1925 to 1929. Most of this class of wheat is milled in this country because of its quality and the location of its area of production with reference to consuming centers and to transportation routes. In recent years mills in the spring wheat territory have found it necessary to supplement their supplies of spring wheat with hard winter wheats.

The fifth class, durum, is a Mediterranean type of wheat grown in our spring wheat section, making up a little less than 10 per cent of the total. Over a third of our crop is exported; direct exports averaged about 27 million bushels for the crop years 1925

to 1929. This wheat is used in the manufacture of macaroni and similar foods and also for blending with the other hard wheats.

This brief summary suggests one reason for the complexity of the wheat situation in the United States. The marketing mechanism must be organized to work these various classes of wheat into the proper channels and to maintain the proper price relationship between the different classes so as to maintain a balance between the production and demand for each. Although each of these wheats has a distinct market, there is more or less substitution and interchangeability between the different classes. If soft red winter goes to a premium above the ordinary grades of hard red winter, as it frequently does, it creates an opportunity to substitute flours from the hard wheat either in blends or in the consumer's market. Hence all classes tend to sell within a fairly definite range. The situation is something like that of the vegetable oils, the prices of which, Phillip Wright of the Institute of Economics so aptly described as being held together by an elastic band which permitted considerable variation between the prices of different varieties but which kept the variation within definite limits.

The changes in the consumption of wheat per capita in this country have previously been discussed by Dr. Baker. I wish, however, to repeat some of the material he presented because it has an important bearing on our present market situation.

For the five-year period, 1925-29, the wheat crops of the United States averaged about 130 million bushels larger than crops of the 1909-13 period. The increase amounted to about 20 per cent. Between these periods our population increased by about 26 per cent. In spite of the fact that production increased less than did population, our net exports increased, averaging about 100 million bushels annually in the pre-war period and about 150 million bushels in the 1925-29 period. The increased exports reflected the decline in per capita consumption in this country.

Hence the problem of finding a market for our national surplus of wheat looms large in all discussions of wheat marketing. In recent years, as is well known, we have found increasing difficulties in moving this surplus into the foreign markets. The data for individual years illustrate the situation (table 2).

It was during the marketing of the 1928 crop that our exports fell off and surpluses began to pile up to an alarming degree. Developments in that year paved the way for the serious market

situation that has come to light in the United States in the past year. Our 1928 crop was the largest we had harvested since 1919 when acreages had been expanded by the war time efforts.

Why did our exports fall off in spite of this large crop? Bear in mind that this was a full year before the Farm Board was created and that, directly, no government money was available to finance a storage campaign. Partly it reflected the very large world crop which reduced the demand and increased the competition from foreign countries, but to me it seems also that it was a part of the process of domestic inflation that has occurred in many lines in this country since 1920. With enormous gold resources and un-

Table 2. Production, Exports, and Carryover of Wheat in the United States, Crop Years 1926-29*
(Millions of bushels)

Crop year (beginning July 1)	Production	Carryover at beginning of year	Exports	Carryover at end of year
1926.....	831.0	109.0	219.0	132.0
1927.....	878.0	132.0	206.0	137.0
1928.....	915.0	137.0	164.0	259.0
1929.....	806.0	259.0	150.0	290.0**

* Includes flour reduced to a wheat basis. Based on data of the United States Department of Agriculture.

** Estimated from 3 available items.

limited credit we established a level of prices above that of the world for many sorts of goods and services which were sheltered in any way, either by tariffs or by their inherent nature. During the year in question we attempted to extend this process to a commodity where it was obviously impossible to accomplish it, namely wheat. The mechanism for doing so was simple. Through the liberal use of credit, farmers and speculators simply held wheat and bid the price to a point where it could not move freely in world trade. The incentive was the opinion that wheat would go higher in price, an opinion not difficult to create in the America that immediately preceded the panic and deflation period that came in the fall of 1929.

Putting it in American slang, "we held the sack" in the marketing of the 1928 crop. Part of the success of the Canadian pool in selling Canada's 1928 crop can be attributed to the fact that we

held our grain out of the way for them. Let us look at the statistics in this connection (table 3).

In the 1928 crop season the 4 leading export countries exported 152 million bushels more than in the previous year and Canada 117 million bushels more. The United States exported 42 millions less. If we had pushed sales of our wheat that year, the world and the United States price levels would have been lower, greater non-food and perhaps greater food use would have been encouraged, acreages would have been reduced somewhat in the following year and a healthier situation would have existed in the United States markets during the marketing of the 1929 crop. The world-wide

Table 3. World Production of Wheat Together with the Exports of Important Exporting Countries, 1926-29
(Millions of bushels)

Year	World production ¹	Exports of four leading export countries ²	Canadian exports	United States exports
1926.....	3,426	759	305	219
1927.....	3,661	763	306	206
1928.....	3,943	915	423	164
1929.....	3,415	(3)	(3)	150

(1) Excluding Russia and China. Figures represent estimates of the U. S. D. A.

(2) United States, Canada, Argentina, Australia.

(3) Data not available.

slump in wheat values would not, of course, have been eliminated but its effects on the United States wheat situation would have been somewhat moderated.

What will become of the enormous surplus of wheat that has piled up in this country as the result of the large 1928 crop and our slow exports of the last two years? In the first place, I think that our holding period is at least temporarily over and that we will be offering our wheat on a basis that will meet competition. The lower prices will reduce production. I look to see the period of expansion in the newer regions at least temporarily checked and considerable reduction in the older higher cost areas. There is no visible margin of profit in wheat production at prices that have prevailed this season in the territory east of the Mississippi River and some individuals will be led to substitute other crops, chiefly feed crops, for a part of their wheat acreage. There will

be also a heavy feeding of wheat to animals so long as these low prices continue. This tendency has been accelerated this season by the short corn (maize) crop caused by the prolonged drought in the American Corn Belt. Our share of the export trade, a reduced acreage, and an increased feed use, all the direct result of the low prices, will eventually whittle down our storage holdings to a reasonable figure. Wheat prices have always moved through irregular fluctuations which may be designated as cycles. Judging by the past we should move into the higher priced phase of the current cycle within a year or two, whatever the long-time trend of wheat prices may be.

SOME CHARACTERISTICS OF THE UNITED STATES GRAIN TRADE

As I pointed out earlier, there are 5 principal classes of wheat in this country, each of which has a more or less distinct market. There are, however, certain general characteristics which run thru all of our grain handling. East of the Rockies grain is typically handled in bulk in the principal grain sections. The wheat moves into elevators at country stations, is dumped and moved mechanically through the elevators to cars or to storage bins. After it is delivered to the local elevators the identity of the wheat is usually lost.

The grain trade is conducted on a cash basis. The farmer is paid on delivery or when he calls for it. The local elevator, when it ships grain to market, ordinarily draws a sight draft on the receiver for a large proportion of the value of the grain for which it receives immediate credit with its local bank.

A good deal of wheat is stored in local elevators by farmers. In some states, notably in the spring wheat states, the law requires that local elevators store grain for farmers at stated maximum charges. This is not true in Illinois nor in the Corn Belt States generally. However, a good deal of wheat is stored by elevators for short and sometimes for rather long periods. In such transactions the local elevator becomes a sort of local bank. There are some difficult technical problems connected with such storage operations that time does not permit me to discuss.

The movement of grain is quite flexible. With year to year shifting in the size of crops in various sections and in the strength of demands from various quarters, the direction of the movement changes considerably from time to time. In Illinois we have made

a considerable study of this matter and found considerable shifting particularly in large areas that might be designated as marginal territory.² Each market is constantly fighting to keep its share of the grain moving in its direction. Freight rates have a great deal to do with the actual pattern of the movement.

A constant stream of market information is moving in the principal grain states. This is assembled and distributed chiefly through the large terminal markets. The heavy grain shipping sections of the Corn Belt in particular, are covered with a network of grain offices that relay information to groups of elevators in the sections that surround them. The strictly wheat sections are not so well supplied with these, although there has been a tendency in recent years for these markets to have more representatives in direct contact with the local elevators in those sections. The development of the radio has greatly broadened the area which can be supplied with market news. I can get from a radio station in a little town about twenty miles from my home in eastern Illinois at eight o'clock in the morning a complete résumé of the overnight news as it relates to grain marketing, the Liverpool cables, international weather forecasts, and the late crop news. This is continued at intervals of one hour throughout the morning. At 12:15 noon, a complete report of the day's grain news is given, covering prices, weather reports, crop summaries, exports, primary receipts.

Most of our local elevators are equipped with radios and get this information as it is broadcasted. Also farmers may and do keep in touch with it.

Another characteristic of American grain markets is the wide use of the futures markets. The American grain trade is built up around the use of the futures market. This does not mean that every bushel of wheat purchased by every grain merchant is hedged. This is far from the truth, but it may be safely said that as now organized, the American grain trade could not be conducted a day without the use of the futures market. These futures markets furnish the mechanism which make it possible for firms with relatively small capital to maintain a constant cash market for grain.

COOPERATIVE DEVELOPMENTS

Until recently the chief cooperative development in wheat marketing in the United States has been in connection with local

² See Illinois Agricultural Experiment Station Bulletin 315.

elevators. Many of the local elevators are owned by groups of local farmers and business men. The Federal Department of Agriculture reported that there were approximately 4,000 of these so-called farmer elevator companies in the United States in 1929. Active organization has practically ceased since 1920 and the number of companies has been declining somewhat. These companies have had varying degrees of success but generally speaking they have demonstrated that farmers can successfully operate this element of the grain business.

These elevators are practically all local unit, independent corporations, both as to ownership and management. The situation is in distinct contrast to that in Canada where, before the formation of the pools, the line elevator type of cooperative organization dominated. We have a few small cooperative "lines" but they are the exception rather than the rule. Many of our local elevators in addition to handling grain, handle considerable quantities of supplies of various kinds. Independent local action must be said to be the dominant note in the country end of cooperative grain marketing down to a very recent date.

In recent years a number of cooperatively owned commission companies have developed. The Federal Department of Agriculture reported that 8 of these handled 36,000,000 bushels of grain in 1927-1928 and that about 12 were operating in 1929. Typically, these are owned by groups of local farmers' elevators and represent these elevators in the terminal markets. This may be looked upon as a sound but elementary step beyond the local elevator.

Another type of cooperative that the American wheat farmer has experimented with, is the pool, somewhat similar to that discussed in Mr. Cairns' paper. These have been organized in practically all of the leading wheat states and in 1929 there were eight which were active. This type of organization has never made much headway in this country. One reason is the bitter opposition of the organized grain trade, both private and cooperative. Another has been the difficulty of operating without physical facilities as, generally speaking, the pools in this country have endeavored to do. Perhaps more important is the fact that the American farmer has not been convinced that this plan is his way to economic salvation. Preoccupation of the farm leadership with farm relief legislation is perhaps an important reason for this view, but in general,

I think, the lack of interest represents the current judgment of our farmers.

The volume of wheat handled by the pools has tended to decline. The volume handled as reported by the United States Department of Agriculture is given in table 4 for the crop years 1924 to 1928 inclusive.

We may summarize cooperative developments in connection with grain marketing down to the formation of the Farm Board by saying that there had been a widespread development of independent local farmer-owned elevators at country points that had,

Table 4. Bushels of Wheat Handled by Grain Pools in the United States, Crop Years 1924-28*

<i>Crop year</i>	<i>Millions of bushels handled</i>
1924-25	25
1925-26	16
1926-27	17
1927-28	12
1928-29	18**

* Based on reports of the United States Department of Agriculture.

** Estimated by Dr. J. F. Booth.

first, narrowed handling margins or improved buying practices at many points, second, given some farmers a sense of proprietorship in their marketing facilities, and third, educated a large number of farmers in some of the elementary principles of grain marketing. Also considerable experimentation and development had taken place in connection with carrying cooperative ownership beyond country points with the tendency for the cooperative commission companies to expand and the pools to recede.

THE FEDERAL FARM BOARD AND WHEAT MARKETING

The Agricultural Marketing Act of 1929 and the establishment of the Federal Farm Board to carry out its provisions, entirely alter the situation with respect to cooperative marketing of wheat in this country. The act definitely puts our federal government behind a campaign to extend cooperative marketing, including the marketing of wheat, and makes large sums of money available that can be used solely through cooperative organizations or organizations affiliated with them.

The Board has been very active in the grain marketing field. I wish to mention briefly four types of activity.

First, it has loaned its moral and financial support to existing cooperative organizations. There has been a great increase in activity, particularly among the non-local groups. Most of the agencies in the field sought recognition and financial support. In Illinois, a state that has lagged in non-local developments, there are now three state-wide groups that are actively in the field seeking for membership among the local farmers' elevators. The Board should be of constructive value in fostering sound developments and in lending financial assistance.

Second, it has organized a grain marketing organization of nation-wide scope, The Farmers National Grain Corporation. This was set up by the Board, working with representatives of various non-local cooperative grain agencies (the commission companies and the pools, representatives of the various state associations of farmer elevators, and representatives of the three national farm organizations, the Farm Bureau, the Farmers Union, and the Grange). This agency presumably aims to coordinate the handling of grain in this country. According to reports it has handled a large volume of grain during the present marketing season. Because of its close contacts with a governmental agency, the Federal Farm Board, this corporation cannot be looked upon as a strictly cooperative enterprise. It should, however, if well managed and if properly coordinated with other organizations be of constructive value not only to the cooperatives but to the grain producers as well.

A third line of activity of the Board has been in the field of price stabilization. As the wheat market weakened last winter, the Board organized a Grain Stabilization Corporation. This entered the wheat market and bought wheat on a large scale. Present holdings are reported to be about 60 million bushels. These operations may have had some temporary effect on the market but subsequent developments do not indicate that this effect was of great duration. Certain farmers who had grain to sell during the period when these operations were being carried on benefited from whatever price enhancement resulted. One practical result was to relieve some of the cooperatives and some of the regular grain trade, or their respective bankers from a part of the serious loss caused by the severe decline in values. The Board has at least

temporarily withdrawn from these stabilization operations, although the Stabilization Corporation is still holding the wheat, or an equivalent amount, which it acquired during its period of active operation. It seems to the speaker that it will be wise to stay out. While stabilization looks simple in theory, in practice it presents some very practical difficulties.

A fourth line of activity of the Board in connection with wheat marketing is that of attempting to get farmers to reduce wheat acreage. Perhaps no part of the Board's activities has stirred up more discussion. Anyone who is familiar with the condition of farm production realizes the practical difficulties in the way of a large wholesale reduction in wheat acreage, even though many local adjustments can be made. However, it seems to the speaker that in sounding this note shortly after getting into active operation, the Board did a very commendable thing. It swept away a great deal of the false optimism that its establishment created.

The psychology of our farmers and of all of the institutions developed to serve farmers including agricultural colleges, experiment stations, and extension services, tends to extend production and to hope for a lucky market to make the operation profitable. Presumably the same may be said of Australian, Canadian and other farmers. The Board in its acreage reduction campaign has merely served notice that it sees danger ahead in the rapid expansion of wheat production that has been going on in many parts of the world and that it does not know how to establish or maintain a higher level of wheat prices under such conditions. It is a warning that our farmers as well as those of other lands may well heed. If farmers in some sections of this or other countries find it profitable to grow wheat at prices that permit it to be used freely as a feed for live-stock, it is of course good business for them to do so, but they should not be misled by the notion that by some revolutionary change in the marketing system, wheat production may become a more profitable business.