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Three locally owned farmer co-operatives in west central Missouri were studied to determine the potential feasibility of forming a single economic entity by combining the 3 firms. This paper addresses the financial analysis, but not the political reality or the particular type of structure that would evolve. Its purpose is to develop a scenario that has possible application to other similar groups of cooperatives beyond the three discussed here. In later papers, we plan to explore the combination of a particular enterprise--such as feed--as an alternative to the total business combination discussed in this paper.

The 3 firms identified herein as A, B, and C form a triangle with no more than 20 miles separating any 2 locations. Firm A also has a branch rail loading facility located between firms B and C. The 3 firms have overlapping trade territories for feed, fertilizer, chemicals, other farm supplies, and grain marketing activities. All 3 firms are currently operating well under maximum capacity for all types of supply and grain marketing activities. Moreover, additional participation by member patrons in farm programs could reduce farm supply and grain marketing business done through cooperatives. This would place additional pressures on co-ops to either reduce services or restructure into more economically viable larger size units.

Income statements for the 3 firms for FY-85 were aggregated to identify total sales and expenses without assuming any adjustments to sales, cost of goods sold, or operating expenses. Then, adjustments were made to each of the items where changes would have been expected to occur, had the 3 firms been operated as a single entity, thereby approximating the adjusted net savings for FY-85.

Potential savings identified herein likely would not occur immediately, but begin occurring over time as the reorganization effort neared completion. The necessary time to complete the transition would depend on factors such as the season of year and how busy managers were with day-to-day activities, as well as the amount of dissension from member/patrons. Therefore, increased savings described might not begin to occur for 6 months to one year after reorganization was initiated.

Features of Restructuring:

-- One of the existing managers would become general manager. The other 2 managers would become assistant (or associate) managers. This would allow each of the 3 to develop specific areas of expertise in a particular type of service offered by the co-op, resulting in better member service. It would also allow managers better opportunities to do strategic planning in order to take increased advantage of emerging economic conditions.

-- The number of employees would be reduced, thereby reducing labor costs and allow better utilization of existing employees.

-- All locations would remain open and continue offering full service.

-- All locations would be linked by a central computer so as to enhance efficiencies in bookkeeping, inventory control, sales deliveries, accounts receivables, employee records, etc. at all locations. One co-op recently purchased a computer and software capable of serving all locations.

-- Feed and other delivery vehicles would serve all patrons without current duplication of routes. They would load at the closest location, rather than having to go back to home base, as is now the case. Or, perhaps the bulk feed business for all 3 co-op locations could be serviced by one facility operating at near full capacity (further analysis is underway on this issue and will be forthcoming in a separate study).

-- After combining, the 3 co-ops could operate with a significant reduction in inventory because much of the common inventory could be distributed among the individual locations to meet demand within a short time. Not all locations need to maintain a full inventory of all supplies, as is now the case.

-- Economies of size in farm supply purchases. In FY-85, $3.9 million or 49.5% of the total $7.9 million purchased by the 3 co-ops was for fertilizer, chemicals, feed, seed, and farm supplies. The remainder spent by the co-ops was to farmers, primarily for grain purchases. The purchasing power of 3 combined units should result in some economies of size for those items purchased for resale to farmers.

-- No additional debt incurred for combining the 3 firms -- stock would be issued instead. Whether this would be agreeable to each of the 3 existing locals is unknown.

-- The potential exists that railroad service to 2 of the 4 locations will be closing in the next few years. Service for the other facility currently located on the same line would continue but would have only indirect service into St. Louis and other grain marketing areas to the east. If this occurs, alternative arrangements will likely become essential to continue successful co-op grain marketing activities. If so, buying or building new facilities as a single combined entity would be much more economically viable than each of the existing co-ops investing individually.

Adjustments to financial data:

Basic financial data resulting from combining the 3 income statements and changes resulting from the following assumptions are included in attachment A.

Decreased cost:

-- Salary expense. Over 52 percent of total expenses for the 3 co-ops were for salary (including retirement, FICA, etc.). Combining the co-ops should result in a reduction of salary expense of 10 to 33 percent. No reduction would occur in salaries of managers; instead, emphasis would be placed on retaining excellent managers who would have more time than currently exists for strategic planning purposes. Those areas where significant salary savings would occur are bookkeeping, delivery, and bulk feed mill personnel. Considerable duplication currently exists in each of these areas and excess capacity is abundant (and probably increasing) in feed grinding and mixing.

-- Cost of purchases. Combined volume of the 3 co-ops should result in some economies of size for those supplies purchased for resale to farmers. About 50 percent of the combined co-op purchases were from off-farm sources in FY-85. By purchasing as a single unit, any reductions in prices paid and total costs to the co-op could be used to increase gross margins or could be passed through to member patrons as price reductions.

-- Interest expense. Reduced by 33 percent because of better inventory control, sharing of a common inventory among the 4 locations, and more careful (computerized) monitoring of inventory levels.

-- Delivery expense. Reduced by 25 percent because of fewer delivery vehicles, a higher utilization rate of those vehicles, and elimination of current duplication of routes.

-- Insurance. Reduced by 15 percent because of reduction in the level of inventory and reduced number of delivery trucks, employees, and directors. There should also be some size economies in purchasing insurance coverage.

-- Audit-tax preparation. Reduced by 33 percent since a single (more complicated) audit would be required. However, the enhanced data system should make more detailed information available for audit & tax preparation. It should also help management by providing improved detail for adjusting operating practices and making better management decisions.

-- Directors. Reduced 33 percent, which assumes about 50 percent of the total number of existing directors with more frequent meetings.

-- Subscriptions-dues. Reduced by 25 percent.

-- Office supplies & postage. Reduced by 25 percent.

<u>Increased cost:</u>

-- Meetings-travel. Increased by 25 percent since more coordination would be necessary to assure efficient operation of the combined facilities and to fully utilize the enhanced product and departmental specialization of the existing management team.

-- Income taxes. Increased by 33 percent since combined net income would result in increased taxes. This could be completely avoided if saving were allocated to member/patrons.

<u>No change assumed (should decrease):</u>

-- Depreciation. Should decrease because of sale or closing of some assets, especially delivery trucks.

-- Repairs. Should be less because of fewer vehicles, even though they would be used more intensively.

-- Accounting-data processing. Should be reduced because a single accounting system would replace the 3 individual systems currently in use. Current computer facilities should be quite adequate for a complete data system with minimal additional expense.

<u>No change assumed (could increase or decrease):</u>

-- Gross sales. Some patron-owners might be upset with the merger, thus decreasing sales. However, eliminating competition among the 3 units should enable the single combined entity to set prices such that acceptable margins on each type of service provided could be attained. Also, some services are handled by one co-op that are not handled by the other two. This service might be expanded to include the complete trade territory thereby enhancing total sales.

Also, as cost savings begin to occur, the co-op should be able to pass savings to members by reducing margins, resulting in lower prices for goods and services. This, in turn, will make the combined co-op locations more price competitive in their marketing areas, resulting in increased sales volume.

Results:

Merely combining the financial statements of the 3 co-ops without any adjustments results in a combined net income of $64,581 (after taxes and before member equity adjustments). This is the base figure to be used in estimating changes in net savings possible as the result of combining the 3 co-ops.

After making all the adjustments described previously except salary expense and cost of purchases, the combined net savings increased to $106 thousand, or an increase over the base case of 64 percent.

The most important cost saving factors for co-ops are: 1) reducing the cost of purchasing supplies to be resold to farmers; and 2) reducing salary expense. Since at least some cost reductions should be possible for both factors but the magnitude is unknown, a sensitivity analysis was used to estimate increased net savings resulting from a combination of these factors. Results are presented in table 1.

Based on discussions with co-op managers, a reduction in salary expense of 10-15 percent could readily be attained in the first year with no reduction in service just by reducing the bookkeeping staff, eliminating some feed processing and delivery personnel, and more fully utilizing the remaining employees. A reduction of 25 percent would be more difficult, although not impossible with additional automation, converting some of the bagged feed business to bulk, and time for necessary training, attrition, or other adjustments. These moves should not reduce the level of patron service and would likely increase service. A reduction of 33 percent in salary expenditure would take some time, require an "all-out" effort, and might reduce the level of service to some member patrons. Therefore, a 15-20 percent reduction seems reasonable within the first or second year. A 15 percent salary expense reduction would have increased net savings to $194 thousand while a 20 percent savings would have increased profits to $223 thousand.

Small percentage decreases in the cost of purchases for co-ops can result in large savings, even if price reductions are small. A reduction of only 1 percent for those supplies purchased from other than farmers would have resulted in a savings of about $140 thousand, or about 117 percent more than the base case (with no adjustment to salary expense). Accompanied by a 20 percent reduction in salary, the combined net savings would have increased to $257 thousand (before additional taxes and equity adjustments).

Thus, slightly more efficient purchasing practices and trimming salary expenditures by 20 percent would have resulted in increased net savings of almost three times greater than the base case. This result would be quite feasible with the 3 co-ops operating as one.

The largest increase in net savings (and one that would take some time to achieve) would obviously occur with larger reductions in both salary expense and cost of purchased supplies. With reductions of 33 percent and 4 percent, respectively, the combined net savings would have increased to $434 thousand in FY-85.

Table 1 -- Net profit (savings) realized by economies in supply purchasing and salary reductions when combining 3 locally-owned farmer cooperatives into a single economic entity, FY-85

% of actual salary expense	% of actual purchase cost from non-farm sources 100	99	98	97	96
	(thousand dollars)				
100	106	140	174	207	241
90	165	198	232	266	299
85	194	228	261	295	329
80	223	257	291	324	358
75	252	286	320	353	387
67	299	333	367	400	434

Appendix A

Cooperatives A, B, & C	Total All Departments	Unallocated Income & Expenses	Adjusting Factors	New Adjusted Values
GROSS SALES	7,904,124			7,904,124
-Returns-allowances	0			0
-Sales discounts	6,049			6,049
Net Sales	7,898,075	0		7,898,075
COST OF GOODS SOLD				
Beginning inv	986,125			986,125
Purchases	6,733,622		0.980	6,666,286
-Returns/allowances	0			0
Net cost of goods	7,719,747	0		7,652,411
-Closing inv	648,054			648,054
Cost of Goods Sold	7,071,693	0		7,004,357
GROSS PROFIT ON SALES	826,382	0		893,718
EXPENSES				
Salaries	291,738	292,814	0.80	467,642
Rent-lease	4,851	1,252	1.00	6,103
Depreciation	111,842	5,970	1.00	117,812
Interest	33,271	0	0.67	22,292
Repairs	32,975	0	1.00	32,975
Taxes	7,294	9,838	0.85	14,562
Insurance	34,238	14,921	0.85	41,785
Utilities	64,457	1,363	1.00	65,820
Licenses	0	2,099	0.85	1,784
Delivery-truck	59,578	0	0.75	44,684
Misc [prorate by sales]	1,075	1,236	1.00	2,311
Total Operating Expenses	641,319	329,493		817,769
NET OPERATING INCOME	185,063			
OTHER INCOME				
Grinding-mixing-drying	83,848		1.00	83,848
Grain brokerage commissions	294		1.00	294
Storage	50,915		1.00	50,915
Trucking	15,429	12,399	1.00	27,828
Equipment rental	27,038		1.00	27,038
Weighing	1,698		1.00	1,698
Seed cleaning	20,156		1.00	20,156
Misc labor	0		1.00	0
Patronage refunds	0	18,890	1.00	18,890
Interest & dividends	28,522	391	1.00	28,913

Cooperatives A, B, & C	Total All Departments	Unallocated Income & Expenses	Adjusting Factors	New Adjusted Values
Finance charges	0	48,669	1.00	48,669
Commission-state taxes	0	574	1.00	574
Cash variance	0	1,177	1.00	1,177
Collect debts writn-off	0	11,143	1.00	11,143
Membr eq-writn-off accts	0	22,890	1.00	22,890
Other	0	1,115	1.00	1,115
	0			
	0			
Total Other Income	227,900	117,248		345,148
OTHER EXPENSES				
Accounting-data processing	0	31,670	1.00	31,670
Legal-collection	0	6,759	1.00	6,759
Bad debts	49,116	1,990	1.00	51,106
Audit-tax preparation	0	15,361	0.67	10,292
Bank service charges	0	93	1.00	93
Advertising	3,328	5,814	1.00	9,142
Office supplies-postage	0	9,991	0.75	7,493
Plant supplies	0	3,954	1.00	3,954
Meetings	0	5,403	1.25	6,754
Travel	0	939	1.25	1,174
Directors	0	1,734	0.67	1,162
Subscriptions-dues	0	3,907	0.75	2,930
Contributions	0	437	1.00	437
Business advisory service	0	2,400	1.00	2,400
Trash & pest control	0	1,019	1.00	1,019
Income taxes	0	5,854	1.33	7,786
Other	0	126	1.00	126
Total Other Expenses	52,444	97,451		144,296
OTHER ADJUSTMENTS				
Sale of assets	0	17,123	1.00	17,123
Depreciation adjustment	0		1.00	0
Reevaluation of assets	0	(3,219)	1.00	(3,219)
Reevaluation of inven	0		1.00	0
Loss-no ins coverage	0	(146)	1.00	(146)
Membr equity-writn-off accts	0		1.00	0
Net Adjustment[+ or -]	0	13,758	1.00	13,758
ALLOCATION OF ADM EXP	(295,938)	(295,938)		
NET OPERATING INCOME (INCL CUSTOM OPERATIONS)				
NET INCOME BEFORE EQUITY ADJUSTMENTS	64,581			290,559