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Farmers' Elevator Operations in South Dakota

L. M. Brown

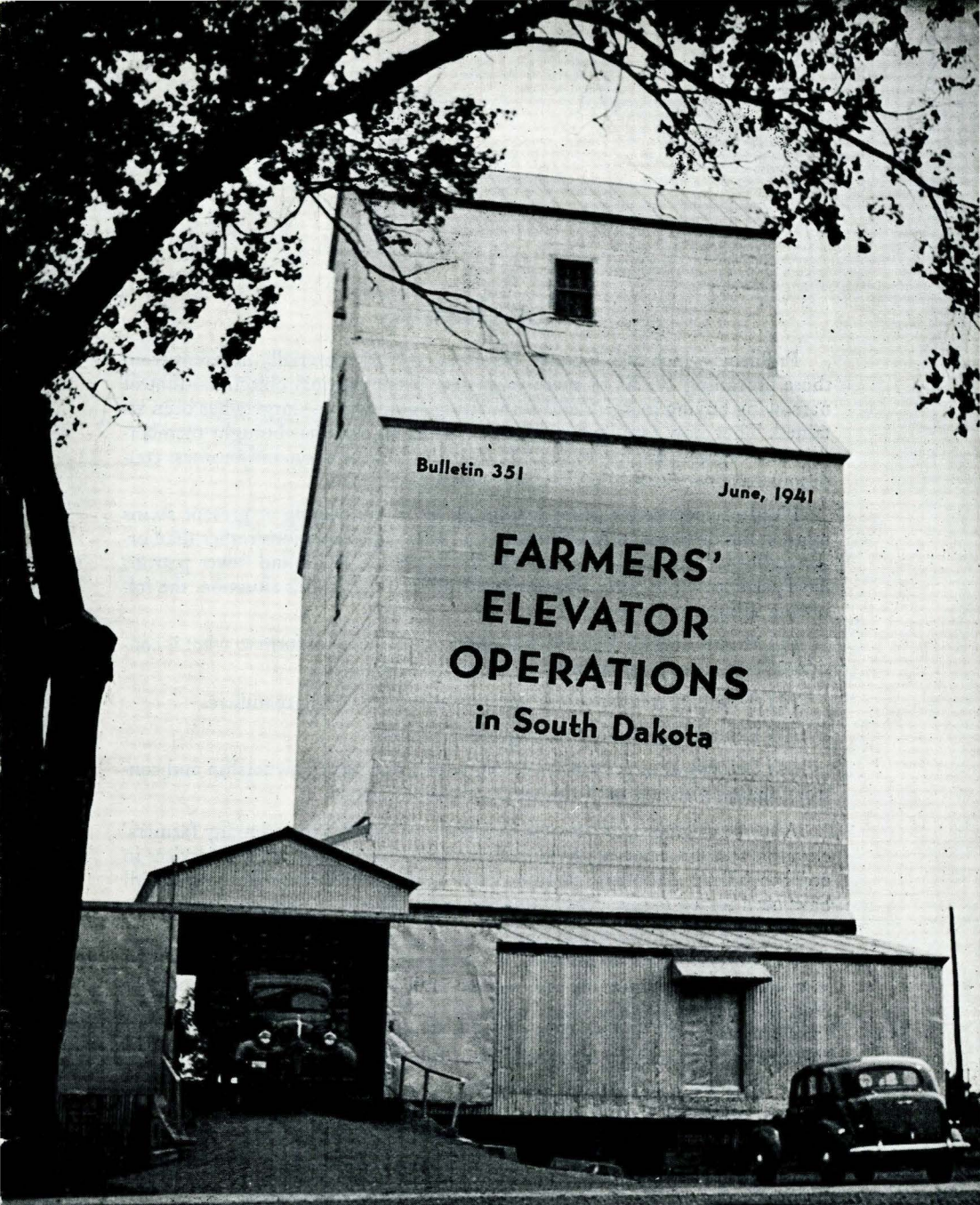
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Bulletin 351

June, 1941

**FARMERS'
ELEVATOR
OPERATIONS**
in South Dakota

**Agricultural Economics Department, Agricultural Experiment Station
South Dakota State College, Brookings, South Dakota, and
Cooperative Research and Service Division, Farm Credit Administration
United States Department of Agriculture Cooperating**

Conclusions

Problems which face farmers' elevators now are materially different from those prevailing 20, 30, or more years ago. Their original objective—that of narrowing buying margins and stimulating competition—largely has been attained. They now face new problems. Passage of time has brought membership and organization problems. Changes in transportation and business conditions have necessitated revamping operating practices.

Need of cooperative grain marketing in South Dakota at present seems more in the direction of reorganization of existing associations rather than organization of new ones. As the years have passed, fewer and fewer patrons have participated in ownership and control. To remedy this situation, the following things can be done:

- (1) Modify articles of incorporation and by-laws to conform to what is considered best in cooperative principles and practices today.
- (2) Eliminate nonproducers and nonpatrons as voting members.
- (3) Extend membership among active patrons.
- (4) Develop an organization set-up which will assure ownership and control remaining always in the hands of producer-patrons.

Adverse weather and business conditions in the 30's forced many farmers' elevators to alter operating policies. Some added new side-lines and services in order to bolster declining incomes. Some adopted stricter credit policies. All have been forced to give closer attention to operating practices and costs.

Changes in transportation and increasing competition (even among cooperatives) have made it desirable, if not necessary, to enlarge trade territories in order to maintain volume and income under prevailing conditions of poor crops and narrowing margins. In cases where small associations are struggling for existence, more active effort might well be directed to bring about consolidations, or absorption by associations more favorably located. Only by such means can needless competition be eliminated, and sufficient volume to assure low cost operation be developed.

Contents

	PAGE
Conclusions.....	2
Nature and purpose of study.....	5
Areas used in study.....	6
Importance of local cooperative grain marketing in South Dakota.....	6
Membership and patronage.....	7
Business volume.....	7
Financial position.....	7
Analysis of financial status by areas.....	8
Area differences.....	8
Capital investment.....	9
Members' equity.....	11
Current assets to current liabilities.....	12
Total assets to total liabilities.....	12
Surplus position.....	13
Operating results.....	13
Yearly results.....	14
Net income of South Dakota elevators.....	15
Sources of income.....	16
Analysis of expenses.....	17
Factors influencing operating results.....	18
Measuring effectiveness.....	18
Membership and patronage.....	18
Membership as a volume factor.....	21
Grain volume as influenced by membership.....	21
Grain volume as influenced by member patronage.....	22
Business volume as influenced by member patronage.....	23
Business volume as related to net operating income.....	23
Grain volume as a factor.....	24
Total business volume as a factor.....	24
Side-lines and services as factors.....	25
Side-line margins.....	26
Grain margins.....	27
Price trends as an income factor.....	28
Hedging policy as a margin factor.....	29
Unit costs of operation.....	30
Grain volume and expense per bushel.....	30
Side-lines.....	31
Labor utilization.....	31
Plant utilization.....	32
Outlets and sales methods used by South Dakota farmers' elevators.....	33
Outlets.....	33
Sales methods.....	34
Appendix.....	35
Farmers' elevator movement in South Dakota.....	35
Early days of movement.....	35
Periods of development.....	36
Wheat pool history.....	37
Accomplishments of movement.....	38
South Dakota cooperative laws.....	38

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Farmers' Elevator Operations in South Dakota

L. M. BROWN¹ and HAROLD HEDGES²

Nature and Purpose of Study

Beginning in the summer of 1937, the Agricultural Economics Department of the South Dakota Agricultural Experiment Station started a cooperative project with the Cooperative Research and Service Division of the Farm Credit Administration. This study was continued during the succeeding two years. From it, information was assembled for the three fiscal years, 1936-37, 1937-38, and 1938-39, on the operating practices and results and the financial status of a representative group³ of South Dakota farmers' elevators, 80 in all. Data were obtained chiefly from annual reports and audits, supplemented by information on membership, organization set-up, and operating methods and problems.

Most of the annual statements utilized were prepared by public accountants, but in a few cases they were made up by the management. Accordingly, the financial statements were not strictly comparable, and adjustments were made to make them more nearly so. In instances where depreciation charges were not made, they were estimated, included in expense, and proper adjustments made in valuation and reserve accounts. Accounts receivable were classified according to collectibility, and proper adjustments made. Dividends declared after audits were made were included as current liabilities and surplus reduced accordingly. By such means the financial statements were made more comparable and reflected operating results and financial status more accurately.

During 1937, the Farm Credit Administration, in cooperation with state colleges, made a survey of all farmers' cooperatives in the United States. The survey reports for South Dakota farmers' elevators were summarized, and the material thus obtained is presented and discussed along with the information obtained from the three-year study. These general survey reports are mainly for the fiscal year, 1935-36.

It is generally assumed that farmers' elevators render valuable services in marketing grain and purchasing supplies for members and patrons. Specific information, however, on operating problems which exist might prove useful

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3. The 80 elevators studied are believed to be reasonably representative of all in the state. To check on this, data from the three-year study were compared with those from the 1937 general survey covering all farmers' elevators. Figures on capital investment were nearly identical, but the 80 associations were somewhat above the general average in current and net worth positions. Hence, if not fully representative, they may be considered as slightly above average.

if for no other purpose than to call attention to those problems. In undertaking the study the following were objectives:

- (1) To learn more of the historical and legal aspects of the farmers' elevator movement in South Dakota.
- (2) To obtain information on organization set-ups.
- (3) To determine membership and patronage.
- (4) To examine the financial status.
- (5) To learn more regarding operating practices and problems.
- (6) To determine important factors influencing operating results.

By summarizing three years of operating experience, backed by information on factors which have contributed to that experience, this study makes available conclusions and results which may be utilized by individual associations in sizing up their own performance records.

Areas Used in Study

South Dakota was divided into two areas for purposes of this study. The reason for this is obvious. Conditions under which elevators operate vary and there is the factor of crop risk arising from differences in rainfall, climate, crop pests and the like. Types of grain grown, and therefore available for market, are not the same in all parts of the state. Likewise, production methods, which have a bearing on marketing, vary widely. The two areas are designated as: Area I, or the Southeastern Area; and Area II, or the Northern and Western Area.

Area I comprises roughly the southeastern one-fourth of the state. Crop risks are relatively low in this section because of amount and timeliness of rainfall, and because of less damage from insect pests, such as grasshoppers. The corn-hog type of farming is most common, with farms smaller than in other parts of the state, and corn is a more important crop than wheat. Because much of the grain is fed to livestock and does not enter commercial channels, elevators have come to depend upon side-lines and services for an important part of their business income.

Area II, which includes the northern and western three-fourths of the state, is a territory of rather high crop risk, with uncertainty of rainfall a major factor. Yields of grain vary widely from year to year. Farming is conducted on a more extensive basis than in Area I. Grain is grown as a cash crop and moved to market through the local elevators. The latter, up to the recent extended period of drought, operated mainly as grain handling agencies. In recent years, however, due to lack of grain business, most of the farmers' elevators have added or expanded side-line and service activities in order to bolster dwindling incomes.

Importance of Cooperative Grain Marketing in South Dakota

Farmers' elevators in South Dakota are scattered throughout those parts in the state where grain is grown on a commercial scale. They are most numerous where grain production is heaviest. Division of the state into two areas sepa-

rates them into two approximately equal groups. In fact, in 1937, there were 97 associations in the Southeastern Area, and 106 in the much larger Northern and Western Area.

In 1938 there were 816 licensed elevators operating in South Dakota.¹ Of these, a third were operated by farmers' elevator associations. The apparent discrepancy between this number and the 203 associations reported in the 1937 survey is due mainly to the fact that a number of the associations operate two or more elevators at a single station and several operate elevators at more than one station. Then, too, a few farmers' elevators as listed by the Public Utilities Commission may not have conformed sufficiently in cooperative structure to be considered cooperative in the 1937 survey.

Membership and Patronage. In 1937, 202 of the 203 farmers' elevators in the state reported a total membership of 27,764. Only 21,560, or 78 percent, of these members were reported as patrons of the associations in which they were members. Many of the remaining 22 percent undoubtedly were nonproducers or otherwise not in position to be patrons.

Although not all members were able or saw fit to trade actively with their own organizations, many non-members did deem it advisable. In fact, the 202 associations reported 52,822 patrons. Hence, only 40 percent of the patrons were members. Apparently the opportunity to extend the membership among active patrons is substantial, provided organization set-ups permit or can be changed to facilitate a move in this direction.

Business Volume. For the crop year, 1935-36, the farmers' elevators of South Dakota handled a little more than 13,000,000 bushels of grain, valued at nearly \$9,000,000. In addition, side-line sales totaled about \$4,100,000. The three-year study of operations indicated that farmers' elevators obtained more than their proportionate share of the available grain volume, but the extent to which this was so was not determined.

In early days of the movement, farmers' elevators confined their activities almost entirely to handling grain. Gradually, many came to recognize possible advantages in handling farm supplies and in offering various services to their patrons. Since drouth conditions have prevailed, more and more associations have realized the desirability, if not necessity, of enlarging their business volume by adding side-lines and services.

The side-lines that have become most important to the South Dakota farmers' elevators are: Coal, seed, feed, and flour, machinery and repairs, petroleum products, and building materials. Of the services offered by the elevator associations the most important are: Storage, cleaning, grinding, and hauling. Many associations have been able to add to their incomes substantially by offering these services. Grinding has been especially lucrative. Many associations have begun to grind and mix feeds under their own trade names.

Financial Position. Stockholders had a combined investment of more than \$2,800,000 in capital stock in the cooperative elevator associations active in

1. Information from South Dakota Public Utilities Commission, Pierre, South Dakota.

Table 1. Aggregate Balance Sheet of South Dakota Farmers' Elevators, 1937 Survey.¹

Assets		
Current Assets:		
Cash		570,720.25
Receivables		1,498,493.17
Inventories		1,116,939.90
Other		157,630.97
Total Current Assets		3,343,784.29
Fixed Assets (depreciated)		2,423,739.74
Other Assets		6,068,407.20
Liabilities		
Current Liabilities		
Fixed Liabilities		939,463.87
		1,048,881.83
Total Liabilities		1,988,345.70
Net Worth		
Capital Stock		2,801,508.23
Surplus and Reserve		1,278,553.27
Total Net Worth		4,080,061.50
Total Liabilities and Net Worth		6,068,407.20

1. 155 associations had fiscal year ending in 1936
 47 associations had fiscal year ending in 1937
 1 association did not report.

1937(See Table 1). Combined assets were more than \$6,000,000. Total liabilities were equal to about \$2,000,000. This would indicate that the combined net worth was more than \$4,000,000. Hence, stockholders had an equity equal to two-thirds of the value of all assets.

Analysis of Financial Status by Areas

As has been explained, the state was divided into two areas and the farmers' elevators grouped accordingly. Tables 2a and 2b present for these areas the average balance sheets for the three years, 1936-37 to 1938-39. The average investment was about the same in each area, being almost identical in some years. Although the totals were similar, items that made up these totals varied widely.

Area Differences. When analyzing the average balance sheets by areas, it will be noted that the elevators in the Southeastern area had higher "current receivables" than those in the Northern and Western area. This is especially true for the crop year, 1938-39, being nearly three times as great. The Northern and Western area, however, had more receivables classed as slow. From this one might deduce that the associations in the Southeastern part of the state were extending more credit, but that the associations in the Northern and Central area had to consider more of their accounts hard to collect.

Judging from the average value of fixed assets, the Northern and Western area had larger elevator plants. The difference in this respect between areas amounted to as much as \$2,000 in 1936-37. As for current liabilities, the average for the associations in the Northern and Western area were twice as large as that of the associations in the other area. There was little difference in the cap-

ital stock, apparently most of the associations of the two areas having on the average about the same amount outstanding. There was, however, a considerable difference in reserves and surpluses. The Southeastern area showed an average almost twice as great. From the standpoint of net worth, the organizations in the Southeastern part of the state were in better position, having on an average several thousand dollars more than the associations in the Northern and Western area.

Capital Investment. All the South Dakota cooperative elevators included in the 1937 survey were local associations, each operating at a single shipping point, with the exception of five associations. These five associations each operate at two or more shipping points.

Table 2a. Comparative Balance Sheets of Southeastern South Dakota Farmers' Elevators 1936-37 to 1938-39.

Item	1936-37		1937-38		1938-39	
	34 Assns.	Total Assets	34 Assns.	Total Assets	30 Assns.	Total Assets
	Av. of	% of	Av. of	% of	Av. of	% of
Assets						
Current						
Cash	3212	11.2	3047	10.7	3112	9.9
Receivables	2076	7.3	3700	12.9	5015	16.0
Inventories	8924	31.2	7492	26.2	8938	28.4
Other	76	.3	41	.1	64	.2
Total Current	14288	50.0	14280	49.9	17129	54.5
Other						
Slow receivables (net)	2457	8.6	2278	8.0	2653	8.4
Investments & other	719	2.5	774	2.7	400	1.3
Total other	3176	11.1	3052	10.7	3053	9.7
Total Fixed (net)	11124	38.9	11256	39.4	11275	35.8
Total Assets	28588	100.0	28588	100.0	31457	100.0
Liabilities and Net Worth						
Current						
Accts Payable-Com.Cos.	380	1.3	251	.9	0	0.0
Accts & Notes Payable	1219	4.3	1486	5.2	789	2.5
Stored grain liab.	90	.3	186	.6	268	.8
Dividends payable	1632	5.7	450	1.6	1508	4.8
Other	660	2.3	624	2.2	500	1.6
Total Current	3981	13.9	2997	10.5	3065	9.7
Deferred						
Notes Payable	6554	23.0	5846	20.4	5213	16.6
Other	0	0.0	12	.1	0	0.0
Total Deferred	6554	23.0	5858	20.5	5213	0.0
Total Liabilities	10535	36.9	8855	31.0	8278	16.6
Net worth						
Capital stock	14706	51.4	14772	51.7	15326	48.7
Capital stock credits	170	.6	171	.6	220	.7
Reserves and surplus	3177	11.1	4790	16.7	7633	24.3
Total Net Worth	18053	63.1	19733	69.0	23179	73.7
Total Liabilities and Net Worth	28588	100.0	28588	100.0	31457	100.0

Table 2b. Comparative Balance Sheets of Northern & Western South Dakota Farmers' Elevators, 1936-37 to 1938-39.

Item	Av. of 37 Assns.	1936-37 % of Total Assets	Av. of 40 Assns.	1937-38 % of Total Assets	Av. of 38 Assns.	1938-39 % of Total Assets
Assets						
Current						
Cash	1907	6.9	1424	5.7	1157	4.1
Receivables	1987	7.2	2632	10.5	1841	6.5
Inventories	6257	22.6	4953	19.8	8317	29.6
Other	369	1.3	62	.2	136	.5
Total Current	10520	38.0	9071	36.2	11451	40.7
Other						
Slow receivables (net)	2965	10.7	2792	11.1	3575	12.7
Investment & other	997	3.6	913	3.7	913	3.3
Total Other	3962	14.3	3705	14.8	4488	16.0
Total Fixed (net)	13189	47.7	12279	49.0	12155	43.3
Total Assets	27671	100.0	25055	100.0	28094	100.0
Liabilities and Net Worth						
Current						
Accts Payable-Com.Cos.	2624	9.5	2455	9.8	1679	6.0
Accts & Notes Payable	560	2.0	678	2.7	791	2.8
Stored grain liab.	596	2.1	810	3.2	3326	11.8
Dividends Payable	378	1.4	117	.5	943	3.4
Other	408	1.5	333	1.3	308	1.1
Total Current	4566	16.5	4393	17.5	7047	25.1
Deferred						
Notes Payable	3295	11.9	2947	11.8	2000	7.1
Other	136	.5	126	.5	0	0.0
Total Deferred	3431	12.4	3073	12.3	2000	7.1
Total Liabilities	7997	28.9	7466	29.8	9047	32.2
Net Worth						
Capital Stock	15210	55.0	14151	56.5	14118	50.3
Capital Stock Credits	754	2.7	731	2.9	741	2.6
Reserves and surplus	3710	13.4	2707	10.8	4188	14.9
Total Net Worth	19674	71.1	17589	70.2	19047	67.8
Total Liabilities and Net Worth	27671	100.0	25055	100.0	28094	100.0

Capital investment of the 202 farmers' elevators reporting in 1937 is shown in Table 3. Twelve associations had small capital investments of \$10,000 or less, 18 had large investments of \$60,000 or more, while 72, the largest group, had from \$10,001 to \$20,000 invested in their business. In each area the largest percentage of the associations were in the \$10,001 to \$20,000 class. The Northern and Western area, however, had more associations with capital investments of \$40,000 and more—23.9 percent, as compared with 17.5 percent in the Southeastern area.

Several factors cause the wide variation in valuation of total assets. One factor is size of the business. Those associations requiring large grain storage space or other facilities had large total assets. Age of the association also will play a role, in that associations with old plants will have more fixed assets charged off through depreciation. Some associations in the past also had oper-

Table 3. South Dakota Farmers' Elevators Classified According to Total Capital Investment, 1937 Survey.¹

Value of Total Assets	State		Southeastern Area:		Northeastern and Western Area:	
	Number of Assns.	Percentage of total	Number of Assns.	Percentage of total	Number of Assns.	Percentage of total
\$10,000 or less	12	5.9	9	9.3	3	2.9
10,001 — 20,000	72	35.6	33	34.0	39	37.1
20,001 — 30,000	45	22.3	23	23.7	22	20.9
30,001 — 40,000	31	15.4	15	15.5	16	15.2
40,001 — 50,000	18	8.9	7	7.2	11	10.5
50,001 — 60,000	6	3.0	3	3.1	3	2.9
More than \$60,000	18	8.9	7	7.2	11	10.5
Total	202	100.0	97	100.0	105	100.0

1. One association did not report.

ated under rather liberal credit policies; thus, their accounts and notes receivable were large and many may not have been charged off even though they were uncollectable.

Others provided their patrons with many farm supplies and services. These side-lines and services, in some instances called for large investments in fixed assets—warehouses, feed grinders, and so on—as well as substantial inventories.

Members' Equity. The members' equity is the percentage which the net worth is of the total book value of the assets, or it may be expressed as the proportion of total book assets which are free of all indebtedness. It is important, when judging the place cooperation has attained in grain marketing, to know the equity of members in their associations. In 1937, cooperative elevator associations in South Dakota showed a wide range in members' equities (See Table 4). Thirteen of the associations were in such poor financial condition that their members had no equities. On the other hand, 86 associations, or nearly 43 percent, had membership equities of more than 75 percent.

Associations in the Southeastern area were in better financial condition from the standpoint of members' equity than those in the Northern and West-

Table 4. South Dakota Farmers' Elevators Classified According to the Members' Equities, 1937 Survey.¹

Equity of Member	State		Southeastern Area:		Northeastern and Western Area:	
	Number of Assns.	Percentage of total	Number of Assns.	Percentage of total	Number of Assns.	Percentage of total
None	13	6.4	0	0.0	13	12.4
1 — 25%	15	7.4	6	6.2	9	8.6
26 — 50%	25	12.4	12	12.4	13	12.4
51 — 75%	63	31.2	34	35.0	29	27.6
76 — 100%	86	42.6	45	46.4	41	39.0
Total	202	100.0	97	100.0	105	100.0

1. One association did not report.

Table 5. Relation of Current Assets to Current Liabilities of South Dakota Farmers' Elevators, 1937 Survey.¹

Relation of current assets to current liabilities	State		Southeastern Area		North & Western Area	
	No.	%	No.	%	No.	%
Current assets 2 or more times current liabilities	138	68.3	68	70.1	70	66.7
Current assets 1 to 1.9 times current liabilities	34	16.8	17	17.5	17	16.2
Current assets less than current liabilities	30	14.9	12	12.4	18	17.1
Total	202	100.0	97	100.0	105	100.0

1. One association did not report.

ern area. In the Southeastern area 46 percent of the associations were in such financial position that their members' equities were 76 percent or more, whereas the Northern and Western area had only 39 percent of its associations in this classification. At the bottom of the scale, the Northern and Western area had 12 percent of its associations with no members' equities while the Southeastern area had no associations in this group.

Current Assets to Current Liabilities. One of the tests in any business analysis is relationship of current assets to current liabilities. An association is considered as being in good operating position if its current assets are two or more times its current liabilities. In Table 5 wide variations in this respect can be seen among the 202 reporting associations. Sixty-eight percent of the associations had current assets two or more times current liabilities, and only 15 percent had current assets less than current liabilities. Associations in the Southeastern area were in a trifle stronger current position than the associations in the Northern and Western area. Seventy percent of the associations in the former had assets two or more times their current liabilities whereas only 66 percent of the associations in the latter area were in this position. As for associations having less current assets than current liabilities, the Southeastern area had only 12 percent of its organizations in this group whereas the Northern and Western area had 17 percent.

Total Assets to Total Liabilities. When comparing the relationship between total assets and total liabilities, the associations of the Southeastern area were superior again (See Table 6). The Southeastern area had 42 percent of

Table 6. Relation of Total Assets to Total Liabilities of South Dakota Farmers' Elevators, 1937 Survey.¹

Relation of current assets to current liabilities	State		Southeastern Area		North & Western Area	
	No.	%	No.	%	No.	%
Liabilities 20% or less of assets	76	37.6	41	42.3	35	33.3
Liabilities 21% to 40% of assets	42	20.8	18	18.5	24	22.9
Liabilities more than 40% of assets	84	41.6	38	39.2	46	43.8
Total	202	100.0	97	100.0	105	100.0

1. One association did not report.

its associations with liabilities equaling 20 percent or less of the assets. The Northern and Western area had only 33 percent of its associations in this group. Then, too, the Southeastern area had fewer associations than the Northern and Western area with liabilities of more than 40 percent of assets. Apparently the Southeastern area had fewer associations in financial difficulties than the Northern and Western area.

Surplus Position. Relation of surplus and reserves to outstanding capital stock can be seen in Table 7. Usually it is considered satisfactory when the surplus and reserves equal or exceed the capital stock. It will be noticed that 29 percent of the associations, the largest group, were in this strong position. Many associations in South Dakota, however, were not in a safe position as 30 percent of them had deficits and another 25 percent had surpluses and reserves of less than 50 percent of the stock.

Table 7. Relation of Surplus and Reserves to Outstanding Capital Stock of South Dakota farmers' elevators, 1937 Survey.¹

Relation of Surplus and Reserves ² to Outstanding Capital Stock	State		Southeastern Area		North and Central Area	
	No.	%	No.	%	No.	%
Deficit						
50% or more of Outstanding Stock	28	14.2	5	5.3	23	22.3
Under 50% of Outstanding Stock	31	15.7	18	19.1	13	12.6
Surplus						
Under 50% of Outstanding Stock	49	24.9	28	29.8	21	20.4
50% to 99% of Outstanding Stock	32	16.3	15	16.0	17	16.5
100% or more of Outstanding Stock	57	28.9	28	29.8	29	28.2
Total	197 ³	100.0	94 ³	100.0	103 ³	100.0

1. One association did not report.

2. Includes general reserves only; not for depreciation and bad debts.

3. 5 associations are nonstock, 3 being in Area 1 and 2 in Area 2.

The Southeastern area had only 24 percent in the "deficit" group as against 35 percent in the Northern and Western area. This situation is not startling in view of the fact that associations in the Northern and Western area were exposed to higher risks and greater fluctuations in grain volume. On the other hand, it is encouraging that 28 percent of the associations in the Northern and Western area were in the favorable position of having surplus and reserves equal to 100 percent or more of the capital stock. Because of the drought many associations found it necessary to draw on surplus and reserve accounts to meet operating expense, and now face the problem of rebuilding these reserves.

Operating Results

Farmers' cooperative elevators in South Dakota have operated under a handicap for most of the years since the drought started in 1930. In 1936 the wheat crop was only 16 percent of the 1927-1936 average and production of

Table 8. Operating Statistics of Southeastern South Dakota Farmers' Elevators 1936-37 to 1938-39

Item	1936-37	1937-38	1938-39
	Average of 34 Assns.	Average of 34 Assns.	Average of 30 Assns.
Grain handled	111,146 bu.	139,117 bu.	178,845 bu.
Grain sales	\$ 75,720	\$ 67,288	\$ 61,735
Side-line sales	\$ 32,268	\$ 33,950	\$ 37,004
Total sales	\$107,988	\$101,238	\$ 98,739
Net income	\$ 3,662	\$ 348	\$ 2,695
Gross margin per bushel of grain sales	5.4c	1.9c	2.6c
Gross margin per dollar of grain sales	8.0c	3.9c	7.5c
Gross margin per dollar of sideline sales	11.9c	12.1c	11.2c
Operating income per dollar of all sales	9.5c	7.1c	9.7c
Operating expense per dollar of all sales	6.0c	6.6c	7.0c
Net operating income per dollar of all sales	3.5c	.5c	2.6c
Side-line and service income in percent of total oper. income	40.6%	63.0%	50.8%
Side-line and service income in percent of operating expense	64.1%	67.5%	69.8%

the grains (wheat, corn, barley, oats and rye) was only 22 percent of this 10-year average. In 1937 the wheat crop was 57 percent and the total for the five grains was 69 percent of the 10-year average. In 1938, crop production increased and was nearly equal to the 10-year average. During the drouth elevators in the north central and western parts of the state suffered most, but all were affected.

Yearly Results. Annual operating statistics for elevators included in the three-year study are shown in Tables 8 and 9, permitting comparisons of various factors between the years covered by the study and between the two areas. Numbers of elevators in the study varied between years, but with few exceptions the same associations were included for all three years.

The volume of grain handled showed less variation between years than between areas, despite the progressive increase in volume each year from 1936-37 to 1938-39. It should be noted that the increase in average volume from the first to the third year of the study was nearly identical for each area. Dollar totals of grain sales did not change proportionately with grain volume, although in the Northern and Western area there was a yearly increase. In the

Table 9. Operating Statistics of Northern and Western South Dakota Farmers' Elevators, 1936-37 to 1938-39

Item	1936-37	1937-38	1938-39
	Average of 37 Assns.	Average of 40 Assns.	Average of 38 Assns.
Grain handled	29,653 bu.	46,093 bu.	94,050 bu.
Grain sales	\$ 24,945	\$ 31,781	\$ 44,389
Side-line sales	\$ 20,100	\$ 17,327	\$ 16,869
Total sales	\$ 45,045	\$ 49,108	\$ 61,258
Net income	\$ 557	Loss \$ 1,295	\$ 1,304
Gross margin per bushel of grain sales	10.6c	2.6c	4.0c
Gross margin per dollar of grain sales	12.6c	3.8c	8.4c
Gross margin per dollar of sideline sales	11.5c	12.6c	13.5c
Operating income per dollar of all sales	13.0c	7.6c	11.0c
Operating expenses per dollar of all sales	11.4c	9.9c	8.8c
Net operating income per dollar of all sales	1.6c	Loss 2.3c	2.2c
Side-line and service income in percent of total oper. income	43.4%	65.3%	37.9%
Side-line and service in percent of operating expense	49.3%	50.0%	47.4%

Southeastern area the dollar sales of grain showed a decrease in both 1937-38 and 1938-39. Side-line sales did not vary as greatly between years as did grain volume. As between areas the Southeastern area had considerably larger average side-line sales than the Northern and Western area, being more than twice as large in 1938-39.

Net income fluctuated greatly during the three years and varied considerably between areas. The second year, 1937-38, proved a difficult period for the elevators in both areas, the Northern and Western area showing an average net loss. The associations in the Southeastern area were able to secure net incomes much larger than those in the other area. For example, in 1936-37, the average net income was more than six times larger in the Southeastern area than in the Northern and Western area.

Gross margins on grain were lower in 1937-38 than in the other two years. These margins were higher in the Northern and Western area than in the Southeastern area, but both showed great yearly variations. Gross margins on side-line sales tended to remain fairly stable during the three years and there was little variation between areas.

Operating expense per dollar of all sales, shown in Tables 8 and 9, bring out the importance of volume on cost of conducting the business. In the Southeastern area, because total sales decreased yearly, operating expense per dollar increased during the three years.

In the Northern and Western area, because the total sales increased, the expense per dollar decreased. Also, the expense per dollar of sales was less in the Southeastern area where dollar sales were larger than in the Northern and Western area.

The last item on Tables 8 and 9, side-line and service income in percent of operating expense, is especially important and should be given considerable attention. Because of short crops many associations, especially in the Northern and Western area, are becoming increasingly interested in finding new sources of income. Even though side-line sales in some cases did not increase in recent years, in many instances this was not due to less interest in this enterprise, but due to a decrease in the farmers' purchasing power. There was considerable variation between the yearly averages shown for the two areas. Where one would expect a yearly increase, in the Northern and Western area a decrease occurred in 1938-39.

Net Income of South Dakota Elevators. In Table 10, farmers' elevators which cooperated in this study are grouped according to the amount of their net incomes. Here again there were wide variations between years and between areas. Both areas showed a high proportion of associations reporting net losses the second year of the study, 1937-38. In the third year the record of net earnings for the associations returned to a position comparable to that of 1936-37. In other words, the year, 1937-38, was by far the most difficult of the three in which to obtain operating gains. The Southeastern area apparently was in a more favorable position than the Northern and Western area, shown by a consistently smaller percentage of associations reporting net losses. Even

Table 10. South Dakota Farmers' Elevators Grouped According to the Amount of Their Net Income, 1936-37 to 1938-39.

Area, and crop year	Number of associations reporting	Percentage of associations reporting—		
		Net losses	Net gains	Net gains over \$1,000
	Number	Percent	Percent	Percent
Southeastern area:				
1936-37	34	20.6	79.4	67.6
1937-38	34	55.9	44.1	29.4
1938-39	31	19.4	80.6	64.5
Northern and western area:				
1936-37	37	37.8	62.2	32.4
1937-38	40	82.5	17.5	15.0
1938-39	38	42.1	57.9	39.5

during the best operating year of the three, only 40 percent of associations in the Northern and Western area had net incomes of over \$1,000 as against nearly 65 percent in the Southeastern area.

Sources of Income. Grain handling ordinarily is the main source of income of South Dakota farmers' elevators (See Tables 11 and 12). It also appears to have been the most variable of the income sources during the three years studied. For example, the average grain trading income in the Southeastern area decreased from \$6026 in 1936-37 to \$2602 in 1937-38, then increased to \$4615 in 1938-39, whereas bushel volume increased in both 1937-38 and 1938-39 over

Table 11. Source of Income of Southeastern South Dakota Farmers' Elevators, 1936-37 to 1938-39.

Source of Income	1936-1937		1937-1938		1938-1939	
	Average of 34 Assns.	% of Gross Income	Average of 34 Assns.	% of Gross Income	Average of 30 Assns.	% of Gross Income
Grain trading income	6026	57.2	2602	34.7	4615	46.5
Other grain income	63	.6	52	.7	87	.9
Side-line trading income	3825	36.3	4122	54.9	4135	41.6
Income from services	343	3.3	400	5.3	722	7.3
Total operating income	10257	97.4	7176	95.6	9559	96.3
Non-operating income	278	2.6	332	4.4	372	3.7
Total Gross income	10535	100.0	7508	100.0	9931	100.0

Table 12. Source of Income of Northern and Western South Dakota Farmers' Elevators, 1936-37 to 1938-39.

Source of Income	1936-1937		1937-1938		1938-1939	
	Average of 37 Assns.	% of Gross Income	Average of 40 Assns.	% of Gross Income	Average of 38 Assns.	% of Gross Income
Grain trading income	3157	52.4	1205	31.2	3755	54.3
Other grain income	156	2.6	90	2.3	428	6.2
Side-line trading income	2306	38.3	2183	56.4	2281	33.0
Income from services	231	3.8	256	6.6	271	3.9
Total operating income	5850	97.2	3734	96.5	6735	97.4
Non-operating income	171	2.8	137	3.5	180	2.6
Total gross income	6021	100.0	3871	100.0	6915	100.0

the preceding year. Other grain income showed an upward trend during the three-year period, due mainly to increased emphasis on the storage function.

Side-line income showed little year-to-year change in either area, and appears to have been the most dependable source of funds to cover expenses. Income from services showed a definite upward trend during the three years studied, but still did not account for a large part of the total gross income. Nonoperating income is that arising from collection of charged-off accounts, freight claims, interest, and like items.

Analysis of Expenses. Expenses of the South Dakota elevators studied are itemized in Tables 13 and 14. Salaries, wages and commissions increased slightly each year of the study and were larger for associations in the South-eastern area than for those in the Northern and Western area. For total expenses the trend also was upward. The average expense of elevators in the

Table 13. Analysis of Expenses of Southeastern South Dakota Farmers' Elevators, 1936-37 to 1938-39.

Expense Items	1936-1937		1937-1938		1938-1939	
	Average of 34 Assns.	% of Total Expense	Average of 34 Assns.	% of Total Expense	Average of 30 Assns.	% of Total Expense
Salaries, wages and comm.	\$2816	41.0	\$3116	43.5	\$3460	47.8
Office, audit and legal	378	5.5	354	4.9	411	5.7
Telephone and telegraph	105	1.5	107	1.5	109	1.5
Light, power and water	379	5.5	358	5.0	378	5.2
Elev. supplies and repairs	300	4.4	374	5.2	350	4.8
Insurance and bonds	368	5.3	353	4.9	348	4.8
Taxes	527	7.7	610	8.5	583	8.1
Directors' fees	166	2.4	152	2.1	149	2.1
Miscellaneous	324	4.7	398	5.6	420	5.8
Depreciation	582	8.5	541	7.6	552	7.6
Total (Excl. int. and bad debts)	5945	86.5	6363	88.8	6760	93.4
Bad debts	553	8.0	341	4.8	202	2.8
Total Operating expense	6498	94.5	6704	93.6	6962	96.2
Interest	375	5.5	456	6.4	274	3.8
Total Expense	6873	100.0	7160	100.0	7236	100.0

Table 14. Analysis of Expenses of Northern and Western South Dakota Farmers' Elevators, 1936-37 to 1938-39.

Expense Items	1936-1937		1937-1938		1938-1939	
	Average of 37 Assns.	% of Total Expense	Average of 40 Assns.	% of Total Expense	Average of 38 Assns.	% of Total Expense
Salaries, wages and comm.	\$2049	37.5	\$2163	41.9	\$2276	40.6
Office, audit and legal	306	5.6	279	5.4	351	6.2
Telephone & telegraph	79	1.5	84	1.6	95	1.7
Light, power and water	241	4.4	242	4.7	257	4.6
Elev. supplies & repairs	144	2.6	171	3.3	225	4.0
Insurance and bonds	423	7.7	349	6.8	398	7.1
Taxes	424	7.8	405	7.8	410	7.3
Directors' fees	118	2.2	106	2.1	112	2.0
Miscellaneous	290	5.3	286	5.5	353	6.3
Depreciation	773	14.1	775	15.0	767	13.7
Total (Excl. int. & bad debts)	4847	88.7	4860	94.1	5244	93.5
Bad debts	295	5.4	22	.4	138	2.4
Total operating expense	5142	94.1	4882	94.5	5382	95.9
Interest	322	5.9	284	5.5	229	4.1
Total Expense	5464	100.0	5166	100.0	5611	100.0

Southeastern area, ranging from \$1500 to \$2000, was greater than the average found for the Northern and Western associations.

Noting the percentage which the various items were of total expense it was found that most the items showed little change during the three-year period, and also varied only in a few respects between areas. Depreciation, for example, was a relatively larger item for the associations in the Northern and Western area than for those in the Southeastern area. Likewise, expenditure for insurance and bonds was larger. On the other hand, bad-debt cost was larger for Southeastern area associations.

Factors Influencing Operating Results

Differences among individual elevator associations of a group are covered up when only averages are shown. Yet, the factors accountable for those differences may be highly important. In the foregoing discussion, year-to-year changes and area differences were noted in such things as operating conditions, financial status, equity position and operating results.

Because many factors combine to bring about given results, it is difficult to segregate any one and determine its precise effect. Then, too, certain factors, such as management, business policies and membership relations, are such intangible things that their influence on results can hardly be measured. In this section, however, some of the factors accounting for differences in the effectiveness of South Dakota farmers' elevators will be discussed—membership, volume, margins, price trends, and others.

Measuring Effectiveness. If net income were the only measure necessary, it would not be difficult to judge the effectiveness of an association. When evaluating cooperatives, however, a more inclusive yardstick is desirable. Not only are financial returns of interest, but there are other important considerations, such as the cost and quality of service rendered. In other words, a farmer-member will judge his cooperative by the kind of job it does in giving him the marketing and other services. If the association is efficient, the farmer-member will receive the greatest possible return, which means the full market price.

Too many members judge their association by the patronage dividend check they receive, being interested only in the financial return at the end of the year. This measure of effectiveness has some merit, but it is not the sole method used by a man who has full knowledge of cooperative practices and principles. The latter understands that he gets, in reality, service at cost through an efficient cooperative, and knows that its mere presence in the market structure means something in long-time effect.

Membership and Patronage. In cooperative elevator associations most of the members are its patrons as well as its owners. Obviously, it is to the interest of the association to have as many of its members as possible patronize it, and also to induce as many non-member patrons as possible to become members. As a rule a patron will be more interested in the association and give it more of his business if he is a member and has some of his own money invested in it.

Table 15. South Dakota Farmers' Elevators Grouped According to Number of Members, 1937 Survey.¹

Number of Members	State		Southeastern Area		Northern & Western Area	
	Number of Assns.	Percent of Total	Number of Assns.	Percent of Total	Number of Assns.	Percent of Total
Less than 50	27	13.4	9	9.3	18	17.0
50 to 99	66	32.7	28	29.2	38	35.8
100 to 149	40	19.8	21	21.9	19	18.0
150 to 199	29	14.3	17	17.7	12	11.3
200 or more	40	19.8	21	21.9	19	17.9
Total	202	100.0	96	100.0	106	100.0

1. One association did not report.

The 1937 survey showed that many associations were facing a membership problem. Their interest in this phase of the cooperative work apparently had not been active since the original organization of the elevators. There were, however, a few associations that had recognized the need for a more active membership. They had taken steps to change their by-laws and lower the cost of membership entrance, or had fostered educational programs in order to attract new members. In Table 15 the South Dakota farmers' elevators are grouped according to the number of members they had in 1937. Forty-six percent of the associations had less than 99 members, and only about 20 percent had more than 200 members. A larger portion of the elevators which had a small number of members are located in the Northern and Western area than in the Southeastern area. Fifty-three percent of the associations in the Northern and Western area had less than 100 members, whereas only 38 percent of those in the southeastern area had less than 100 members. The Southeastern area had more of its associations in the higher bracket—40 percent of its associations having memberships of 150 or more as compared with 29 percent in the Northern and Western area.

The South Dakota farmers' elevators are grouped in Table 16 according to number of member-patrons. It is to be expected that, when an association has been organized many years, some members cease patronizing it. Members die, move out of the territory or cease farming. It is to the advantage of the association, however, to take steps to correct this situation by making a settlement and cancelling memberships of those who can no longer be patrons. When a

Table 16. South Dakota Farmers' Elevators Grouped According to Number of Member-Patrons, 1937 Survey.¹

No. of Member-Patrons	State		Southeastern Area		Northern & Western Area	
	Number of Assns.	Percent of Total	Number of Assns.	Percent of Total	Number of Assns.	Percent of Total
Less than 50	42	20.8	14	14.6	28	26.4
50 to 99	79	39.1	34	35.5	45	42.5
100 to 149	35	17.3	25	26.0	10	9.4
150 to 199	18	8.9	10	10.4	8	7.6
200 or more	28	13.9	13	13.5	15	14.1
Total	202	100.0	96	100.0	106	100.0

1. One association did not report.

member, who has patronage to offer, ceases to patronize his association, however, the management is faced with a problem that can be solved only through education and perhaps by offering better services. More than 20 percent of the elevator associations in South Dakota had less than 50 member-patrons. The Northern and Western area had more associations with a small number of member-patrons than the Southeastern area. Sixty-nine percent of the associations in the former had less than 100 member patrons while 50 percent of the associations in the latter area were in this group. A higher percentage of associations having 200 or more member-patrons were located in the Northern and Western area, however, than in the Southeastern area, but the difference in percentage was slight.

It was re-discovered in the three-year elevator study that many associations had a considerable number of members who did not patronize their own associations. In Table 17 the percentage of members of South Dakota farmers' elevators who patronized their own associations in the three years studied is shown. Only a limited number, however, reported membership for all three years. The average number of members fluctuated little. Associations in the Southeastern area had larger average memberships than those in the Northern and Western area. As for member-patrons, elevators in the Southeastern area were in better position than the other area, both in average number and in the percentage of members patronizing.

Table 17. Percentage of Members of South Dakota Farmers' Elevators who patronize their own associations, by areas. 1936-37 to 1938-39

Area and year	Number of elevators reporting	Average number of members	Average number of member patrons	Percent of members patronizing
Southeastern area:				
1936-37	19	161	133	82.6
1937-38	19	167	130	77.8
1938-39	19	170	135	79.4
Northern and western area:				
1936-37	19	146	106	72.6
1937-38	19	142	98	69.0
1938-39	19	146	101	69.2

Each association has its own membership problems. One of the universal problems is that of eliminating from the membership those no longer in position to patronize. To learn more of the status of South Dakota elevators in this respect, the membership lists of 33 associations were classified according to land tenure and residence (See Table 18). Producers were classified as owner-operators, tenants and landlords. Nonproducers were classified as local, non-resident and deceased.

Variations between areas was not great, although there were some differences. Of most interest, was the fact that 30 percent were in the non-producer groups. In the Southeastern area 13 percent of the members were deceased. In the Northern and Western area more than 16 percent of the members were non-residents. The task ahead is to replace the non-producers with active patrons who now are not members.

Table 18. Composition of Membership of South Dakota Farmers' Elevators According to Land Tenure and Residence, 1938.

Area	No. of Associations Reporting	Av. No. of Members per Assn.	Percentage of Members who were—					
			Owner-Operators	Tenants	Land-lords	Local Non-Producers	Non-Residents	Deceased (Estates)
Southeastern	12	114	39.2	15.4	14.6	7.2	10.7	12.9
Northern and Western	21	130	37.7	16.0	15.5	5.4	16.1	9.3
	33	124	38.2	15.8	15.2	6.1	14.2	10.5

Membership as a Volume Factor. One of the main sources of strength of a cooperative business organization lies in the fact that the owners, the members, furnish most of the patronage. It is not, as a rule, necessary for the management to resort to expensive advertising in order to bring in business, since in most cases each member as an owner gladly gives his business to the association.

Grain Volume as Influenced by Membership. Membership and business volume definitely are related as is shown by data furnished by the cooperative elevators studied. Information for the three-year period indicates the important part membership plays. As elevators are primarily interested in handling grain, attention is directed first to the relationship between size of membership and grain volume. Annual records obtained for the three-year period were combined and then considered on an area basis.

Table 19 shows the number of these records for each area divided into groups on the basis of number of members. Each of these groups then was classified according to the number of bushels of grain handled. For those associations having less than 100 members, 41 percent of the annual records in the Southeastern area and 7 percent in the Northern and Western area reported handling over 100,000 bushels of grain. When the membership was between 100 and 199, then the chances of handling 100,000 bushels of grain or more were greater. This was especially true in the Southeastern area. When

Table 19. Grain Volume of South Dakota Farmers' Elevators in each area as Influenced by Number of Members, 1936-37 to 1938-39.

Area and No. of Members	Number of Elevator Records Studied	Elevator Records Reporting Grain Volumes of—							
		Less than 50,000 bu.		50,000 to 99,000 bu.		100,000 to 149,000 bu.		150,000 bu. or more	
		No.	Percent	No.	Percent	No.	Percent	No.	Percent
Southeastern:									
Less than 100	27	6	22.2	10	37.0	6	22.2	5	18.6
100 to 199	36	7	19.4	11	30.6	7	19.4	11	30.6
200 or more	21	3	14.3	4	19.0	2	8.6	12	57.1
Totals	84	16	19.1	25	29.8	15	17.8	28	33.3
Northern and Western:									
Less than 100	43	34	79.1	6	13.9	2	4.7	1	2.3
100 to 199	36	27	75.0	6	16.7	0	0.0	3	8.3
200 or more	26	11	42.3	6	23.1	2	7.7	7	26.9
Totals	105	72	68.6	18	17.1	4	3.8	11	10.5

associations had 200 or more members the chances were even greater of obtaining a high volume. As evidence 65 percent of the annual records of such associations in the Southeastern area and 34 percent in the Northern and Western area reported a volume of more than 100,000 bushels. Judging from results in the three years studied, a membership of at least 100 in the Southeastern area and 200 in the Northern and Western area seems necessary in order to give reasonable assurance of handling 100,000 bushels or more annually.

Table 20. Grain Volume of South Dakota Farmers' Elevators as Influenced by Number of Member-Patrons, 1936-37 to 1938-39.

Area, and number of member-patrons	Number of Elevator records reporting grain volume of—								
	Elevator Records	Less than 50,000 bu.		50,000 to 99,000 bu.		100,000 to 149,000 bu.		150,000 or more bu.	
		Studied	No.	Percent	No.	Percent	No.	Percent	No.
Southeastern:									
Less than 75	26	7	26.9	12	46.2	4	15.4	3	11.5
75 to 149	32	6	18.7	8	25.0	7	21.9	11	34.4
150 or more	26	3	11.5	5	19.2	4	15.4	14	53.9
Totals	84	16	19.0	25	29.8	15	17.9	28	33.3
Northern and western:									
Less than 75	41	32	78.1	6	14.6	2	4.9	1	2.4
75 to 149	38	30	78.9	6	15.8	0	—	2	5.3
150 or more	19	8	42.1	4	21.1	2	10.5	5	26.3
Totals	98	70	71.4	16	16.3	4	4.1	8	8.2

Grain Volume as Influenced by Member-Patronage.—The extent to which members trade with their own associations affects substantially amounts of grain handled. In Table 20 member patronage is associated with grain volume. Annual records for the three-year period were grouped according to number of member-patrons and number of bushels of grain handled. In the period studied, associations in the Southeastern area handled a greater grain volume than those in the Northern and Western area. Seventy-one percent of the association records in the Northern and Western area reported handling less than 50,000 bushels as compared to 19 percent in the Southeastern area, and 33 percent in the Southeastern area reported handling 150,000 bushels of grain or more, as against 8 percent in the other area.

Table 20 shows that, as the number of member-patrons increased, a larger percentage of the association records fell in the large volume groups. For instance, when an association had less than 75 member-patrons and operated in the Northern and Western area, its chances of handling more than 50,000 bushels of grain were small, because 78 percent of the associations in this group handled less than 50,000 bushels. When the number of member-patrons was 150 or more, then its chances of handling less than 50,000 bushels were only 42 in 100. Here again it is shown that membership and patronage had a definite influence on the amount of grain handled.

Table 21. Business Volume (Dollar Sales) of South Dakota Farmers' Elevators as Influenced by Number of Member-Patrons 1936-37 to 1938-39

Area, and number of member-patrons	Number of Elevator Records Studied	Elevators Having Sales Volume of—					
		Less than \$50,000		\$50,000 to \$99,000		\$100,000 or more	
		No.	Percent	No.	Percent	No.	Percent
Southeastern:							
Less than 75	26	10	38.5	12	46.1	4	15.4
75 to 149	32	6	18.7	19	59.4	7	21.9
150 or more	26	3	11.5	7	26.9	16	61.6
Total in area	84	19	22.6	38	45.2	27	32.2
Northern and Western:							
Less than 75	44	34	77.3	8	18.2	2	4.5
75 to 149	39	26	66.7	11	28.2	2	5.1
150 or more	22	7	31.8	3	13.6	12	54.6
Total in area	105	67	63.8	22	21.0	16	15.2

Business Volume as Influenced by Member-Patronage. Because side-line activities has become increasingly important to cooperative elevators, the total volume of dollar sales, which includes side-line sales, is an important measure of business activity. An association with a small grain volume could turn to side-lines and service as an additional source of income. In the preceding two sections, membership and member patronage were discussed in relation only to grain volume. Table 21 presents similar data, showing the relationship between dollar sales of both grain and side-lines and member patronage.

Associations in the Southeastern area were more fortunate than those in the Northern and Western area in total dollars of sales. Only 23 percent of the association records for the three years studied in the Southeastern area had less than \$50,000 of sales as compared to 64 percent in the Northern and Western area. In both areas, as the number of member-patrons increased a larger percentage of the records showed greater dollar sales. The greatest contrast is seen in the Northern and Western area for those association records reporting \$100,000 or more of sales. Only a little more than 4 percent of the records reporting less than 75 member-patrons attained this high volume grouping; a trifle more than 5 percent of the records reporting between 75 and 149 member-patrons fell into this grouping; but of those reporting over 150 member-patrons 54 percent had this large volume. Whether the business of an association consists of grain alone, or grain and side-lines, the advantage of a large, loyal membership is plainly evident.

Business Volume as Related to Net Operating Income. A large business volume usually makes possible lower unit costs which, in turn, improves the possibility for large net operating income. In preceding sections the influence of membership and patronage on grain and business volumes were discussed. What now is the effect of business volume on operating results? Control of grain volume in large part, is out of the hands of the management, because crop conditions are beyond human control. The low grain volume of the last 10 years has affected even the best associations. It is possible for the management to affect the volume by the type and efficiency of services offered. Management also may influence volume by adding to or expanding side-line activities.

Grain Volume as a Factor. Because grain volume is of prime importance to the elevators, grain volume is related to net operating results (See Table 22). As in Tables 19, 20 and 21, annual association records obtained for the three-year period were utilized for this purpose. They were grouped according to the grain volume handled and the amount of net loss or gain reported. A larger percentage of the Northern and Western association records reported net losses than was the case in the Southeastern area. In the Southeastern area more of the annual records were in the highest classification with net incomes of \$1000 or more.

Table 22. Grain Volume of South Dakota Farmers' Elevators as Related to Their Net Operating Income (Before Deducting Interest) 1936-37 to 1938-39

Area, and Grain Volume (thousand bushels)	Number of		Records of Annual Operations Resulting in—							
	Elevator Records Studied	Net Loss of \$1000 or more		Net Loss of \$1 to \$599		Net gain of \$1 to \$999		Net gain of \$1000 or more		
		No.	Percent	No.	Percent	No.	Percent	No.	Percent	
Southeastern:										
Less than 50	21	7	33.3	3	14.3	5	23.8	6	28.6	
50 to 74	18	3	16.7	3	16.7	3	16.6	9	50.0	
75 to 99	12	2	16.7	4	33.3	2	16.7	4	33.3	
100 to 124	5	0	0.0	1	20.0	2	40.0	2	40.0	
125 to 149	10	0	0.0	3	30.0	1	10.0	6	60.0	
150 or more	33	1	3.0	0	0.0	5	15.2	27	81.8	
	99	13	13.1	14	14.1	18	18.2	54	54.6	
Northern and Western:										
Less than 50	82	33	40.2	20	24.4	16	19.5	13	15.9	
50 to 74	11	0	0.0	0	0.0	6	54.5	5	45.5	
75 to 99	7	0	0.0	0	0.0	1	14.3	6	85.7	
100 to 124	2	0	0.0	0	0.0	1	50.0	1	50.0	
125 to 149	2	0	0.0	0	0.0	0	0.0	2	100.0	
150 or more	11	2	18.2	1	9.1	0	0.0	8	72.7	
	115	35	30.4	21	18.3	24	20.9	35	30.4	

There was a tendency for annual records showing large grain volume to be in the highest net income classification. In the Southeastern area, an association handling less than 50,000 bushels of grain had 33 chances in 100 of suffering a net loss of \$1000 or more during the three years studied. If an association had a grain volume of 150,000 bushels or more, chances were only 3 in 100 that it would have a net loss of \$1000 or more. Furthermore, chances of making a net gain of \$1000 or more increased from 28 in 100 to 82 in 100 when an association increased its grain volume from less than 50,000 to 150,000 bushels or more. It would appear from Table 22 that there is a direct correlation between net income and grain volume which cannot be ignored by cooperative elevator managers.

Total Business Volume as a Factor. Although handling of grain is the principal activity of cooperative elevators in South Dakota, side-lines and services have become increasingly important. To show the complete picture of combined effect of grain and side-line volume on net income, total sales were related to net operating income. (See Table 23.)

Table 23. Business Volume (Dollar Sales) of South Dakota Farmers' Elevators as a Factor Influencing Net Operating Income.¹ 1936-37 to 1938-39.

Area, and Business Volume	Number of Elevator Records Studied	Net Loss of		Records of Annual Net Loss of		Operations Resulting in—			
		\$1000 or more	Percent	\$1 to \$999	Percent	Net gain of \$1 to \$999		Net gain of \$1000 or more	
		No.	Percent	No.	Percent	No.	Percent	No.	Percent
Southeastern Area:									
Less than \$50,000	23	7	30.5	5	21.7	6	26.1	5	21.7
\$50,00 to \$99,000	45	5	11.1	5	11.1	7	15.6	28	62.2
\$100,000 or more	31	1	3.2	4	12.9	5	16.1	21	67.8
Total in area	99	13	13.1	14	14.1	18	18.2	54	54.6
Northern and Western:									
Less than \$50,000	78	31	39.8	19	24.4	17	21.8	11	14.0
\$50,000 to \$99,000	22	3	13.6	1	4.6	5	22.7	13	59.1
\$100,000 or more	16	2	12.5	1	6.2	2	12.5	11	68.8
Total in area	116	36	31.0	21	18.1	24	20.7	35	30.2

1. Before interest charges.

Associations with large business volume had a greater chance of obtaining sizeable net incomes than those associations with small business volume. Here again associations in the Southeastern area were in better position than those in the Northern and Western area. In the Northern and Western area an association with a business volume of \$100,000 or more had 68 chances in 100 that it would have a net gain of \$1000 or more in the three-year period studied. An association with less than \$50,000 had only 14 chances out of 100 of obtaining an income of this amount. Here again net operating income apparently is materially affected by business volume.

Side-lines and Services as Factors. In view of the growing importance of side-lines and services, consideration should be given the influence they exert on net operating income. The combined influence of grain sales and side-line service sales has been discussed in the preceding section. Here, an attempt is made to evaluate the influence of side-lines and services alone (See Table 24).

Table 24. Influence of Sideline Income and Grain Volume on Net Operating Income, 1936-37 to 1938-39.

Area and Size of Business	No. of Elevator Records Studied	% Reporting Net Gain	% Reporting Net Gain of \$1000 or more
Southeastern Area:			
Small grain—small side-lines	22	45.4	27.3
Small grain—large side-lines	30	66.7	43.3
Large grain—small side-lines	19	78.9	52.6
Large grain—large side-lines	29	96.6	86.2
Total in Area	100		
Northern and Western Area:			
Small grain—small side-lines	41	31.7	14.6
Small grain—large side-lines	59	55.9	28.8
Large grain—small side-lines	9	66.7	55.6
Large grain—large side-lines	6	100.0	100.0
Total in Area	115		

Annual records of associations studied were grouped on the basis of size of business as indicated by two factors, namely, grain volume and the percentage side-line and service income was of operating expense. The latter was selected as the best indicator of the contribution which side-line activities made to the business. Records reporting less than 100,000 bushels of grain were considered to have a small grain business, those reporting more a large grain business. When side-line and service income was less than 40 percent of operating expense, the side-line business was considered small, when more than 40 percent it was considered large.

Association records in the "small grain and small side-line" group showed the smallest percentage reporting net gains. When records showed either large grain or large side-line business, chances for gains improved, whereas those with both large grain and large side-line business were in best position. As between areas, the differences between groups were slightly in favor of the Southeastern area, but perhaps not enough to be significant. Here again there is a direct tie-in between volume of business, both side-line and grain, and opportunity to obtain net gain. Naturally, because elevator associations are primarily grain-handling institutions, a large grain volume is more important than a large side-line volume. Based on this study, however, any institution having both a large grain volume and large side-line business was in favorable position to show good results.

Side-line Margins. Many South Dakota farmers' elevators have been forced to add side-lines and services during the drouth years to bolster dwindling incomes. It is a difficult management problem to know what side-lines can best be added. Local conditions make it necessary for considerable thought before a choice is made. Some associations, after they have gone to the bother of adding side-lines, have found that net results were not as anticipated—the new side-lines added very little toward helping pay expenses.

Table 25 shows, by years, the number of associations handling each side-line, the average sales, gross margins realized, and gross profit per dollar of sales. For the latter item, there is considerable variation among the side-lines. Variations for individual side-lines between years are small in most cases, and

Table 25. Sideline Sales and Gross Margins on Sideline Sales of South Dakota Farmers' Elevators, 1936-37 to 1938-39.

Side-lines	1938-39				1937-38				1936-37			
	No. of Elev.	Av. Sales	Gross Margins	Gross Profit	No. of Elev.	Av. Sales	Gross Margins	Gross Profit	No. of Elev.	Av. Sales	Av. Gross Margins	Gross Profit
		\$	\$	%		\$	\$	%		\$	\$	%
Feed, flour	56	1905	178	9.3	56	2987	258	8.6	57	6386	585	9.2
Seeds	44	1540	186	12.1	44	2338	255	10.9	36	1688	292	17.3
Coal	67	9003	1257	14.0	67	10095	1335	13.2	63	10387	1397	13.4
Twine	51	2268	181	8.0	50	1902	148	7.8	38	1073	73	6.8
Machinery	7	15646	1336	8.5	9	13312	1193	9.0	8	10973	1138	10.4
Building												
Materials	11	22112	3691	16.7	15	13966	2746	19.7	16	10278	1918	18.7
All Sidelines	69	25093	2919	11.6	70	25595	3021	11.8	66	26366	3037	11.5
Petroleum	11	14884	2327	15.6	12	12107	1914	15.8	11	12005	1779	14.8
Livestock	4	58736	31	.05	6	31965	-26	-.08	6	34137	-63	-1.8

gross profit for all side-lines is nearly identical for each of the three years. Greatest average gross margin per dollar of sales each of the three years was made on building materials, with petroleum products second. Coal was third in two of the three years. All three of these side-lines showed a consistently high percentage of gross profit. Buying of livestock by elevator associations apparently was unprofitable because in two of the three years livestock was sold for a little less than its cost. The figures presented are gross figures and expense must be deducted from gross margins to determine net gains or losses. Therefore, it is necessary for associations, if they are to justify the addition of side-lines, to make certain that these side-lines do contribute enough to cover, at the very least, the added expense of handling them.

Grain Margins. It is of utmost importance to cooperative elevators that grain margins be large enough to provide for expenses of conducting the business and enough net return to assure safe operation. Tables 26, 27, 28 and 29 present some gross margin figures for South Dakota farmers' elevators studied in 1936-37. Associations in the Northern and Western area indicated that they attempt to take wider margins per bushel than those in the Southeastern area. However, approximately 80 percent of the associations in both areas attempted to obtain from 4 cents to 5.9 cents per bushel.

Table 26. Gross Margins per Bushel on Wheat Considered Desirable by South Dakota Farmers' Elevators, 1936-37

Attempted margin per bushel on wheat	Southeastern area:		Northern and Western area:	
	Number of associations	Percentage of total	Number of associations	Percentage of total
Less than 3 cents	2	6.2	1	2.7
3 to 3.9 cents	4	12.5	2	5.4
4 to 4.9 cents	10	31.3	9	24.3
5 to 5.9 cents	15	46.9	22	59.5
6 cents or more	1	3.1	3	8.1
Total	32	100.0	37	100.0

Table 27. Gross Margins on Wheat Realized by South Dakota Farmers' Elevators, 1936-37 to 1938-39.

Area, and crop year	Number of elevators studied	Gross loss per bushel	Percentages of elevators reporting			
			Less than 2 cents	Gross gains per 2 - 3.9 cents	bushel of - 4 - 5.9 cents	6 cents or more
		Percent	Percent	Percent	Percent	Percent
Southeastern Area:						
1936-37	28	3.6	3.6	7.1	14.3	71.4
1937-38	29	58.6	13.8	3.4	6.9	17.3
1938-39	30	10.0	20.0	23.3	23.3	23.4
Totals	87	24.1	12.6	11.5	15.0	36.8
Northern and western Area:						
1936-37	37	5.4	-	8.1	-	86.5
1937-38	40	35.0	5.0	12.5	20.0	27.5
1938-39	38	7.9	2.6	26.3	29.0	34.2
Totals	115	16.5	2.6	15.7	16.5	48.7

Table 28. Gross Margins per Bushel on Corn Considered Desirable by South Dakota Farmers' Elevators 1936-37.

Attempted margin per bushel of corn	Southeastern area:		Northern and Western area:	
	Number of associations	Percentage of total	Number of associations	Percentage of total
Less than 3 cents	2	6.2	0	-
3 to 3.9 cents	13	40.6	2	8.7
4 to 4.9 cents	10	31.3	10	43.5
5 to 5.9 cents	6	18.8	10	43.5
6 cents or more	1	3.1	1	4.3
Totals	32	100.0	23	100.0

Table 29. Gross Margins on Corn Realized by South Dakota Farmers' Elevators, 1936-37 to 1938-39.

Area, and crop year	Number of elevators studied	Gross loss per bushel	Percentages of elevators reporting			
			Gross gains per bushel of -			
			Less than 2 cents	2 - 3.9 cents	4 - 5.9 cents	6 cents or more
		Percent	Percent	Percent	Percent	Percent
Southeastern Area:						
1936-37	29	—	6.9	24.1	27.6	41.4
1937-38	30	6.7	36.7	33.3	16.6	6.7
1938-39	30	3.3	36.7	56.7	—	3.3
Totals	89	3.4	27.0	38.2	14.6	16.8
Northern and Western Area:						
1936-37	37	2.7	2.7	8.1	21.6	64.9
1937-38	38	18.4	13.2	10.5	18.4	39.5
1938-39	36	8.3	11.1	16.7	25.0	38.9
Totals	111	9.9	9.0	11.7	21.6	47.8

Table 27 presents the gross margins on wheat realized by the elevators studied for the three-year period covered. The associations have been grouped by areas according to the amount of gross margin received. There was considerable variation between years and somewhat less variation between areas. For instance, in the Southeastern area in 1936-37, only 3.6 percent of the associations had a gross loss per bushel while in 1937-38 nearly 60 percent of the associations had a gross loss. In the Northern and Western area the realized margins for the first two years studied, were nearly as divergent. In Tables 28 and 29 margins on corn per bushel are presented in identical form as those for wheat. Here again attempted margins tended to be higher in the Northern and Western area. Likewise realized margins ran higher in the latter area. Year-to-year variations were greatest in the Southeastern area. No doubt, higher margins are required in the Northern and Western area because of the effect of greater crop risks on volume.

Price Trends as an Income Factor. When attempting to arrive at reasons for changes in gross margins realized per bushel of grain, the fact is apparent that price trends are a factor. For instance, during the harvest season when the elevators purchase the bulk of the grain, what is happening to grain prices at

Table 30. Gross Margins per Bushel Realized by South Dakota Farmers' Elevators, by Areas, as Related to the July-November Trend of Wheat Prices in Minneapolis, Crop Years of 1936, 1937, and 1938.

Crop year	Gross margins per bushel realized on wheat		Monthly average prices per bushel No. 1 dark northern spring wheat				
	Southeastern area	Northern and western area	July	Aug.	Sept.	Oct.	Nov.
			cents	cents	cents	cents	cents
1936	5.4 cents	10.6 cents	136	147	146	148	144
1937	1.9 cents	2.6 cents	151	133	134	127	115
1938	2.6 cents	4.0 cents	88	78	76	73	73

the terminal market is important. If the trend is upward, while the elevator manager accumulates a carload and sends it to the market, there is greater assurance of receiving a substantial margin on the purchased grain. If the price trend is downward the purchased grain may be worth less by the time it reaches the terminal market for sale and a loss is incurred.

Table 30 shows the average gross margins per bushel of wheat realized by South Dakota farmers' elevators as related to the trend of wheat prices at Minneapolis during the harvest seasons of 1936, 1937 and 1938. In 1936 the price trend was upward, the monthly average prices advancing 12 cents between July and October. Gross margins realized per bushel were high, averaging 5.4 cents in the Southeastern area and 10.6 cents in the Northern and Western area. In 1937 the price trend was downward during harvest, decreasing from \$1.51 per bushel in July to \$1.15 in November. Likewise, gross margins realized were drastically lower than in the previous year. In 1938 prices declined again and realized margins were below 1936. In the three years studied, the trend of wheat prices during the harvest season apparently played an important role in determining the margins obtained by South Dakota farmers' elevators.

Hedging Policy as a Margin Factor. One means of protecting the margin on grain at time of purchase is to sell approximately the same volume in the futures market. Some South Dakota associations thus hedge their grain purchases while others do not. Some boards of directors instruct their managers not to hedge because they consider hedging as speculation. Hedging, properly done, provides a substantial degree of price protection.

Table 31. Relation Between Hedging Practices of 23 Southeastern South Dakota Farmers' Elevators and the Average Gross Margins Realized on Wheat, 1936-37 to 1938-39.

Crop Years	Average Gross Margin per Bushel on Wheat	
	Of Elevs. Which Hedged Their Wheat Purchases	Of Elevs. Not Hedging Their Wheat Purchases
	Cents	Cents
1936-37	7.5	10.7
1937-38	4.3	-1.9
1938-39	4.4	2.8
3-Year Averages	4.9	2.9

Table 32 presents the relation between hedging practices of 23 Southeastern South Dakota farmers' elevators and the average gross margins realized on wheat. In 1936-37 when elevator prices advanced during harvest those not hedging had an advantage over elevators that hedged. In 1937-38 grain prices declined during the harvest, and elevators that did not hedge wheat purchases lost nearly 2 cents per bushel. In 1938-39 elevators hedging wheat also had the advantage though much less than in the previous year. Averaging the margins per bushel realized for the three years, elevators that hedged obtained an average gross margin per bushel 2 cents greater than that of elevators that did not hedge. By hedging or other means of selling grain promptly after purchase, risks of loss from grain trading operations are minimized.

Table 32. Relation of Annual Grain Volume to the Estimated Grain Expense per Bushel of South Dakota Farmers' Elevators, 1936-37 and 1938-39.

Grain volume (bushels)	Southeastern area				Northern and Western area			
	1936-37		1938-39		1936-37		1938-39	
	No. of elevators reporting	Average expense per bushel	No. of elevators reporting	Average expense per bushel	No. of elevators reporting	Average expense per bushel	No. of elevators reporting	Average expense per bushel
		Cents		Cents		Cents		Cents
Less than 50,000	9	6.7	—	—	32	10.1	19	11.2
50,000 to 99,000	14	4.5	7	4.7	4	6.6	9	3.5
100,000 to 149,999	5	2.8	8	2.2	1	9.6	3	3.5
150,000 to 199,999	1	2.0	7	2.2			2	3.0
200,000 or more	4	1.8	9	1.6			5	2.1
All associations	33	3.1	31	2.1	37	9.0	38	3.6

Unit Costs of Operation

Several measures of operating efficiency have been suggested in preceding sections. Another possible measure is the unit cost of operation, or, in other words, expense per dollar of sales or per bushel. All business organizations are interested in lowering unit costs of operation because this usually is accompanied by increased net earnings. This test, however, is not complete as it does not reflect accurately the degree of skill in merchandising or number of services offered.

Grain Volume and Expense per Bushel. Table 32 presents the relation of annual grain volume to the estimated grain expense per bushel of South Dakota farmers' elevators for the years 1936-37 and 1938-39. As grain volume increased, expense per bushel tended to decrease. In the Southeastern area in 1936-37, average expense per bushel ranged from 6.7 cents for elevators handling less than 50,000 bushels to 1.8 cents for those with 200,000 or more bushels. In the Northern and Western area for the same year the average expense per bushel was 10.1 cents for 32 elevators handling less than 50,000 bushels, 6.6 cents for four handling between 50,000 and 100,000 bushels, and 9.6 cents for a single elevator handling between 100,000 and 150,000 bushels.

In 1938-39, when the associations in the Northern and Western area had

better grain volume, 19 associations handling less than 50,000 bushels had an accompanying average expense of 11.2 cents per bushel. In contrast, five associations handling 200,000 or more had an average expense of only 2.1 cents. These figures indicate that the trend in expense per bushel was sharply downward as grain volume increased from less than 50,000 up to 150,000 bushels. Changes in unit costs for volume increases beyond 150,000 bushels were much less marked.

Table 33. Expense per Dollar of Sales as Influenced by Percentage Side-Line Sales were of Total Sales, South Dakota Farmers' Elevators, 1936-37 to 1938-39.

Area, and percentage side-line sales are of total sales	1936-37		1937-38		1938-39	
	No. of elevators reporting	Average expense per dollar of sales	No. of elevators reporting	Average expense per dollar of sales	No. of elevators reporting	Average expense per dollar of sales
		Cents		Cents		Cents
Southeastern:						
Less than 20 percent	12	4.4	12	4.3	15	5.8
20-39.9 percent	14	6.4	10	7.8	6	7.6
40 percent or more	8	7.8	12	8.0	10	8.1
Total	34	6.0	34	6.6	31	7.0
Northern and Western:						
Less than 20 percent	2	11.7	8	6.4	14	6.3
20-39.9 percent	14	10.4	10	9.5	9	9.8
40 percent or more	21	12.3	22	14.1	15	14.2
Total	37	11.4	40	9.9	38	8.8

Side-lines. Because of the importance of side-lines, their influence on unit costs deserves attention. Table 33 shows expense per dollar of sales as influenced by the relative importance of side-lines in the total business of South Dakota farmers' elevators. Associations in each were grouped according to the percentage that side-line sales were of total sales. There was a tendency for expense per dollar of sales to rise as the proportion of side-line sales to total sales increased. It is evident from this that it was more expensive to handle a dollar of side-line sales than one of grain sales. Hence, comparisons of unit costs of elevators having a high proportion of side-line business with those having a low proportion are largely meaningless. If comparisons were made of elevators having about the same proportions of side-line business to total volume, unit costs would have more significance.

Labor Utilization. Labor is usually the largest item on the expense statement. It is important, therefore, that the elevator management knows how effectively its labor supply is utilized. One measure of this is the relation of sales per man month to expense per dollar of sales. In Table 34 the elevators were grouped on the basis of these two factors for 1936-37. In the Southeastern area, the associations with low sales per man tended to have high expense per dollar of sales, whereas more than three-fourths of those with sales of \$4,000 or more per man month had expenses of less than 5 cents per dollar of sales. In the Northern and Western area there are no associations that have an expense as low as 5 cents per dollar of sales. However, all associations in this area having \$4,000 or more of sales per man month had less than 10

Table 34. Relation of Sales per Man-month of Labor to Expense per Dollar of Sales of South Dakota Farmers' Elevators, 1936-37.

Dollar Sales Per man month	Number of Assns.	Percentage of associations with expense per dollar			
		of sales of- Less than 5c percent	5c to 9.9c percent	10c to 14.9c percent	15c or more percent
Southeastern Area:					
Less than \$2000	3	—	33.3	33.3	33.3
\$2000 to \$3999	15	13.3	66.7	20.0	—
\$4000 or more	14	78.6	14.3	7.1	—
Northern and Western Area:					
Less than \$2000	20	—	10.0	45.0	45.0
\$2000 to \$3999	14	—	50.0	50.0	—
\$4000 or more	3	—	100.0	—	—

cents expense per dollar of sales, whereas 9 out of 10 of those with less than \$2,000 sales had expenses of 10 cents or more. These data suggest that as more business is done for each man employed, the expense per dollar of sales tends downward.

Plant Utilization. Unit costs of operation in any business are influenced by the extent to which facilities are utilized. It is important that the physical plant be used to capacity, if the association is to operate economically. Many plant costs are fixed and must be met regardless of the extent to which the facilities are used. One of the measures of plant efficiency is capacity turnover. It is determined by dividing annual grain volume by plant capacity. As capacity turnover increases, grain expense per bushel decreases. This is an indication of how volume can operate to reduce the unit expense of handling grain.

By relating sales per dollar of the original investment in fixed assets to expense per dollar of sales, another indication of how increased sales can affect the unit costs of operation is provided (See Table 35). The original in-

Table 35. Relation of Sales per Dollar of Original Investment in Fixed Assets to Expense per Dollar of Sales of South Dakota Farmers' Elevators, 1936-37 to 1938-39.

Area, and sales per dollar invested in fixed assets	Number of association records	Percentage of associations having expense per dollar of sales of			
		Less than 5 cents	5 to 9.9 cents	10 to 14.9 cents	15 cents or more
Southeastern Area:					
Less than 2 dollars	11	%	%	%	%
2 to 3.9 dollars	32	9.4	45.5	45.5	9.0
4 to 5.9 dollars	32	40.6	65.6	18.8	6.2
6 dollars or more	24	66.7	43.8	15.6	—
Total Area	99	32.3	25.0	8.3	—
Northern and Western Area:					
Less than 2 dollars	65	—	6.2	41.5	52.3
2 to 3.9 dollars	32	—	62.5	34.4	3.1
4 to 5.9 dollars	11	18.2	72.7	9.1	—
6 dollars or more	8	62.5	37.5	—	—
Total in Area	116	6.0	30.2	33.6	30.2

vestment rather than the depreciated value is taken as the best indicator of operating capacity. In each area, about two-thirds of the annual records showing sales per dollar of fixed assets of \$6 or more had an expense per dollar of sales of less than 5 cents. In contrast, most of the records with sales under \$2, reported expense per dollar of 10 cents or more. It is important, therefore, that the physical facilities be utilized fully if unit costs are to be held down.

Outlets And Sales Methods Used by South Dakota Farmers' Elevators

Elevator managers, especially those who are good merchandisers, do not always use the same sales methods nor the same outlets. An alert manager will take advantage of opportunities and will sell grain where it will yield him the greatest net return.

Outlets. Tables 36, 37 and 38 show outlets used by South Dakota farmers' elevators in disposing of grain. Bushel volume, by years, by areas, and by kinds of grain, was determined and that moving to each outlet—whether terminal shipment, sale to truckers or local retailing—is shown in percentage. In 1936-37, when South Dakota was suffering short crops, local retailing was important, especially in the Northern and Western area. In fact, 92 percent of the corn and 97 percent of the oats were sold locally. There was a great need for feed in that area. In the Southeastern area during the same year only a little more than 29 percent of the corn was sold locally and 22 percent of the oats. In the other two years, local retailing was not as important as during the first year of the study. Another significant point is the volume of grain disposed of to truckers. In the Southeastern area this outlet apparently is diminishing in importance, decreasing from 13.5 percent of the total bushels in 1936-37 to 5.2 percent in the last year of the study. In the Northern and Western area, how-

Table 36. Outlets Used by South Dakota Farmers' Elevators in Disposing of Grain Handled in 1936-37.

Area, and Kind of grain	Bushels Handled	Percentage Disposed of by—		
		Terminal Shipment	Sale to Truckers	Local Retailing
Southeastern:				
Wheat	277,810	82.1	1.5	16.4
Corn	520,260	58.4	11.9	29.7
Oats	909,796	55.6	22.2	22.2
Barley	755,351	73.6	12.5	13.9
Rye	258,367	82.7	2.3	15.0
Flax	18,874	84.4	3.2	12.4
All grain	2,739,958	66.5	13.5	20.0
Northern and Western:				
Wheat	222,522	52.7	1.4	45.9
Corn	180,331	7.8	0.0	92.2
Oats	286,807	2.6	0.0	97.4
Barley	128,102	21.0	0.0	79.0
Rye	91,185	63.3	0.0	36.7
Flax	3,344	64.4	0.0	35.6
All grain	912,291	24.7	.3	75.0

Table 37. Outlets Used by South Dakota Farmers' Elevators in Disposing of Grain Handled in 1937-38.

Area, and Kind of grain	Bushels Handled	Percentage Disposed of by—		
		Terminal Shipment	Sale to Truckers	Local Retailing
Southeastern:				
Wheat	791,021	87.7	4.2	8.1
Corn	568,879	76.3	10.4	13.3
Oats	615,290	68.0	9.0	23.0
Barley	481,637	67.0	13.2	19.8
Rye	201,832	94.7	1.3	4.0
Flax	11,532	95.2	1.3	3.5
All grain	2,170,191	75.2	8.9	15.9
Northern and Western:				
Wheat	713,168	88.3	1.1	10.6
Corn	244,625	68.9	3.3	27.8
Oats	327,980	50.9	4.7	44.4
Barley	114,530	59.2	3.6	37.2
Rye	328,562	95.1	0.0	4.9
Flax	16,962	91.3	0.0	8.7
All Grain	1,745,827	78.0	2.0	20.0

Table 38. Outlets Used by South Dakota Farmers' Elevators in Disposing of Grain Handled in 1938-39.

Area, and Kind of grain	Bushels Handled	Percentage Disposed of by—		
		Terminal Shipment	Sale to Truckers	Local Retailing
Southeastern:				
Wheat	903,022	98.5	0.0	1.5
Corn	731,073	54.9	14.9	30.2
Oats	1,441,215	80.1	5.0	14.9
Barley	1,231,974	87.6	6.6	5.8
Rye	731,611	96.6	.5	2.9
Flax	49,009	86.0	1.0	13.0
All Grain	5,087,904	84.0	5.2	10.8
Northern and Western Area:				
Wheat	1,727,660	97.2	1.1	1.7
Corn	256,283	69.8	4.5	25.7
Oats	418,941	54.1	14.4	31.5
Barley	191,674	62.1	9.2	28.7
Rye	370,410	93.4	1.4	5.2
Flax	27,797	80.4	0.0	19.6
All Grain	2,992,765	86.0	3.8	10.2

ever, just the opposite appears to be true. In 1936-37 only .3 percent of the grain was sold to truckers while by 1938-39 this had risen to 3.8 percent of the total crop.

Sales Methods. South Dakota, together with the other hard spring wheat states tributary to the Minneapolis market, has long been considered consignment territory. By that is meant that most of the grain moves to the terminal market on consignment, usually for sale by sample to the highest bidder. Table 39 offers evidence that this practice still prevailed during the period of this study, at least among farmers' elevators.

During the three years, 1936-37 to 1938-39, three-fourths of the wheat of the Southeastern elevators studied was shipped on consignment. In the Northern and Western area, the proportion was still higher. An interesting development is the decrease in consignments from 1937-38 to 1938-39. There was a tendency for a few more sales on a "to arrive" basis, possibly as a result of the experience with a declining market in 1937-38. Sales on the to arrive basis take place before the grain leaves the local elevator. The buyer does not receive the grain until the shipment arrives some time later.

Table 39. Methods of sale of wheat used by South Dakota farmers' elevators, 1936-37 to 1938-39.

Method of sale of wheat used by associations	Percentage of associations reporting in —					
	Southeastern South Dakota			Northern and Western South Dakota		
	1936-37	1937-38	1938-39	1936-37	1937-38	1938-39
Consignment:						
76 to 100 percent of shipments	77.0	78.1	70.4	80.6	96.6	88.0
51 to 75 percent of shipments	3.8	—	14.8	—	—	4.0
50 percent or less of shipments	3.8	12.5	11.1	—	—	4.0
Finance Contracts	15.4	9.4	3.7	19.4	3.4	4.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Appendix

Farmers, Elevator Movement In South Dakota

It was in the 80's of the past century that the farmers' elevator movement began in South Dakota. The first elevator association,—and, so far as known, the first co-operative of any type in the State—was organized at Baltic in 1887. It still is active. The following year, 1888, saw elevators organized at Artesian, Gary, and Alpena. The one at Artesian still is operating.

The movement made little headway during the 90's and the first years of the present century. About 1906, however, intensive organizational activity began. This period lasted until 1920. Since then few new associations have been started.

During 1937, a careful check was made of the number of existing elevator associations in South Dakota. The number of active organizations reported was 203. These cooperatives had a total membership of 27,764, or an average of 137 members

for each association. Patronage was not limited to members, however. In fact, the number of patrons, 52,082, reported by the 203 associations was nearly twice as large as the number of members.

A complete history of the farmers' elevator movement in South Dakota is not available, so the total number of associations organized in the State since 1888 is not known. It is fairly certain, however, that there were at least 400 farmers' elevators in operation in 1919 or 1920. For various reasons—drouth, depression, transportation changes, loss of status as cooperatives, poor management—nearly half of the 400 have ceased operation, at least as cooperatives. Those remaining are the better managed and more favorably located associations.

Early Days of Movement. The farmers' elevator at Baltic, already referred to, was the first organized and is the oldest still in existence in the State. It was one of several such organizations started in Iowa



South Dakota's first cooperative elevator

and other states of the Middle West about 1887. Many reasons have been and are advanced in favor of farmers setting up their own marketing organizations. One particular factor, however, apparently was accountable for the birth of these Middle Western farmers' elevators in the late 80's. It was a protest against the virtual monopoly in local grain handling developed by independent and line elevator concerns.

For the 14-year period, 1887 to 1900, files of the Farm Credit Administration reveal definite evidence of the organization of 18 farmers' elevators in South Dakota. Of the 18, five still remain in active operation. Without doubt other organizations started for which no historical record is available. These early associations sprang up mainly for the reason already cited, which showed up in excessive margins, poor service, and general lack of competition. In some instances, however, organizations were started because of lack of grain handling facilities at some shipping points.

Periods of Development. The 15 years, 1906 to 1920 inclusive, stand out as a period of rapid development of the farmers' elevator movement in South Dakota. There are definite records of 331 associations set

up in that period, and no doubt others started for which no record is available. The general survey of 1937 gave information on the dates of organization of 200 of the 203 associations in existence at that time. These are shown by periods from 1887 to 1937 in Table 40. It reveals that 160 or three-fourths of the associations active in 1937 were organized in the 15-year period, 1906 to 1920.

Prior to 1906 the farmer-owned elevators operated under difficult conditions. They were discriminated against by commission firms, railroads, in fact by practically all privately-owned agencies with which they had to deal. Beginning in the early years of the present century, however, farm pressure on state and federal legislative and regulatory bodies brought gradual improvement in conditions and discontinuance of many trade abuses. No doubt this stimulated organization activities and led to the material increase in number of associations. Good crop yields and rising prices also may have been contributing factors.

Terminal commission firms have played a significant role in South Dakota farmers' elevator history. In the period of discrimination against farmers' elevators, some com-

Table 40. Date of Organization of South Dakota Farmers' Elevators Existing in 1937.

Period	Number
1887 - 1900	5
1901 - 1905	13
1906 - 1910	53
1911 - 1915	45
1916 - 1920	62
1921 - 1925	11
1926 - 1930	6
1931 - 1937	5
Total	200 ¹

1. Three associations did not answer this question.

mission firms continued friendly to the associations. Line elevators were a dominant element in the local grain trade. The commission merchants looked primarily to independent and farmers' elevators for their grain volume, so were anxious to see the latter grow. As a result, some of them sent out organizers to aid in starting new associations. They often went far in financing them, even to advancing funds for buildings and equipment. By inducing local directors to sign notes and assume personal responsibility for association borrowings, the lenders felt reasonably secure not only of the loan but of the business volume of the association.

The period since 1920 has been one of adjustment. Few new associations have been started. Inefficiently operated and poorly located elevators—cooperative and private—have been forced out of business. Improved farm-to-market roads have been a factor. The trend has been toward larger establishments, with their advantage of low-cost operation.

Wheat Pool History.¹ In the early 20's there began a distinctive period in cooperative grain marketing history commonly designated as the pool period. Following the organization of "Wheat Pools" in nearby grain states, sentiment for such an association developed in South Dakota in early 1923. It culminated in the incorporation of an association on June 28 of that year. Later this association joined with similar organizations from other northern grain states to form also a terminal sales agency. Sales offices were opened in Minneapolis, Duluth, Portland, and Seattle.

1. This section is based mainly on information provided by C. W. Croes, who was manager of the South Dakota pooling movement.

Under the pooling method, the producer member signed an exclusive marketing agreement under which he agreed to deliver the wheat marketed from his farm to the pool organization. His grain was delivered to a local elevator, and for it he received a warehouse receipt which he assigned to the pool. Under his marketing agreement he agreed that his wheat could be commingled with other wheat of like variety and quality for marketing throughout the season in a manner that was deemed by the management to be in the best interests of the producers.

The producer member received, on delivery of the warehouse receipt to the pool, a first advance of about 75 percent of the prevailing market value, a second advance at about midseason, and a final settlement at the close of the pooling year. This full settlement represented the average price the association received for the producer's variety and grade of wheat, less handling costs.

In 1923-24, the South Dakota Association received 534,000 bushels of wheat; in 1924-25, 2,048,000 bushels, and in 1925-26, a total of 2,053,000 bushels. During the crop years of 1924 to 1927, with a relatively strong market, average payments to growers were almost universally satisfactory. The crop year of 1925 probably was most outstanding. During the 1928 and 1929 crop years, however, the market declined rapidly. Final settlement prices were below those prevailing at time of delivery, resulting in protests from producers.

In 1930 the stabilization program of the Federal Farm Board was begun. The South Dakota association turned over its volume of grain to the Stabilization Corporation, and the terminal marketing activities of the pools were transferred to another

er organization then getting under way. With the liquidation of the latter organization in 1938, the South Dakota association resumed active marketing operations, but not of the pooling nature. Instead, it conducts its business as a cooperative elevator organization, and in 1941 operated elevator properties at 17 stations in north central South Dakota.

Accomplishments of Movement. Since 1887, farmers' elevators have constituted a wholesome element in the marketing of South Dakota grain. They have played the dominant role in reducing local grain handling charges and in bettering the marketing process. By so doing they have made conditions more difficult for successful operation. This has meant the elimination of high-cost concerns—private and cooperative—which could not justify continued existence.

A few of the existing farmers' elevators have served South Dakota farm communities for as long as a half-century. Most of them have been in operation 20 years or more. Even the 200 odd associations that have passed from the picture have played a part in bettering the marketing process. Those remaining must do as good or a better job than other agencies in operating their businesses in order to assure continued survival.

South Dakota Cooperative Laws

The beginning of South Dakota laws authorizing formation and operation of cooperative organizations reaches back beyond the organization of the State itself. The first was a territorial act of 1885 permitting the formation of building and loan associations. South Dakota was not organized and admitted to the Union until 1889. The second piece of cooperative legislation was an act passed by the legislature of 1893 (Chap. 106) providing in a general way for the formation of township mutual insurance companies. From that time until 1911, no important cooperative legislation was enacted.

In 1911 an act was passed entitled "Cooperative Corporations." It provided that cooperative corporations with capital stock could be formed under the general corporation laws of the State and should have all the rights and be subject to all the duties, restrictions, and liabilities of such corporations. The law itself was short and in-

complete, but it did state that such associations could fix and limit the general (stock) dividends to be declared and paid annually, and could pay cooperative (patronage) dividends according to the amount of business done with its stockholders.

The legislature of 1913 passed the first comprehensive act under which cooperative marketing associations might be formed. This act, like that of 1911, is still in effect although it has been amended. This 1913 act was entitled "Cooperative Corporations and Associations." The following summary presents its most pertinent points and reflects the various amendments made since 1913:

1. Five or more persons may organize an association.
2. Each stockholder is entitled to only one vote.
3. Individual ownership is limited to \$1,000 in associations of \$100,000 or less capital stock, and to 1 percent of the stock in associations of more than \$100,000.
4. Dividends on capital stock shall not exceed 8 percent.
5. Not less than 10 percent of the annual net earnings shall be set aside for a reserve fund, until an amount has been accumulated of not less than 50 percent of the paid-up capital stock.
6. Not less than 1 percent nor more than 5 percent of the annual net profits or earnings shall be set aside for an educational fund.
7. Balance of the annual net profits or earnings, after necessary deductions are made, shall be apportioned among stockholders, or stockholders and patrons, in proportion to the amount of business transacted with the association.
8. The word "Cooperative" shall not be used in the title of any business unless organized under Sections 8839-8853.¹

In 1923, the "Cooperative Marketing Act" was passed as a result of the interest which developed in the wheat pool. The Montana cooperative law furnished the ba-

1. S. D. Rev. Code of 1939, Vol. 1, Title 11, Part 11, Chap. 11.

sis for the South Dakota act. The following is a summary of the 1923 act, with amendments to date:

1. Five or more agricultural producers may organize an association.
2. Each member or stockholder is entitled to only one vote.
3. Stock ownership is limited to 1/20 of the issued common stock.
4. Only producers of the products handled may become members or stockholders.
5. Common stock cannot be transferred to nonproducers of the products handled.

6. Associations shall not handle agricultural products of non-members to an amount greater in value than is handled for members.

7. Associations shall make provision in by-laws for automatic suspension of the rights of membership when a member ceases to be eligible, and for the purchase by the association of a member's interest upon death, withdrawal, or expulsion.

8. Each association shall send an annual report to the Secretary of Agriculture of the State of South Dakota.¹

1. S. D. Rev. Code of 1939, Vol. Title 4, Chap. 4. Point 8 regarding the law does not appear to have been compiled with consistently.