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Strategies for Survival by Cooperative Country Elevators-Revisited

Abstract

The structure and operations of local cooperative elevators were affected by excess storage capacity, modifications in Government programs, and other factors during the late 1980s and early 1990s. While the reduction in Government storage payments had the greatest impact on elevator operations, other programs such as Payment-In-Kind (PIK), Government grain sales (Commodity Credit Corporation (CCC) catalog and auction sales), and Conservation Reserve Program (CRP) also affected cooperative elevator activities. In 1988 and 1992, 71 cooperative managers were asked to rank a number of factors that affected cooperative operations and management strategies used as a practical response. This report presents these rankings and analyzes management strategies implemented between 1988 and 1992 and their degree of success.

Keywords: Farmer cooperatives, grain, marketing, structure, operations, Government policy

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Strategies for Survival by Cooperative Country Elevators-Revisited

United States Department of Agriculture

Rural Business-Cooperative Service

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RBS Research Report 158

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Executive Summary

In the late 1980s and early 1990s, managers of cooperative country elevators changed management strategies to adapt to excess capacity, the rise and fall of Federal farm programs, and other factors. While the reduction of Government storage payments had the greatest impact on elevators, the introduction of and changes in other programs also had their impact. These programs included Payment-In-Kind (PIK), Government grain sales (Commodity Credit Corporation (CCC) catalog and auction sales), and the Conservation Reserve Program (CRP) acreage reduction.

In 1988, North Dakota State University (NDSU) surveyed 87 cooperative elevator managers (Gunn and Cobia) about the structure and operations of their cooperatives and possible management strategies to offset income loss from changes in Government programs.

In a 1992 followup study, 71 of the initial 87 cooperative managers were again surveyed. This report analyzes their responses and concentrates on the ranking of factors that affected elevator operations, proposed managerial strategies they have tried, the degree of success, and the importance in keeping the cooperative elevator viable. A companion report (Responses of Cooperative Elevators to Changes in Government Policies, RBS Research Report 153) analyzes the structural and operational changes that occurred between 1988 and 1992 and their impact on the financial condition of the cooperatives.

The 1988 participating cooperatives were classified by production region, progressiveness, and size. All cooperatives were kept in the same classification grouping in 1992 to allow comparison of the changes. Only cooperatives responding to both surveys were analyzed.

Highlights

Reduced Government storage payments had the greatest effect on elevator operations. Forty-one of the 71 respondents ranked this highest and 14 others ranked it 2nd. It was also ranked highest in 1988. The effects of other farm programs ranked 2nd.

Cooperative managers ranked the farm crisis and interest rates 3rd and 4th, respectively, a switch in places from 1988. This was due mainly to lower rates in the early 1990s.

In 1992, as in 1988, managers ranked the introduction of unit trains 5th, but said their impact had worked its way through the industry and its effect had decreased since 1988.

While mergers ranked 6th in both studies, it was the only factor to show a significantly increased impact from 1988 to 1992. Ten of the 71 responding cooperatives had been involved in mergers between 1988 to 1992. Rail abandonment ranked 7th in importance in both studies, although its effect decreased between 1988 and 1992.

The “other factors” category added in the 1992 study ranked relatively high. However, only 15 managers ranked it compared to 67 ranking Government storage and 34 ranking rail abandonment. Other factors included the availability of rail cars, drought, and increased competition.

Attracting new patrons, changing merchandising practices, and more efficient use of labor were the top three ranked management strategies in 1988.

In 1992, managers ranked changing merchandising practices as the most successful practice followed by labor use and attracting new patrons. Fifty-eight of the managers (85 percent) tried changing merchandising practices and it was successful 97 percent of the time.

Between 1988 and 1992, managers made better use of personnel, including transferring them to other activities during slack periods.

The top three ranked management strategies were successful in more than 70 percent of the cooperatives. The rest were sorted into two groups. The first group was successful 30 to 50 percent of the time. These are decreasing transportation costs, mergers and acquisitions, increasing margins, adding marketing services, other alternatives for increasing revenue, changing blending and cleaning practices, and changing discounts and premiums.

The least successful group of management strategies in terms of overall success were considered very successful by managers who implemented them-decreasing advertising, controlling expenses, coordinating deliveries, reducing debt, reducing inventory, and offering shorter weekend hours.

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Introduction

Various events and structural changes in the U.S. grain marketing system during the past 20 years had a tremendous effect on farmer-owned cooperatives. Mergers, acquisitions, and bankruptcies prompted consolidations among cooperatives. Changes in Government policies and trading practices have forced the entire grain industry to alter operating practices. Adjustments are still occurring.

Reduced Federal storage income had the greatest effect on the grain marketing system. Once this income was lost, the entire grain handling system faced severe storage overcapacity. Competition intensified in merchandising (Warman 1993). Cooperative elevator managers implemented new management strategies, merged with nearby elevators, and diversified services.

In 1988, North Dakota State University (NDSU) surveyed 87 cooperative elevator managers (Gunn and Cobia) about their structure and operations. Managers were also asked to discuss strategies to compensate for lost Government income.

In a 1992 followup survey, 71 of the original 87 cooperatives provided new information on structure, operations, and management strategies. Of the rest, four elevators were sold to another company, two went out of business, and 10 managers chose not to participate (table 1). (For a survey copy, contact The Quintin N. Burdick Center for Cooperatives, North Dakota State University, Fargo, ND 58105.)

This report analyzes the responses of the 71 managers who participated in both surveys. It concentrates

Table 1—Number Of respondents, reasons for nonparticipation in 1992 survey

Group	Number of respondents	Non-participation: Sold to another elevator	Liquidated	Refusal
All	71	4	2	10
Production Region				
Spring Wheat	23	4	1	4
Corn	26	0	1	1
Winter Wheat	22	0	0	5
Progressiveness				
Progressive	25	0	1	4
Intermediate	29	2	0	1
Conservative	17	2	1	5
Size (Storage Capacity)				
Small	21	1	1	6
Medium	24	1	0	4
Large	26	2	1	0

Table 2 **Frequency distribution of factors affecting cooperative financial status by managers of 71 selected grain marketing cooperatives, 1992**

Factor	Frequency of ranking										1992		1988	
	1	2	3	4	5	6	7	8	Total	Percent	Mean	Rank	Mean	Rank
Govt. Storage Program	41	14	5	4	2	0	1	0	67	(94)	1.75	(1)	1.76	(1)
Other Farm Programs	6	12	13	11	5	3	2	0	52	(73)	3.72	(2)	2.85	(2)
Farm Crisis	4	9	12	9	9	2	0	0	45	(63)	3.36	(3)	3.69	(4)
Interest Rate	2	12	16	10	10	3	4	0	57	(80)	3.68	(4)	3.46	(3)
Unit Train Introduction	4	5	10	4	5	9	7	0	44	(62)	4.27	(5)	3.91	(5)
Mergers	4	8	3	9	7	9	7	1	48	(68)	4.40	(6)	5.29	(6)
Rail Abandonment	2	1	2	4	1	8	11	5	34	(48)	5.76	(7)	5.53	(7)
Other	6	7	0	0	1	0	0	1	15	(23)	2.56	(8)		
Total	69	68	61	51	40	34	22	7						

on what factors affected elevator operations, managerial strategies tried, degree of success, and their importance in keeping the cooperative elevator viable. A companion report analyzes the structural and operational changes *since* 1988. *(See* Response of Cooperative Elevators to Changes in Government Policies, RBS Research Report 153.)

Classification Scheme

In 1988, participating cooperatives were classified by production region, progressiveness, and size. Cooperatives were sorted into three production regions based on the primary commodity produced in the area-spring wheat (23 elevators), corn (26 elevators), and winter wheat (22 elevators). The cooperatives were located in Iowa (11), Kansas (13), Minnesota (16), Nebraska (4), North Dakota (13), Oklahoma (X), and South Dakota (6).

The progressiveness of a cooperative was judged by its financial strength and innovative techniques. Return on equity, return on assets, percent of noncash grain purchases in 1991, and Government grain purchases from the cooperative by others were factors in determining financial strength. Innovative techniques included the use of a FAX machine, a computerized accounting system, and maintaining the quality of stored grain. There were 25 progressive, 29 intermediate, and 17 conservative elevators.

Cooperatives in each production region were further classified by size based on elevator storage capacity-small (21), medium-size (24), and large (26)—to eliminate size-production intercorrelation. All cooperatives were kept in the same classification grouping for sake of comparison.

Selected Developments

In 1988, managers ranked seven factors as to their effect on elevator operations-Government storage programs, other farm programs, farm crisis, interest rate, introduction of unit trains, mergers, and rail line abandonment. In 1992, an “other factors” category was added to accommodate factors that some managers found to have a greater effect than those provided in the earlier study-weather, competition, rail car availability, addition of rail loadout facilities, farmer attitudes, decreased margins, and poor crop.

Responses were scored by assigning a value to each factor. The most important factor was assigned 1, the second was assigned 2, etc. Each factor’s total score

Table 3— **Average ranking scores (1=most, 7=least) of specified factors as to operational impact and differences from 1988 to 1992 by managers of 71 grain marketing cooperatives [a]**

Group	Govt. storage programs			Other farm programs			Farm crisis			Interest rate		
	1992	1988	Diff	1992	1988	Diff	1992	1988	Diff	1992	1988	Diff
All	1.75	1.76	-0.01	3.26	2.85	0.42	3.36	3.69	-0.33	3.68	3.46	0.22
Production region												
Spring Wheat	1.77	1.41	0.36	3.75	3.31 w	0.43	3.80	4.40 w	-0.60	3.64	3.76	-0.12
Corn	1.87	2.09	-0.22	3.43	3.00	0.43	3.29	3.88 w	-0.59	3.18	3.32	-0.14
Winter Wheat	1.59	1.77	-0.18	2.53	2.13 s	0.40	2.92	2.62 sc	0.30	4.33	3.33	1.00
Progressiveness												
Progressive	1.61	1.82	-0.21	3.33	2.78	0.55	2.80	4.07	-1.27'	3.71	4.10	-0.38
Intermediate	1.86	2.07 c	-0.21	3.18	2.91	0.27	3.67	2.57	0.10	3.78	2.95	0.82
Conservative	1.75	1.12 i	0.63	3.33	2.83	0.50	3.55	3.33	0.22	3.50	3.29	0.21
Size (storage capacity)												
Small	2.28 m	1.81	0.47	3.47	2.27	1 .00*	3.20	3.53	-0.33	3.37	3.11	0.26
Medium	1.36s	1.59	-0.23	3.26	3.05	0.21	3.17	3.70	-0.53	4.05	3.21	0.84
Large	1.63	1.88	0.25	3.11	2.94	0.17	3.77	3.85	-0.08	3.63	4.05	-0.42

[a] Statistical significance between groups in a particular category is indicated by the first letter of the other group to which a specific group is compared. A .05 percent level of significance is used.

* Represents a .05 percent level of significance for differences between the two years.

Table 3 (continued)- **Average ranking scores (1=most, 7=least) of specified factors as to operational impact and differences from 1988 to 1992 by managers of 71 grain marketing cooperatives**

Group	Intro. of unit trains			Mergers			Rail abandonment			Other [a]		
	1992	1988	Diff	1992	1988	Diff	1992	1988	Diff	1992	1988	Diff
All	4.27	3.91	0.36	4.39	5.29	-0.90*	5.76	5.53	0.23	2.56		
Production region												
Spring Wheat	3.89	3.21	0.68	4.00	5.60	-1.60'	5.09	6.00	-0.91	4.20		
Corn	4.43	4.43	0.00	4.94	5.38	-0.44	6.00	5.00	1.00	1.00		
Winter Wheat	4.73	4.45	0.27	4.24	4.94	-0.70	6.20	5.70	0.50	2.12		
Progressiveness												
Progressive	3.93	3.60	0.33	4.50	5.11	-0.61	6.18	5.55	0.63	3.00		
Intermediate	4.44	4.22	0.22	4.68	5.84	-1.16	5.56	5.62	-0.06	2.86		
Conservative	4.45	3.82	0.63	3.73	4.63	-0.90	5.57	5.29	0.28	1.50		
Size (storage capacity)												
Small	4.35	4.12	0.23	5.24	5.41	-0.17	5.73	5.27	0.46	1.25		
Medium	4.40	3.67	0.73	4.40	5.73	-1.33'	5.92	5.75	0.17	3.67		
Large	4.00	3.92	0.08	3.50	4.75	-1.25	5.57	5.71	-0.14	2.78		

[a] Other was not presented as a factor in 1988.

* Represents a .05 percent level of statistical significance for differences between the two years.

was then divided by the number of managers ranking the factor. The smaller the number, the greater the effect on elevator operations. Factors that had no effect were not ranked. Table 2 presents the 1992 rankings of the eight factors. (Also see group ranking tables in appendix A.)

Ranking Impacts

Reduced Government storage payments had the greatest effect on elevator operations, ranked highest by 41 of the 71 respondents and second highest by 14 others. It was also ranked highest in 1988, and there was virtually no change between 1988 and 1992 (table 3).

Using the tables, readers can compare groups in each classification category. In table 3, for example, the effect of "other farm programs" in the spring wheat production area can be compared with those in the winter wheat production area. Any statistically significant difference between two groups is denoted by the first letter of the other group with which a specific group is compared.

Thus, in table 3, other farm programs in the spring wheat production area is statistically different from the winter wheat production area. This is measured at the 0.05 level of significance. When differences between 1988 and 1992 are presented, an asterisk (*) indicates it is statistically significant at the 0.05 level. In table 3, the change in the effect of the "farm crisis" between 1988 and 1992 on progressive cooperatives was statistically significant.

Other farm programs rankecl 2nd with a score of 3.26 just as in 1988 but up 0.42 points. Thus, managers believed the effects of the Government programs were greater in 1988. Managers also reported decreased use of CCC catalog and auction sales in the early 1990s.

The farm crisis (3.36) and interest rate (3.68) ranked 3rd and 4th, respectively, a switch from 1988. This was due mainly to a lower interest rate in the early 1990s when the industry increased investment in marketing infrastructure (Dahl). Lower rates also helped cooperative elevators carrying heavy debt from the 1970s devote more capital for operations (Warman).

In both 1988 and 1992, managers ranked the introduction of unit trains 5th (4.27). However, the increased score from 1988 indicates a slightly smaller impact in 1992. The managers felt that the effect from the introduction of unit trains had worked its way through the industry, particularly in the spring wheat area where they were introduced at a later date. Rail loadout capacity also increased between 1988 and 1992, but most of it occurred closer to 1988.

While mergers ranked 6th in both surveys, it was the only factor to show a significantly increased impact from 1988 to 1992. Ten of the 71 responding cooperatives were involved in mergers between 1988 and 1992 (Stearns, Cobia, Warman). This indicates that the consolidation of cooperative country elevators continued and affected elevator operations. Rail abandonment ranked 7th (5.76) in importance in both studies, but most of it occurred earlier.

The "other factors" category, added in the 1992 study, was rankecl relatively high, with a score of 2.56. These included the availability of rail cars, drought, and increased competition. However, only 15 managers ranked the other factors compared with 67 ranking Government storage and 34 ranking rail abandonment. Six of the 15 ranked this factor first and seven rankecl it 2nd. Given the low total number of managers

Table 4—**Average ranking of factors affecting elevator operations of individual groups by managers,** 1992

Factor	All	Spring Wheat	Corn	Winter Wheat	Progres-sive	Inter-mediate	Conser-vative	Small	Medium	Large
Govt. Storage Program	1	1	1	1	1	1	1	1	1	1
Other Farm Programs	2	3	4	2	3	2	2	4	3	2
Farm Crisis	3	4	3	3	2	3	3	2	2	5
Interest Rate	4	2	2	5	4	4	4	3	4	4
Unit Trains Introduction	5	5	5	6	5	5	6	5	5	6
Mergers	6	6	6	4	6	6	5	6	6	3
Rail Abandonment	7	7	7	7	7	7	7	7	7	7
Other	8	8	8	8	8	8	8	8	8	8

ranking this factor, it is assumed other factors did not have a great effect. For the purpose of this study, other factors is ranked last.

Differences Among Groups

Table 4 summarizes the average rankings of those factors managers believed affected elevator operations. Reduced Government storage payments ranks 1st for all nine groups while rail abandonment ranks 7th.

Production region

Even considered by production areas, reduced Government storage payments ranked 1st in effect on cooperative elevators (tables 3 and 4). Spring wheat area managers indicated the effects decreased between 1988 and 1992, but increased in winter wheat and corn production areas.

Spring wheat and corn area managers ranked interest rates 2nd, up from 4th in 1988. These cooperatives showed higher debt/asset ratios than in the winter wheat production area (Stearns, Cobia, and Warman). The effect of the farm crisis increased in spring wheat and corn areas compared with a decrease in winter wheat areas. This correlates with the number of farm bankruptcy filings, which were nearly three times higher in the Northern Plains and Corn Belt regions than in the winter wheat areas.

Winter wheat area managers ranked the impact of mergers 4th, compared with a 6th place ranking in the other production areas. These managers also reported increased competition from elevators that merged with or were acquired by other firms. There was a significant difference in the ranking score for mergers in the spring wheat production area. Six mangers ranked mergers 1st and **2nd** in order of importance, indicating more merger activity than in 1988.

Rail abandonment was ranked last by managers in all areas although two corn area managers ranked it 1st and 2nd. Managers in the winter wheat and corn production areas felt this factor decreased while spring wheat area managers felt it increased.

Progressiveness

Government storage programs ranked 1st in each group of the progressiveness category. Progressive and intermediate managers felt that the effect was slightly higher in 1992 while conservative managers believed it was lower. Progressive managers ranked the farm crisis 2nd, up from 4th in 198X. These cooperatives had the largest decrease in net income and a significant decline in return to equity and assets from 1987 to 1991 partially due to the farm crisis (Stearns, Cobia, and Warman). Progressive managers also felt interest rates had a greater effect in 1988 than in 1992.

Intermediate managers ranked all factors in the same order as in the overall sample. The most significant change was the increase in the effect of mergers.

Conservative managers switched ranking order of farm crisis and interest rate and introduction of unit trains and mergers. They felt that the impacts of the farm crisis and mergers were greater than in 1988. Four conservative managers ranked other factors 1st or 2nd in importance.

Size

When analyzing the cooperatives by size, all managers ranked Government storage payment reduction 1st. The score for small elevators was significantly lower than for medium-sized cooperatives. Although the effect of storage payments ranked lst, the managers of small cooperatives felt it was less in 1992 than in 1988. They ranked the impact from the farm crisis 2nd, up from 5th in 1988 and other farm programs 4th, down from 2nd in 1988.

The farm crisis, farmers leaving the farm and bankruptcies, had a greater effect on small and medium-size cooperatives than on larger ones that were more able to remain competitive. Managers of four small cooperatives ranked other factors as 1st or 2nd—rail car availability, rail loadout capacity, drought, and small margins.

Managers of medium-size elevators ranked the farm crisis 2nd, up from 5th in 1988. Medium-size elevators' ranking score for impacts from mergers was significantly lower (e.g., a higher impact) than in 1988. Although only 9 percent of the medium-size elevators were involved in mergers themselves, mergers by competitors affected them.

Management Strategies

Managers of grain marketing cooperatives adopted different strategies to compensate for reduced Government storage income and the other eight factors affecting operations. In 1988, the managers were presented 15 alternatives and were asked to identify the most practical. Next, they ranked the alternatives in the order of having the most income-producing potential (Gunn and Cobia). In 1992, managers identified successful alternatives they had tried and ranked them according to their degree of success.

The 15 alternatives were change merchandising practices, decrease costs through better labor use, attract new patrons, decrease transportation costs, merge or acquire additional facilities, increase margins, add or drop marketing services, find additional sources of revenue, change blending and cleaning practices, change discount and premium practices, change the internal structure of the cooperative, handle new crops, eliminate product lines, control general costs, and close facilities.

In 1988, the authors felt that some responses were unrealistic because of the competitive environment, and that others were incompatible (Gunn and Cobia). For example, 90 percent of the managers felt that attracting new patrons was the most practical alternative to pursue. Competitive pressure from excess capacity and declining numbers of farmers made this impossible for 90 percent of the elevators to achieve simultaneously. In addition, more than 50 percent of the managers felt that it was more practical to increase income by increasing margins. In reality, excess capacity in unit-train shipping facilities and increased competition for grain squeezed merchandising margins (Dahl).

Managers were asked to rank the alternatives they have tried, with the most successful ranked one, etc. Each alternative's total score was then divided by the number of managers ranking that alternative. The smaller the index number, the greater the perception of success by the managers.

Attracting new patrons, changing merchandising practices, and more efficient use of labor were the top three ranked management strategies in both 1988 and 1992 (table 5). However, changing merchandising practices was considered most successful, while labor use and attracting new patrons ranked 2nd and 3rd, respectively, in 1992, a change from 1988. Fifty-eight of the managers (85 percent) changed merchandising practices. This was successful 97 percent of the time.

The change in ranking score for labor use improved significantly from 1988 as managers transferred personnel from elevator tasks to other activities depending upon the flow of business. These strategies were successful in more than 70 percent of the cooperatives.

The remaining strategies sort into two groups. The first group has a 30 percent to 50 percent success rate--decreasing transportation costs, mergers and acquisitions, increasing margins, adding marketing services, other alternatives for increasing revenue, changing blending and cleaning practices, and changing discounts and premiums.

Decreasing costs through rail and transportation ranked 4th in 1992, up significantly from its 10th ranking in 1988. This reflects the importance of controlling transportation costs in grain marketing to offset decreasing margins. Also, the Staggers Act (1980) deregulated rates, allowing railroads and grain handlers to negotiate their rates (Warman).

Boosting revenue by increasing margins was considered contradictory by Gunn and Cobia in the previous study. Of the 75 percent of the managers trying to increase margins, 53 percent were successful. But, managers said increased competition made it very difficult to maintain any hike in margins.

The least successful group of management strategies in terms of overall success were considered very successful by those managers who implemented them. For example, other cost-reducing practices ranked 6th in 1988, but dropped to 14th in 1992. However, all nine managers who tried this said it was successful. Decreasing advertising, controlling expenses, coordinating deliveries, reducing debt and inventory, and offering shorter weekend hours were among the strategies.

Production Region

Different management strategies for different production regions should be expected because of differences in agronomic practices, crops raised, and marketing strategies for different crops. In the spring wheat area, changing merchandising practices ranked as the most successful management strategy (appendix tables Bl-B3). Attracting new patrons ranked 2nd and more efficient use of labor ranked 3rd.

Spring wheat managers ranked other practices to increase revenue 4th, up from 7th in 1988. This compares with a 7th and 12th place ranking for corn and winter wheat areas, respectively. Some practices used to increase revenue were adding fertilizer and chemical application, increasing trade area, increasing services to patrons, providing facilities for cleaning certified seed, planning strategies, advertising, selling bulk feed, and adding new enterprises.

In the corn production area, the top three strategies were the same as the entire group. Merger/acquisition ranked 4th. Most of the corn managers perceived mergers/acquisitions as a successful strategy (93 percent). They also considered adding or dropping marketing services, increasing revenue, changing management structure, and decreasing other costly practices as successful management strategie. Decreasing transportation costs and a change in management structure both improved from 1988.

Table s-frequency distribution of rankings of management strategies attempted, index, and differences in indices from 1988 to 1992 by managers of 71 selected grain marketing cooperatives

Strategy [a]	Index					frequency distribution of rankings										Tried [b]		Successful		Percent of total
	1992		1988		Diff	1	2	3	4	5	6	7	8	9	lo	#	%	#	%	
Merch Pract	4.21	(1)	4.39	(2)	-0.18	17	9	6	12	9	1	1	0	1	0	58	85.3	56	96.6	82.4
Labor	4.87	(2)	6.18	(3)	-1.29'	11	16	4	7	7	2	2	0	0	0	53	77.9	49	92.5	72.1
New Patron	5.35	(3)	3.55	(1)	1.80	3	10	7	13	a	4	3	2	0	0	58	85.3	50	86.2	73.5
Trans Cost	6.84	(4)	9.05	(10)	-2.21'	4	7	a	a	12	3		0	0	0	37	54.4	33	89.2	48.5
Merge/Acq	6.93	(5)	8.61	(8)	-1.68	lo	4	3	6	1	0	0	1	0	0	28	41.2	25	89.3	36.8
Margins	7.32	(6)	6.50	(4)	0.82	7	4	5	3	3	3	0		11	0	51	75.0	27	52.9	39.7
Mktg Serv	7.48	(7)	7.99	(7)	-0.51	3	5	7	1	10	5	3	2	0	0	38	55.9	36	94.7	52.9
Incr Revenue	7.58	(8)	7.82	(5)	-0.24	6	5	5	2	2	1	0		11	0	23	33.8	23	100.0	33.8
Blend/Clean	7.76	(9)	9.15	(11)	-1.39	1	2	9	3	2		2	110		0	22	32.4	21	95.5	30.9
Disc/Prem	a.20	(10)	a.73	(9)	-0.53	1	17		2	7	3	0	0	1	0	30	44.1	22	73.3	32.3
Chg Mgmt	8.89	(11)	10.41	(15)	-1.50'	2		10	2	13	2		0	0	0	11	16.2	11	100.0	16.2
New Crops	9.00	(12)	9.27	(12)	-0.27	10		2	3	12		10	2		0	19	27.9	12	63.2	17.6
Elim Prod	9.15	(13)	10.27	(14)	-1.12	0		10	1	0	4	2		10	1	14	20.6	10	71.4	14.7
Decr Costs	9.22	(14)	7.92	(6)	1.30	0		12	1	1	4	0	0	0	0	9	13.4	9	100.0	13.4
Close Plant	9.49	(15)	10.15	(13)	-0.66	2		11	1	0	1	0	0	0	0	7	10.3	6	85.7	8.8
Total						68	67	66	65	53	37	la	9	6	1					

[a] Merch Pract = Change merchandising practices; Labor = Decrease costs through better labor utilization; New Patron = Attracting new patrons; Trans Cost = Lowenng transportation costs; Merge/Acq = Merger or acquisition; Margins = Increase margins; Mktg Serv = Adding or dropping marketing services: Incr Revenue = Increase revenue; Blend/Clean = Change blending and cleaning practices; Disc/Prem = Change discounts and premiums; Chg Mgmt = Change internal cooperative structure; New Crops = Handle new types of crops: Elim Prod = Eliminate product line: Deer Costs = Decrease costs: Close Plant = Decrease costs through plant closing.

[b] Percent of managers selecting specified strategy.

* Represents a .05 percent level of significance for differences between the two years.

Managers for the winter wheat area ranked more efficient use of labor as the most successful management strategy (3rd in 1988). Attracting new patrons ranked 3rd, with a significantly lower index score than in the first study. Mergers and acquisitions, although not changing relative rankings, were considered successful (78 percent) by those who tried them.

Progressiveness

There were major differences between groups in the progressiveness category. Managers of progressive cooperatives ranked changing merchandising practices lst, but mergers and acquisitions 2nd (appendix tables B-4 to B-6). This compares with 10th and 7th for intermediate and conservative managers, respectively. All managers found these strategies successful.

Conservative managers ranked fewer strategies than intermediate and progressive managers. It also appears conservative managers were unable to implement many of the changes they thought practical. This may have been because they were less aggressive than others in seeking alternatives. Due to the smaller size of conservative cooperatives, their managers had less flexibility in trying new strategies.

More efficient use of labor was the most successful strategy tried by the conservative managers (4th in 1988). Increasing margins dropped from 3rd to 6th. Managers of conservative cooperatives said they were successful in increasing margins only 37.5 percent of the time. Although mergers/acquisitions were ranked 7th, X3 percent of the conservative managers who tried them reported success.

Size

The size of a cooperatives may affect the strategies that are available to managers and their ability to implement them. In large cooperatives, changing merchandising practices, using labor efficiently, and adding new patrons were considered successful strategies by more than 83 percent of the managers (appendix tables B-7 to B-Y). Decreasing transportation costs moved from Yth to 4th. Nine managers of larger cooperatives felt merger/acquisitions were successful. The importance of changing blending and cleaning practices moved to 7th from 13th, reflecting success by all managers who attempted to compete more aggressively in grain merchandising.

Medium-sized elevator managers ranked changing merchandising practices 1st in success and labor usage 2nd in 1992 (5th in 1988). Attracting new patrons, considered most practical by medium-sized elevator managers, dropped to 3rd as a successful strategy. These managers ranked increasing margins 3rd in practicality in 1988, but only 10th in 1992. All 17 managers, who added or reduced marketing services, found that a worthwhile strategy.

In attempting to recoup losses from reduced Government storage payments, small elevators adopted cost-cutting strategies to become more competitive with larger elevators. Many small elevators made more efficient use of labor and Attempted to attract new patrons. Small elevators also changed merchandising practices (3rd from 2nd), cut transportation costs (4th from 13th), and added marketing services (5th from 8th). Merger/acquisitions were successful in 7 of Y small cooperatives.

Summary and Implications

Today's cooperative grain marketing system faces a number of challenges because of changes in the system during the late 1980s and early 1990s. Shifts in farm policies forced grain marketers to respond to market signals rather than Government programs. This report examined those factors that forced cooperatives to change operating practices and reexamines management strategies that cooperatives implemented and the success of these strategies.

This was a followup to a 1988 study. Seventy-one of the 87 managers from the 1988 study responded. The cooperatives were located in seven States which covered the Corn Belt, hard red spring wheat, and hard red winter wheat production areas. Responses were classified by production area, the cooperative's progressiveness, and its size.

As in 1988, reduced Government storage payment was ranked 1st among factors affecting cooperatives. Other farm programs was ranked 2nd and the farm crisis was a close 3rd. The score for other farm programs increased (less effect) from the first study. Cooperative managers believed the effect of the farm crisis was greater in 1992 than in 1988. Factors such as interest rates, introduction of unit trains, mergers, and rail abandonment ***were*** ranked the same as in 1988.

In 1988, managers ranked 15 management strategies based on their practicality. In this study, managers identified strategies they tried and then ranked them according to their levels of success.

The top three management strategies in 1992 were changing merchandising practices, using labor more efficiently, and attracting new patrons. Eightyfive percent (58) of the managers successfully changed merchandising practices. The top three in 1988 were attracting new patrons, changing merchandising practices, and more efficient utilization of labor.

The remaining strategies fall into two categories-30 to SO percent success rate and least successful. However, managers who implemented these strategies considered them very successful.

This study illustrates two points. First, the key element for the success of cooperative grain elevators is the development of good merchandising skills and practices. This confirms earlier research. Grain marketing cooperatives must continue to improve in the management area.

Second, labor costs run between 35 and 45 percent of a cooperative elevator's operating cost, the biggest expense. To achieve maximum productivity of labor, managers moved employees to do other jobs during slack periods.

Managers can attract new patrons through the prices charged and added services. However, not all cooperative elevators can implement these changes at the same time. Some cooperatives gained new patrons from mergers and the addition of facilities. Managers also noted that producers increasingly shop for the best prices and services and patronize a number of elevators.

As a final note, all 15 of the suggested management strategies were tried. Every alternative was successful for at least 6 of the 71 managers. This suggests that any individual cooperative elevator should evaluate each alternative to determine its applicability. Restructuring and downsizing will continue in the industry, but each cooperative has a variety of management strategies available to help it survive.

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Appendix Table A1— **Frequency distribution of factors affecting financial status of cooperatives by managers of 23 spring wheat cooperatives, 1992**

Factor	Frequency ranking 1	2	3	4	5	6	7	8	Total	Percent	Mean	Rank
Govt. Storage Program	12	6	2	1	1	0	0	0	22	(96)	1.77	(1)
Other Farm Programs	2	2	2	6	1	2	1	0	16	(70)	3.75	(2)
Farm Crisis	1	2	4	1	6	1	0	0	15	(65)	3.80	(3)
Interest Rate	1	5	3	2	3	2	1	0	17	(74)	3.64	(4)
Unit Trains Introduction	1	3	7	2	1	2	3	0	19	(83)	3.89	(5)
Mergers	4	2	0	2	1	3	3	0	15	(65)	4.00	(6)
Rail Abandonment	1	0	2	2	1	1	2	2	11	(48)	5.09	(7)
Other	1	2	0	0	0	0	0	2	5	(22)	4.20	(8)
Total	22	22	20	16	14	11	10	4				

Appendix Table A2— **Frequency distribution of factors affecting financial status of cooperatives by managers of 26 corn cooperatives, 1992**

Factor	Frequency ranktng 1	2	3	4	5	6	7	8	Total	Percent	Mean	Rank
Govt. Storage Program	14	5	1	1	1	0	1	0	23	(88)	1.87	(1)
Other Farm Programs	2	3	7	5	2	1	1	0	21	(81)	3.43	(4)
Farm Crisis	1	4	4	5	3	0	0	0	17	(65)	3.29	(3)
Interest Rate	1	5	8	5	3	0	0	0	22	(85)	3.18	(2)
Unit Trains Introduction	2	2	1	0	3	4	2	0	14	(54)	4.43	(5)
Mergers	0	4	0	2	2	4	3	1	16	(62)	4.94	(6)
Rail Abandonment	1	1	0	0	0	4	5	2	13	(5)	6.00	(7)
Other	3	0	0	0	0	0	0	0	3	(12)	1.00	(8)
Total	25	24	21	18	14	13	12	3				

Appendix Table A3— **Frequency distribution of factors affecting financial status of cooperatives by managers of 22 winter wheat cooperatives, 1992**

Factor	Frequency ranktng 1	2	3	4	5	6	7	8	Total	Percent	Mean	Rank
Govt. Storage Program	15	3	2	2	0	0	0	0	22	(100)	1.59	(1)
Other Farm Programs	2	7	4	0	2	0	0	0	15	(68)	2.53	(2)
Farm Crisis	2	3	4	3	0	1	0	0	13	(54)	2.92	(3)
Interest Rate	0	2	5	3	4	1	3	0	18	(82)	4.33	(5)
Unit Trains Introduction	1	0	2	2	1	3	2	0	11	(50)	4.73	(6)
Mergers	0	2	3	5	4	2	1	0	17	(77)	4.24	(4)
Rail Abandonment	0	0	0	2	0	3	4	1	10	(45)	6.20	(7)
Other	2	5	0	0	1	0	0	0	8	(36)	2.12	(8)
Total	22	22	20	17	12	10	10	1				

Appendix Table A4— **Frequency distribution of factors affecting financial status of cooperatives by managers of 25 progressive grain marketing cooperatives, 1992**

Factor	Frequency ranking 1	2	3	4	5	6	7	8	Total	Percent	Mean	Rank
Govt. Storage Program	14	6	2	0	1	0	0	0	23	(92)	1.61	(1)
Other Farm Programs	3	4	4	3	1	1	2	0	18	(72)	3.33	(3)
Farm Crisis	2	4	6	1	2	0	0	0	15	(60)	2.80	(2)
Interest Rate	1	2	7	5	0	0	1	0	21	(84)	3.71	(4)
Unit Trains Introduction	1	2	4	3	1	3	1	0	15	(60)	3.93	(5)
Mergers	1	3	1	4	3	3	2	1	18	(72)	4.50	(6)
Rail Abandonment	1	0	0	0	0	4	5	1	11	(44)	6.18	(7)
Other	1	3	0	0	0	0	0	1	5	(20)	3.00	(8)
Total	24	24	24	16	8	11	11	3				

Appendix Table A5— **Frequency distribution Of factors affecting financial status Of cooperatives by managers of 28 intermediate grain marketing cooperatives, 1992**

Factor	Frequency ranking 1	2	3	4	5	6	7	8	Total	Percent	Mean	Rank
Govt. Storage Program	18	4	2	2	1	0	1	0	28	(100)	1.86	(1)
Other Farm Programs	3	5	6	3	3	2	0	0	22	(88)	3.18	(2)
Farm Crisis	1	3	5	6	5	1	0	0	21	(75)	3.67	(3)
Interest Rate	0	7	4	4	3	2	2	0	22	(88)	3.72	(4)
Unit Trains Introduction	1	2	3	1	4	3	3	0	18	(64)	4.44	(5)
Mergers	1	3	1	3	2	6	3	0	19	(68)	4.68	(6)
Rail Abandonment	1	1	1	3	0	2	5	3	16	(57)	5.56	(7)
Other	3	2	0	0	1	0	0	1	7	(28)	2.86	(8)
Total	28	27	22	22	19	16	14	4				

Appendix Table A6— **Frequency distribution Of factors affecting financial status Of cooperatives by managers of 17 conservative cooperatives, 1992**

Factor	Frequency ranking 1	2	3	4	5	6	7	8	Total	Percent	Mean	Rank
Govt. Storage Pogram	9	4	1	2	0	0	0	0	16	(94)	1.75	(1)
Other Farm Programs	0	3	3	5	1	0	0	0	12	(71)	3.33	(2)
Farm Crisis	1	2	1	2	2	1	0	0	9	(53)	3.56	(3)
Interest Rate	1	3	5	1	2	1	1	0	14	(82)	3.50	(4)
Unit Trains Introduction	2	1	2	0	0	3	3	0	11	(65)	4.45	(6)
Mergers	2	2	1	2	2	0	2	0	11	(65)	3.72	(5)
Rail Abandonment	0	0	1	1	1	2	1	1	7	(41)	5.57	(7)
Other	2	2	0	0	0	0	0	0	4	(24)	1.50	(8)
Total	17	17	14	13	8	7	7	1				

Appendix Table A7— **Frequency distribution of factors affecting financial status of cooperatives by managers of 21 small (storage capacity) cooperatives, 1992**

Factor	Frequency ranking 1	2	3	4	5	6	7	8	Total	Percent	Mean	Rank
Govt. Storage Pogram	10	4	3	1	2	0	1	0	21	(100)	2.29	(1)
Other Farm Programs	3	3	2	2	2	2	2	1	15	(71)	3.47	(4)
Farm Crisis	2	3	3	5	1	1	0	0	15	(71)	3.20	(2)
Interest Rate	1	7	4	2	3	0	2	0	19	(90)	3.37	(3)
Unit Trains introduction	0	2	5	2	2	5	1	0	17	(81)	4.35	(5)
Mergers	1	0	1	4	3	3	4	1	17	(81)	5.24	(6)
Rail Abandonment	1	0	1	2	0	3	5	2	15	(71)	4.73	(7)
Other	3	1	0	0	0	0	0	0	4	(19)	1.25	(8)
Total	21	20	19	18	13	14	15	4				

Appendix Table A8— **Frequency distribution of factors affecting financial status of cooperatives by managers of 24 medium (storage capacity) cooperatives, 1992**

Factor	Frequency ranking 1	2	3	4	5	6	7	8	Total	Percent	Mean	Rank
Govt. Storage Pogram	15	6	1	0	0	0	0	0	22	(92)	1.36	(1)
Other Farm Programs	1	5	6	5	0	1	1	0	19	(79)	3.26	(3)
Farm Crisis	2	4	4	3	4	0	0	0	17	(71)	3.18	(2)
Interest Rate	0	3	4	4	5	3	0	0	19	(79)	4.05	(4)
Unit Trains Introduction	3	0	3	0	2	2	4	0	15	(63)	4.40	(5)
Mergers	1	3	1	2	2	4	2	0	15	(63)	4.40	(5)
Rail Abandonment	0	1	1	1	0	3	4	2	12	(50)	5.92	(7)
Other	1	1	0	0	0	0	0	1	3	(13)	3.67	(8)
Total	23	23	20	15	13	13	11	3				

Appendix Table A9— **Frequency distribution Of factors affecting financial status Of cooperatives by managers of 26 large (storage capacity) cooperatives, 1992**

Factor	Frequency ranking 1	2	3	4	5	6	7	8	Total	Percent	Mean	Rank
Govt. Storage Pogram	14	4	1	3	0	0	0	0	24	(92)	1.63	(1)
Other Farm Programs	3	3	5	4	3	0	0	0	18	(69)	3.11	(2)
Farm Crisis	0	2	5	1	4	1	0	0	13	(50)	3.77	(5)
Interest Rate	1	2	8	4	2	2	0	0	19	(73)	3.63	(4)
Unit Trains Introduction	1	3	2	1	1	2	2	0	12	(46)	4.00	(6)
Mergers	2	5	1	3	2	2	1	0	16	(62)	3.50	(3)
Rail Abandonment	1	0	0	1	0	2	2	1	7	(27)	5.56	(7)
Other	2	5	0	0	1	0	0	1	9	(35)	2.78	(8)
Total	26	24	22	17	13	9	5	2				

Appendix Table B1-- **Frequency distribution of rankings of management strategies attempted, index, and differences in indices from 1988 to 1992 by managers of 23 spring wheat grain marketing cooperatives**

Strategy [a]	Index					Frequency distribution of rankings										Tried [b]		Successful		Percent [c]
	1992		1988		Diff	1	2	3	4	5	6	7	8	9	10	#	%	#	%	total
Merch Pract	4.80	(1)	6.56	(4)	-1.76	5	4	0	5	2	0	101			0	1	86.4	18	94.7	81 8
Labor	6.15	(3)	5.93	(3)	0.21	2	4	1	1	4	0	1	0	0	0	15	60.2	13	86.7	59.1
New Patron	5.22	(2)	3.61	(1)	1.60'	0	2	3	5	3	1	2	0	0	0	19	86.4	16	84.2	72 7
Trans Cost	6.41	(5)	9.24	(10)	-2.83'	2	3	2	4	0	0	0	0	0	0	12	54.6	il	91.7	50.1
Merge/Acq	7.26	(8)	10.37	(13)	-3.11*	3	0	1	11	0	0		0	0	0	6	273	6	100.0	27 3
Margins	6.83	(7)	3.87	(2)	2.95'	3	2	2	3	0	2	0	0	0	0	19	86.4	9	47 4	40.9
Mktg Serv	7.83	(9)	8.50	(9)	-0.76	1	2	3	0	4	2	0	1	0	0	14	63.6	13	92.9	59 1
Incr Revenue	6.24	(4)	8 02	(7)	-1.78	4	2	2	0	1	0	0	1	0	0	10	45.4	10	100 0	45 4
Blend/Clean	6.46	(6)	9.32	(11)	-2.86'	0	2	3	2	1	0		110		0	10	45.4	10	1 00.0	45.4
Disc/Prem	8.16	(10)	8.17	(8)	-0 04	0	14	1	1		0	0	0	1	0	11	50.0	8	72.7	36 4
Chg Mgmt	8.63	(12)	10.32	(12)	-1 69	1	0	0	0	1	0	1	0	0	0	3	13 6	3	100.0	13.6
New Crops	8.43	(11)	7.52	(6)	0.91	0	0	1	2	0	2	0		01	0	7	31.8	6	857	27.3
Elim Prod	8.91	(14)	11.19	(15)	-2.28'	0	0	0	0	0	1	11		0	0	4	18.2	3	75.0	13.7
Decr Costs	8.60	(13)	6.67	(5)	2.13	0	0	0	0	0	3	0	0	0	0	3	13.6	3	1000	13.6
Close Plant	8.98	(15)	10.59	(14)	-1.61'	1	0	0	1	0	1	0	0	0	0	3	13.6	3	1000	13.6
Total						22	22	22	22	18	12	7	4	3	0					

[a] Merch Pract = Change merchandising practices Labor = Decrease costs through better labor utilization New Patron = Attracting new patrons, Trans Cost = Lowenng transportation costs Merge/Acq = Merger or acquisition; Margins = Increase margins, Mktg Serv = Adding or dropping marketing services; Incr Revenue = Increase revenue, Blend/Clean = Change blending and cleaning practices; Disc/Prem = Change discounts and premiums, Chg Mgmt = Change Internal cooperative structure New Crops = Handle new types of crops, Elim Prod = Eliminate product line; Decr Costs = Decrease costs, Close Plant = Decrease costs through plant closing

[b] Percent of managers selecting specified strategy.

* Represents a .05 percent level of significance for differences between the two years.

Appendix Table B2 - **Frequency distribution of rankings of management strategies attempted, index, and differences in ilndices from 1988 to 1992 by managers of 26 corn grain marketing cooperatives**

	Index					Frequency distribution of rankings										Tned [b]		Successful		Percent of
Strategy [a]	1992		1988		Diff	1	2	3	4	5	6	7	8	9	10	#	%	#	%	total
Merch Pract	3.10	(1)	3.48	(1)	-0.38	8	3	3	4	3	1	0	0	0	0	22	91.7	22	100.0	91.7
Labor	4.46	(2)	6.02	(3)	-1.56	3	6	2	3	3	1	0	0	0	0	20	83.3	18	90.0	75.0
New Patron	4.86	(3)	3.50	(2)	1.36	3	5	1		3	3	1		110	0	21	87.5	18	85.7	75.0
Trans Cost	6.19	(5)	9.12	(9)	-2.93'	1	2	5	3	1	1	0	0	0	0	14	58.3	13	92.9	54.2
Merge/Acq	5.98	(4)	7.63	(5)	-1.65	5	2	2	3	0	0	0	0	0	0	13	54.2	12	92.3	50.0
Margins	8.35	(8)	8.00	(8)	0.35	1	2	0	0	2	0	0	0	0	0	14	58.3	5	35.7	20.8
Mktg Serv	6.27	(6)	7.21	(4)	-0.94	0	3	3	14		2	10		0	0	14	58.3	14	100.0	58.3
Incr Revenue	7.46	(7)	7.62	(6)	-0.15	2	0	3	2	0	1	0	0	0	0	8	33.3	8	100.0	33.3
Blend/Clean	8.58	(9)	9.19	(10)	-0.61	0	0	3	10		1	0	0	0	0	6	25.0	5	83.3	20.8
Disc/Prem	8.62	(10)	9.48	(11)	-0.86	0	0	0	1	2	3	0	0	0	0	9	37.5	6	66.7	25.0
Chg Mgmt	8.79	(11)	10.44	(15)	-1.65'	1	1	0	10		0	10		0	0	4	16.7	4	100.0	16.7
New Crops	9.52	(13)	10.42	(14)	-0.90	0	0	0	0	1	0	1	0	0	0	4	16.7	2	50.0	8.4
Elim Prod	9.54	(14)	9.83	(12)	-0.29	0	0	0	0	0	1	10		0	0	3	12.5	2	66.7	8.3
Decr Costs	9.13	(12)	7.96	(7)	1.17	0	0	1	10		1	0	0	0	0	3	12.5	3	100.0	12.5
Close Plant	9.92	(15)	10.09	(13)	-0.17	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0.0
Total						24	24	23	23	19	13	5	1	0	0					

[a] Merch Pract = Change merchandising practices; Labor = Decrease costs through better labor utilization; New Patron = Attracting new patrons; Trans Cost = Lowering transportation costs Merge/Acq = Merger or acquisition; Margins = Increase margins; Mktg Serv = Adding or dropping marketing services; Incr Revenue = Increase revenue; Blend/Clean = Change blending and cleaning practices; Disc/Prem = Change discounts and premiums; Chg Mgmt = Change internal cooperative structure; New Crops = Handle new types of crops: Elim Prod = Eliminate product line; Decr Costs = Decrease costs; Close Plant = Decrease costs through plant closing.

[b] Percent of managers selecting specified strategy

. Represents a .05 percent level of significance for differences between the two years

Appendix Table B3— **Frequency distribution of rankings of management strategies attempted, index, and differences in indices from 1988 to 1992 by managers of 22 winter wheat grain marketing cooperatives**

Strategy [a]	Index					Frequency distribution of rankings										Tned [b]		Successful		Percent of
	1992		1986		Diff	1	2	3	4	5	6	7	8	9	10	#	%	#	%	total
Merch Pract	4.90	(2)	3.18	(1)	1.73	4	2	3	3	4	0	0	0	0	0	17	77.3	16	94.1	72.2
Labor	4.02	(1)	6.61	(3)	-2.59'	6	6	1	3	0	1	1	0	0	0	18	81.8	18	100.0	81.8
New Patron	6.04	(3)	3.57	(2)	2.48'	0	3	3	5	2	2	0	1	0	0	18	81.8	15	83.3	68.1
Trans Cost	8.04	(7)	8.77	(9)	-0.73	1	2	1	10	1	3		0	0	0	11	50.0	9	81.8	40.9
Merge/Acq	7.70	(5)	7.91	(5)	-0.21	2	2	0	2	0	0	0	1	0	0	9	40.9	7	77.8	31.8
Margins	6.61	(4)	7.48	(4)	-0.86	3	0	3	3	1	1	0	1	1	0	18	81.8	13	72.2	59.1
Mktg Serv	8.55	(9)	8.27	(7)	0.27	2	0	1	0	2	1	2		10	0	10	45.5	9	90.0	40.5
Incr Revenue	9.11	(12)	7.86	(6)	1.25	0	3	0	0	10		0	01		0	5	22.7	5	100.0	22.7
Blend/Clean	8.16	(8)	8.93	(10)	-0.77	1	0	3	0	1	1	0	0	0	0	6	27.3	6	100.0	27.3
Disc/Prem	7.77	(6)	8.41	(8)	-0.64	1	0	3	0	4	0	0	0	0	0	10	45.5	8	80.0	36.4
Chg Mgmt	9.29	(13)	10.45	(15)	-1.15	0	0	0	10	3	0		0	0	0	4	18.2	4	100.0	18.2
New Crops	8.98	(11)	9.75	(12)	-0.77	1	0	1	10		0	0	01		0	8	36.4	4	50.0	18.2
Elim Prod	8.93	(10)	9.84	(14)	-0.91	0	1	0	1	0	2	0	0	0	1	7	31.8	5	71.4	22.7
Decr Costs	9.77	(15)	9.18	(11)	0.59	0	1	1	0	1	0	0	0	0	0	3	14.3	3	100.0	14.3
Close Plant	9.50	(14)	9.77	(13)	-0.27	1	1	1	0	0	0	0	0	0	0	4	18.2	3	75.0	13.7
Total						22	21	21	20	16	12	6	3	3	1					

[a] Merch Pract = Change merchandising practices; Labor = Decrease costs through better labor utilization; New Patron = Attracting new patrons; Trans Cost = Lowenng transportation costs; Merge/Acq = Merger or acquisition; Margins = Increase margins: Mktg Serv = Adding or dropping marketing services: Incr Revenue = Increase revenue; Blend/Clean = Change blending and cleaning practices; Disc/Prem = Change discounts and premiums; Chg Mgmt = Change internal cooperative structure; New Crops = Handle new types of crops; Elim Prod = Eliminate product line; Decr Costs = Decrease costs; Close Plant = Decrease costs through plant closing.

[b] Percent of managers selecting specified strategy.

* Represents a .05 percent level of significance for differences between the two years.

Appendix Table 64 **Frequency distribution of rankings of management strategies attempted, index, and differences in indices from 1988 to 1992 [illegible] managers of 25 progressive grain marketing cooperatives**

Strategy [a]	Index 1992		Index 1988		Diff	Frequency distribution of rankings 1	2	3	4	5	6	7	8	9	10	Tried [b] #	Tried [b] %	Successful #	Successful %	Percent of total
Merch Pract	3.62	(1)	4.38	(1)	-0.76	5	6	2	2	5	0	1	0	1	0	22	91.7	22	100.0	91 i
Labor	5.10	(3)	5.62	(3)	-0.52	3	3	2	2	5	2	2	0	0	0	19	79.2	19	100.0	79.2
New Patron	5.68	(4)	4.38	(2)	1.30	0	3	2	4	5	2	3	1	0	0	21	87.5	20	95.2	a3 3
Trans Cost	5.76	(5)	9.08	(10)	-3.32*	1	2	4	5	0	i	2	0	0	0	17	70.8	15	88.2	62.4
Merge/Acq	4.98	(2)	7.56	(6)	-2.58*	5	3	2	3	0	0	0	1	0	0	14	58.3	14	1000	50.3
Margins	7.52	(8)	7.66	(7)	-0.14	3	2	0	1	0	3	0	1	0	0	17	70 8	10	58 8	41.6
Mktg Serv	8.62	(9)	6.64	(4)	1 98	3	0	3	0	2	1	2	2	0	0	14	583	13	92 9	54 2
Incr Revenue	7.10	(6)	7.12	(5)	-0.02	3	2	3	1	0	0	0	1		0	11	458	11	1000	458
Blend/Clean	7.30	(7)	10.18	(13)	-2.88*	0	0	2	2	2	2	1		0	0	10	41.7	10	100 0	4 · 7
Disc/Prem	8.72	(10)	8.30	(9)	0.42	0	1	2	1	1	0	0	0	1	0	a	33.3	6	75.0	25.0
Chg Mgmt	9.46	(14)	10.50	(14)	-1.04	0	0	0	0	0	1	1	0	0	0	2	a.3	2	100.0	8.3
New Crops	9.04	(11)	9.92	(11)	-0.88	1	0	0	1	0	1	0	0	2	0	9	37.5	5	55.6	20.9
Elim Prod	9.14	(12)	10.66	(15)	-1.52	0	0	0	0	0	1	1	1	0	1	7	29.2	4	57.1	16.7
Decr Costs	9.22	(13)	7.96	(8)	1.26	0	1	0	0	0	3	0	0	0	0	4	17.4	4	100.0	1/ 4
Close Plant	9.86	(15)	10.04	(12)	-0.18	0	0	1	1	0	1	0	0	0	0	3	12.5	3	100.0	12.5
Total						24	22	23	23	20	18	13	8	5	1					

[a] Merch Pract = Change merchandising practices, Labor = Decrease costs through better labor utilization, New Patron = Attracting new patrons: Trans Cost = Lowering transportation costs, Merge/Acq = Merger or acquisition; Margins = Increase margins; Mktg Serv = Adding or dropping marketing services Incr Revenue = Increase revenue' Blend/Clean = Change blending and cleaning practices; Disc/Prem = Change discounts and premiums: Chg Mgmt = Change internal cooperative structure New Crops = Handle new types of crops: Elim Prod = Eliminate product line; Decr Costs = Decrease costs, Close Plant = Decrease costs through plant closing

[b] Percent of managers selecting specified strategy.

* Represents a .05 percent level of significance for differences between the two years

Appendix Table B5— **Frequency distribution of rankings of management strategies attempted, index, and differences in indices from 1988 to 1992 by managers of 29 intermediate grain marketing cooperatives**

Strategy [a]	Index					Frequency distribution of rankings										Tried [b]		Successful		Percent of
	1992		1988		Diff	1	2	3	4	5	6	7	8	9	10	#	%	#	%	total
Merch Pract	4.76	(1)	4.77	(2)	-0.01	7	1	3	8	2	1	0	0	0	0	22	78.6	22	100.0	78.6
Labor	5.47	(3)	5.74	(4)	-0.27	4	8	1	2	2	0	0	0	0	0	21	75.0	17	80.9	60.7
New Patron	5.16	(2)	3.00	(1)	2.16’	2	4	5	3	3	1	0	1	0	0	22	78.6	19	86.4	67.9
Trans Cost	7.66	(7)	9.10	(11)	-1.44	2	4	1	2	1	1	1	0	0	0	14	50.0	12	85.7	42.9
Merge/Acq	8.31	(10)	9.40	(12)	-1.09	3	0	0	3	0	0	0	0	0	0	8	28.6	6	75.0	21.5
Margins	7.16	(5)	5.17	(3)	1.98	3	2	3	1	1	0	0	0	1	0	23	82.1	11	47.8	39.2
Mktg Serv	6.98	(4)	8.67	(7)	-1.69*	0	4	1	1	4	4	1	0	0	0	16	57.1	15	93.8	53.6
Incr Revenue	7.21	(6)	8.10	(6)	-0.89	2	3	2	1	2	0	0	0	0	0	10	35.7	10	100.0	35.7
Blend/Clean	8.31	(11)	8.81	(8)	-0.50	1	0	4	1	0	0	0	0	0	0	7	25.0	6	85.7	21.4
Disc/Prem	8.09	(8)	8.91	(9)	-0.82	0	0	3	0	5	3	0	0	0	0	15	53.6	11	73.3	39.3
Chg Mgmt	8.29	(9)	10.45	(14)	-2.16’	2	1	0	1	1	1	1	0	0	0	7	25.0	7	100.0	25.0
New Crops	8.52	(12)	9.07	(10)	-0.55	0	0	2	2	1	1	1	0	0	0	9	32.1	7	77.8	24.9
Elim Prod	9.12	(15)	10.69	(15)	-1.57’	0	0	0	1	0	3	1	0	0	0	6	21.4	5	83.3	20.0
Decr Costs	8.91	(13)	7.74	(5)	1.17	0	0	2	1	1	1	0	0	0	0	5	17.9	5	100.0	17.9
Close Plant	9.00	(14)	10.36	(13)	-1.36	2	1	0	0	0	0	0	0	0	0	4	14.3	3	75.0	10.7
Total						28	28	27	27	23	16	5	1	1	0					

[a] Merch Pract = Change merchandising practices; Labor = Decrease costs through better labor utilization; New Patron = Attracting new patrons; Trans Cost = Lowenng transportation costs; Merge/Acq = Merger or acquisition: Margins = Increase margins: Mktg Serv = Adding or dropping marketing services; Incr Revenue = Increase revenue; Blend/Clean = Change blending and cleaning practices; Disc/Prem = Change discounts and premiums; Chg Mgmt = Change internal cooperative structure; New Crops = Handle new types of crops; Elim Prod = Eliminate product line; Decr Costs = Decrease costs: Close Plant = Decrease costs through plant closing.

[b] Percent of managers selecting specified strategy.

• Represents a .05 percent level of significance for differences between the two years.

Appendix Table B6— Frequency Distribution of Rankings of Management Strategies Attempted, Index, and Differences in indices from 1988 to 1992 by Managers of 17 Conservative Grain Marketing Cooperatives

Strategy [a]	Index					Frequency distribubon of rankrngs										Tned [b]		Successful		Percent of
	1992		1988		Diff	1	2	3	4	5	6	7	8	9	10	#	%	#	%	total
Merch Pract	4.14	(2)	3.73	(2)	0.41	5	2	1	2	2	0	0	0	0	0	14	87.5	12	85.7	75.0
Labor	3.53	(1)	7.73	(4)	-4.20'	4	5	1	3	0	0	0	0	0	0	13	81.3	13	100.0	81.3
New Patron	5.18	(3)	3.29	(1)	1.88	1	3	0	6	0	1	0	0	0	0	15	93.8	11	73.3	68.8
Trans Cost	7.03	(5)	8.91	(11)	-1.88	1	1	3	1	0	0	0	0	0	0	6	37.5	6	100.0	37.5
Merge/Acq	7.44	(7)	8.79	(10)	-1.35	2	1	1	0	1	0	0	0	0	0	6	37.5	5	83.3	31.2
Margins	7.29	(6)	7.06	(3)	0.23	1	0	2	1	2	0	0	0	0	0	11	68.7	6	54.6	37.5
Mktg Serv	6.65	(4)	8.79	(9)	-2.14	0	1	3	0	4	0	0	0	0	0	8	50.0	8	100.0	50.0
Incr Revenue	8.91	(10)	8.28	(7)	0.53	1	0	0	0	0	1	0	0	0	0	2	12.5	2	100.0	12.5
Blend/Clean	7.50	(8)	8.24	(6)	-0.74	0	2	3	0	0	0	0	0	0	0	5	31.3	5	100.0	31.3
Disc/Prem	7.61	(9)	9.03	(13)	-1.41	1	0	2	1	1	0	0	0	0	0	7	43.8	5	71.4	31.3
Chg Mgmt	9.09	(11)	10.21	(15)	-1.12	0	0	0	1	0	1	0	0	0	0	2	12.5	2	100.0	12.5
New Crops	9.76	(13)	8.68	(8)	1.09	0	0	0	0	0	0	0	0	0	0	1	6.3	0	0.0	0.0
Elim Prod	9.20	(12)	9.00	(12)	0.21	0	1	0	0	0	0	0	0	0	0	1	6.3	1	100.0	6.3
Decr Costs	9.76	(13)	8.18	(5)	1.59	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0.0
Close Plant	9.76	(13)	9.97	(14)	-0.21	0	0	0	0	0	0	0	0	0	0	0	0.0	0	0.0	0.0
Total						16	16	16	15	10	3	0	0	0	0					

[a] Merch Pract = Change merchandising practices; Labor = Decrease costs through better labor utilization; New Patron = Attracting new patrons; Trans Cost = Lowering transportation costs; Merge/Acq = Merger or acquisition; Margins = increase margins; Mktg Serv = Adding or dropping marketing services; Incr Revenue = Increase revenue; Blend/Clean = Change blending and cleaning practices; Disc/Prem = Change discounts and premiums: Chg Mgmt = Change internal cooperative structure; New Crops = Handle new types of crops; Elim Prod = Eliminate product line: Decr Costs = Decrease costs; Close Plant = Decrease costs through plant closing.

[b] Percent of managers selecting specified strategy.

. Represents a .05 percent level of significance for differences between the two years.

Appendix Table B7-- **Frequency distribution of rankings of management strategies attempted, index, and differences in indices from 1988 to 1992 by managers of 21 small (storage capacity) grain marketing cooperatives**

	Index					Frequency distribution of rankings										Tned [b]		Successful		Percent of
Strategy [a]	1992		1986		Diff	1	2	3	4	5	6	7	8	9	10	#	%	#	%	total
Merch Pract	6.11	(3)	3.97	(2)	2.14	4	0	3	4	1	1	0	0	0	0	15	71.4	13	86.7	61 9
Labor	5.11	(1)	6.10	(3)	-0.98	3	6	2	1	1	1	0	0	0	0	14	66.7	14	100.0	66.7
New Patron	5.21	(2)	3.36	(1)	1.86	1	5	2	4	0	0	1	0	0	0	16	76.2	13	81.3	61.9
Trans Cost	6.64	(4)	10.38	(13)	-3.74'	4	2	1	2	1	0	0	0	0	0	10	52.4	10	100.0	52.4
Merge/Acq	6.93	(6)	9.48	(11)	-2.55'	4	2	0	1	0	0	0	0	0	0	9	42.9	7	77.8	33.4
Margins	7.10	(7)	6.74	(4)	0.36	1	1	3	1	2	0	0	0	0	0	16	76.2	8	50.0	38 1
Mktg Serv	6.76	(5)	8.07	(8)	-1.31	1	2	1	1	5	1	0	0	0	0	11	52.4	11	100.0	52 4
Incr Revenue	a.55	(10)	7.29	(5)	1.26	2	0	1	0	0	0	0	0	0	0	3	14.3	3	100.0	14.3
Blend/Clean	8.38	(9)	8.38	(9)	0.00	1	1	1	1	0	0	0	0	0	0	4	19.1	4	100.0	19 1
Disc/Prem	7.70	(8)	7.81	(6)	-0.11	0	0	3	1	3	2	0	0	0	0	9	42.9	9	100.0	42 9
Chg Mgmt	9.64	(14)	10.74	(14)	-1.10	0	0	0	0	0	1	0	0	0	0	1	4.8		100.0	4 8
New Crops	8.76	(11)	8.62	(10)	0.14	0	0	1	1	0	1	1	0	0	0	5	23.8	4	80.0	19.0
Elim Prod	9.62	(13)	10.33	(12)	-0.71	0	0	0	0	0	1	0	0	0	0	1	4.8		100.0	4 8
Decr Costs	9.55	(12)	7.74	(7)	1.81'	0	0	0	1	0	0	0	0	0	0	1	4.8		100.0	4 8
Close Plant	9.88	(15)	11.00	(15)	-1.12	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0.0	0 0
Total						21	19	18	18	13	8	2	0	0	0					

[a] Merch Pract = Change merchandising practices; Labor = Decrease costs through better labor utilization New Patron = Attracting new patrons, Trans Cost = Lowenng transportation costs Merge/Acq = Merger or acquisition; Margins = Increase margins: Mktg Serv = Adding or dropping marketing services; Incr Revenue = Increase revenue. Blend/Clean = Change blending and cleaning practices; Disc/Prem = Change discounts and premiums: Chg Mgmt = Change internal cooperative structure, New Crops = Handle new types of crops Elim Prod = Eliminate product line; Decr Costs = Decrease costs, Close Plant = Decrease costs through plant closing.

[b] Percent of managers selecting specified strategy.

* Represents a .05 percent level of significance for differences between the two years

Appendix Table B8-- **Frequency distribution of rankings of management strategies attempted, index, and differences in indices from 1988 to 1992 by managers of 24 medium (storage capacity) grain marketing cooperatives**

	Index					Frequency distribution of rankings										Tried [b]		Successful		Percent of
Strategy [a]	1992		1988		Diff	1	2	3	4	5	6	7	8	9	10	#	%	#	%	total
Merch Pract	3.50	(1)	4.29	(2)	-0.79	a	3	2	2	5	0	0	0	0	0	20	87.0	20	100.0	87.0
Labor	5.29	(2)	7.94	(5)	-2.65'	5	5	0	2	2	1	0	0	0	0	18	78.3	15	83.3	65.2
New Patron	5.79	(3)	4.06	(1)	1.73	2	2	1	6	3	2	1	0	0	0	20	87.0	17	85.0	74.0
Trans Cost	7.35	(8)	8.48	(9)	-1.13	0	2	2	4	0	0	3	0	0	0	13	56.5	11	84.6	47.8
Merge/Acq	7.17	(6)	8.96	(10)	-1.79	2	1	2	2	1	0	0	1	0	0	10	43.5	9	90.0	39.2
Margins	8.35	(10)	6.00	(3)	2.35*	1	1	1	2	1	1	0	0	0	0	16	69.6	7	43.6	30.3
Mktg Serv	6.60	(4)	8.17	(8)	-1.56	1	1	4	0	4	4	1	2	0	0	17	73.9	17	100.0	73.9
Incr Revenue	6.65	(5)	8.00	(6)	-1.35	2	4	2	2	0	1	0	0	1	0	12	52.2	12	100.0	52.2
Blend/Clean	7.33	(7)	9.13	(11)	-1.79	0	1	4	2	1	1	0	0	0	0	10	43.5	9	90.0	39.2
Disc/Prem	8.52	(11)	8.10	(7)	0.42	0	0	2	0	3	1	0	0	0	0	11	47.8	5	54.6	26.1
Chg Mgmt	8.27	(9)	9.85	(14)	-1.58	2	1	0	1	0	1	1	0	0	0	6	26.1	6	100.0	26.1
New Crops	9.58	(14)	9.23	(12)	0.35	0	0	0	0	1	0	0	0	2	0	7	30.4	3	42.9	13.0
Elim Prod	9.06	(13)	9.71	(13)	-0.65	0	1	0	0	0	0	2	1	0	1	8	34.8	5	62.5	21.8
Decr Costs	8.88	(12)	7.58	(4)	1.29	0	1	2	0	1	2	0	0	0	0	6	27.3	6	100.0	27.3
Close Plant	10.27	(15)	10.50	(15)	-0.23	0	0	1	0	0	0	0	0	0	0	1	4.4	1	100.0	4.4
Total						23	23	23	23	22	14	8	4	3	1					

[a] Merch Pract = Change merchandising practices; Labor = Decrease costs through better labor utilization; New Patron = Attracting new patrons: Trans Cost = Lowenng transportation costs; Merge/Acq = Merger or acquisition; Margins = Increase margins; Mktg Serv = Adding or dropping marketing services; Incr Revenue = Increase revenue; Blend/Clean = Change blending and cleaning practices; Disc/Prem = Change discounts and premiums; Chg Mgmt = Change internal cooperative structure; New Crops = Handle new types of crops; Elim Prod = Eliminate product line; Decr Costs = Decrease costs; Close Plant = Decrease costs through plant closing,

[b] Percent of managers selecting specified strategy.

* Represents a .05 percent level of significance for differences between the two years.

Appendix Table B9— **Frequency distribution of rankings of management strategies attempted, index, and differences in indices from 1988 to 1992 by managers of 26 large (storage capacity) grain marketing cooperatives**

	Index					Frequency distribution of rankings										Tried [b]		Successful		Percent of
strategy [a]	1992		1988		Diff	1	2	3	4	5	6	7	8	9	10	#	%	#	%	total
Merch Pract	3.33	(1)	4.81	(3)	-1.48	5	6	1	6	3	0	1	0	1	0	23	95.8	23	100.0	95.8
Labor	4.29	(2)	4.62	(2)	-0.33	3	5	2	4	4	0	2	0	0	0	21	87.5	20	95.2	83.3
New Patron	5.04	(3)	3.25	(1)	1.79*	0	3	4	3	5	2	1	2	0	0	22	91.7	20	90.9	83.4
Trans Cost	6.52	(4)	8.50	(9)	-1.98	0	2	5	2	0	2	0	0	0	0	13	54.2	11	84.6	45.9
Merge/Acq	6.71	(6)	7.58	(5)	-0.87	4	1	1	3	0	0	0	0	0	0	9	37.5	9	100.0	37.5
Margins	6.54	(5)	6.77	(4)	-0.23	5	2	0	0	1	2	0	1	1	0	19	79.2	12	36.8	29.1
Mktg Serv	8.87	(13)	7.75	(6)	1.12	1	2	2	0	1	0	2	0	0	0	10	41.7	8	80.0	33.4
Incr Revenue	7.65	(7)	8.10	(7)	-0.44	2	1	2	0	2	0	0	1	0	0	8	33.3	8	100.0	33.3
Blend/Clean	7.65	(7)	9.81	(11)	-2.15	0	0	4	0	1	2	0	1	0	0	8	33.3	8	100.0	33.3
Disc/Prem	8.31	(9)	10.04	(13)	-1.73	1	1	2	1	1	0	0	0	1	0	10	41.7	7	70.0	29.2
Chg Mgmt	8.87	(13)	10.65	(14)	-1.78	0	0	0	1	1	1	1	0	0	0	4	16.7	4	100.0	16.7
New Crops	8.65	(11)	9.84	(12)	-1.19	1	0	1	2	0	1	0	0	0	0	7	29.2	5	71.4	20.8
Elim Prod	8.85	(12)	10.75	(15)	-1.90'	0	0	0	1	0	3	0	0	0	0	5	20.8	4	80.0	16.7
Decr Costs	9.28	(15)	8.38	(8)	0.90	0	0	0	0	0	2	0	0	0	0	2	8.3	2	100.0	8.3
Close Plant	8.44	(10)	9.15	(10)	-0.71	2	1	0	1	0	1	0	0	0	0	6	25.0	5	83.3	20.9
	Total		24	24	24	23	19	16	7	5	3	0								

[a] Merch Pract = Change merchandising practices; Labor = Decrease costs through better labor utilization; New Patron = Attracting new patrons; Trans Cost = Lowering transportation costs; Merge/Acq = Merger or acquisition; Margins = Increase margins; Mktg Serv = Adding or dropping marketing services; Incr Revenue = Increase revenue; Blend/Clean = Change blending and cleaning practices: Disc/Prem = Change discounts and premiums; Chg Mgmt = Change internal cooperative structure; New Crops = Handle new types of crops; Elim Prod = Eliminate product line; Decr Costs = Decrease costs; Close Plant = Decrease costs through plant closing.

[b] Percent of managers selecting specified strategy.

* Represents a .05 percent level of significance for differences between the two years,

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