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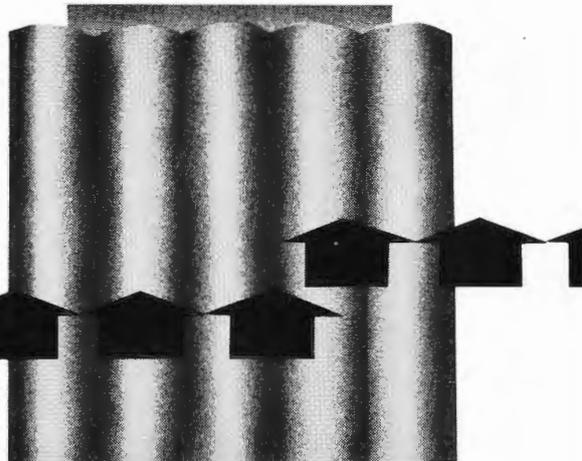
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# The Grain - Storage Picture



Grain storage and the capacity for it have grown rapidly in the past 10 years, and there's much interest in the cost of the over-all operation. Here's a brief summary of the situation — nationally and here in Iowa.

by Geoffrey S. Shepherd, Allen B. Richards and John T. Wilkin

FEDERAL price-support and grain-storage operations have grown to large proportions over the past 10 years. The estimated carryover of feed grains last October was 68 million tons—equal to half of an average year's crop. Carryover of wheat last July was 1.3 billion bushels—more than an average year's crop. Most of these stocks were owned by the Commodity Credit Corporation. Yearly figures for these stocks are shown in the table.

Total CCC investment in price-support programs by the end of 1959 amounted to 9.1 billion dollars—consisting of 1.7 billion in loans outstanding and the cost value of the inventories of 7.4 billion. The "realized cost" of the "programs primarily for stabilization of farm prices and income" rose to approximately 2.7 billion dollars in fiscal 1958. This is the net amount paid out by the CCC that year.

## Who Got the Money?

Did farmers get it all? They got most of it. But a substantial share went to the grain trade for storage and handling of the stocks of grain. Data from the Commodity Stabilization Service show that

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the total cost value of the corn disposed of by the CCC in fiscal year 1959, for example, was 505 million dollars. About 395 million of this represented the cost of acquiring or loan value of the corn. The remaining 110 million represented the costs of storage, handling and transportation and other miscellaneous costs.

Returns to the CCC for these dispositions amounted to 271 million dollars. Thus, in fiscal 1959 the "realized cost" of the corn program was 234 million dollars, with about half of this amount going mainly to the grain trade and transportation agencies.

## Storage Facilities . . .

Grain storage capacity also has increased greatly. Most has been built by private enterprise. Rates paid by the CCC under the uniform storage agreement—plus the

accelerated amortization program, the guaranteed occupancy contracts and the policy of filling elevator space before bin site space—evidently were attractive enough to induce the grain trade to build substantial amounts of new storage capacity to handle the CCC grain. The storage rate in recent years has been 16½ cents per bushel per year.

This large increase in storage capacity has created some hazard for the grain trade. What would happen, for instance, if a series of poor crop years came along or if CCC loan rates were lowered considerably such that year-end carryover stocks were greatly reduced? Could the excess capacity be converted to other uses? Or would substantial over-capacity show up? If so, where would it be located and in what amounts?

There are other questions, too. Has this new capacity been built at the expense of other alternative uses for elevator capital? What have been the effects on the capital structure of country elevators building this new capacity? Have the storage programs been profitable for elevators? If so, have the CCC programs interfered with or been compatible with nongrain activities of country elevators?

**Wheat:** The CCC has made the greatest use of commercial subterminal and country elevator space and the least use of its own facilities, such as country bin sites, in the case of wheat. In 1958, for instance, 54 percent of

Year-end carryover of feed grains and wheat, 1950-60.

Crop year	Feed grains, Oct. 1 (million tons)	Wheat, July 1 (million bu.)
1950	30.5	400
1951	28.6	256
1952	20.1	605
1953	27.0	934
1954	31.7	1,036
1955	39.1	1,033
1956	43.3	909
1957	48.9	881
1958	59.1	1,279
1959	67.7 <sup>a</sup>	1,319 <sup>a</sup>
1960	78.0 <sup>b</sup>	1,436 <sup>b</sup>

<sup>a</sup>Preliminary

<sup>b</sup>Projected

Source: The Feed Grain Situation, The Wheat Situation, AMS, USDA.

the CCC-owned wheat was stored in subterminal and country elevators, 33 percent in terminals and 13 percent in CCC-owned or controlled storage.

**Corn:** Here the CCC generally stored the largest proportion of its corn in CCC-owned facilities and the lowest proportion in terminal storage. But, between 1956 and 1958, when the total amount of CCC corn rose to a very high level, only a small amount of this increase was stored in CCC-owned facilities. Most of the increase was stored in commercial subterminal and country elevators. In 1958 the proportion stored in commercial facilities rose to 33 percent, with 56 percent stored in CCC-owned or controlled facilities and 11 percent in terminals. These figures don't include on-farm storage.

**Location:** Stocks of the different grains are concentrated in different areas in various types of storage facilities. Wheat stocks are concentrated in Kansas and, to a lesser extent, in Nebraska. The CCC-owned wheat is held chiefly in commercial storage facilities. Subterminal and country elevator positions generally are used more extensively than terminal elevators, though this tendency became less marked after 1956. The amount of wheat stored by the CCC in its own facilities is relatively small.

The increase in the amount of corn carryover under CCC ownership is concentrated chiefly in Iowa and Illinois. Until 1956 commercial facilities weren't used extensively for CCC storage of its corn inventory, and it made greater use of its own facilities. Where commercial facilities were used, country and subterminal elevators were used more than terminal elevators. Since 1956 the amount and proportion stored in commercial facilities have risen sharply, particularly in country and subterminal elevators.

**Capacity:** The accumulation of CCC grain stocks made necessary a substantial increase in the construction of new storage capacity to handle these stocks. Country

elevator storage capacity increased more than terminal elevator capacity, with the greatest increases in Kansas, Iowa and Illinois, in that order.

This additional grain storage capacity was built primarily to take advantage of the opportunity to store CCC grain, not because of increased merchandising opportunities. Actually, the construction of storage capacity in terminal markets was increasing faster than the amount of grain available for marketing. At the same time, market shipments and receipts of grain were declining.

**Iowa:** The amount of elevator capacity in Iowa has increased substantially in relation to grain production in recent years. In areas where a substantial portion of this capacity is in permanent grain-storage tanks, it's likely that excess capacity would exist if the CCC program were reduced. In areas where much of the capacity is in flat storage (quonset-type structures, for example) that can be converted to other uses, this problem is less likely to arise.

**Cooperatives:** The capacity of cooperative elevators in Iowa rose considerably after 1950. Large cooperatives increased their capacity by about 3½ times from 1950 to 1956. Their flat capacity, however, increased much less than this. Small elevators more than doubled their capacity after 1950. But, by 1957, their flat capacity was 50 percent greater than their permanent capacity.

About 84 percent of the capacity built by Iowa cooperative elevators after 1946 was for grain storage. About 30 percent of this increase resulted from government construction incentives. Including the flat storage built after 1946, about 45 percent of the cooperative capacity built after that year is directly attributable to CCC and government construction incentives.

The financial structure of the elevators in 1956 indicated that the large cooperative elevators expected the available volume of free grain for merchandising and storage to increase substantially should the CCC program

decline. Small elevators were either more cautious or foresaw less prospect of increased grain opportunities in the future. They concentrated on building more temporary flat capacity and on sideline facilities, while the larger cooperatives built proportionately more permanent structures. A large portion of the storage capacity built by the larger cooperatives was completed under the accelerated amortization provision of the 1954 internal revenue code.

There was little change among different-sized cooperatives in the relative volumes of grain handled in the 1950-56 period when government programs were in effect on a large scale as compared with earlier periods when most of the programs weren't in effect. But a high proportion of all elevators had a decline in their corn volume, mainly because of the large amounts of grain "fixed" in storage under the commodity loan program.

By 1956 large cooperative elevators received almost a third of their total gross income from the CCC. They received 64 percent of their *grain* income from the CCC. The small elevators received 10 percent of their total gross income and 32 percent of their grain income from the CCC. The small elevators relied more on sideline and custom service income and, thus, tended to be less dependent on CCC storage operations than the large elevators.

Our findings indicate that the small cooperative elevators obtained about the same or a greater net return on total investment in all fixed resources as did the large elevators. The small elevators stored proportionately less CCC grain than the larger elevators, but this didn't hinder their ability to make an adequate return on their investment.

Iowa cooperative elevator managers believed that the major effects of the government grain-storage and construction-incentive programs were: (1) stimulation of investment in equipment and buildings for grain storage as well as sideline and custom service activities; and (2) alteration of the market and pricing structures facing individual elevators.