

A COST ANALYSIS OF FIVE COOPERATIVE ELEVATOR
ASSOCIATIONS IN NORTH CENTRAL OKLAHOMA

By

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INTRODUCTION

Farmers have exhibited their faith in the cooperative movement by joining local farmer cooperative organizations. There are different types of local farm cooperative organizations in Oklahoma. The two principal types in cooperative grain marketing are the single unit association which operates one or more stations in one locality, and the multiple unit association which operates subsidiary stations in more than one locality while maintaining an administrative headquarters in only one place. This study deals with single unit grain associations in addition to a proposed multiple grain association.

The success of a farmers cooperative grain association depends on several factors. One important factor is the actual need for the cooperative in a given locality. Another factor in measuring the success of a cooperative is the association's ability to render services to its patrons and control costs in order to maximize profits.

Purpose of Study

The purpose of this study is to compare the existing costs of five single unit cooperative associations with what the costs would be if a multiple unit were formed from the five single units. The five single unit cooperatives are located at Bison, Waukomis, Imo, Drummond and Ames.¹ In analyzing costs, three types of analysis are used, namely, departmental, seasonal, and fixed and variable. The costs of the projected multiple unit associations are compared with the total costs of the five associations operating individually.

¹This study is one phase of a project comparing the operations of multiple unit associations with single unit associations being undertaken by the Department of Agricultural Economics of Oklahoma A. and M. College.

Method of Procedure

A cost study of any business is based primarily on the expenses of that business. A cost analysis of more than one cooperative association is also concerned with a comparison of the costs of operation of all of the associations. In order to evaluate the cost structures of five associations, it was necessary to divide the study into four important phases of cost procedure. The four sections of the study are departmental costs, seasonality of costs, fixed and variable costs, and the projected proposal of a multiple cost structure derived from the five single organizations. The cost data of each section cover a three year period from 1946 through 1948.

The departmental phase of the study includes a division of the expenses in two parts. One part of the expenses goes to defray wheat marketing and storage costs, while the other part is charged to the sideline operations of the associations to operate costs. The managers' estimates were used along with a division of expenses according to gross earnings and the writer's knowledge of the operations of each cooperative.

The seasonality of expenses was analyzed by tabulating the total expenses for each month of the year by associations. This type of analysis makes it possible to determine seasonal variation in cost structure. Fixed and variable expenses were calculated on the fixity and variability of each individual expense item. The fixed and variable expense section makes it possible to determine the costs that are the most rigid in an organization.

The analysis of the proposed multiple unit association is based on the expenses of the single unit associations. These expenses were further analyzed into a proposed departmental, seasonal, and fixed and variable analysis. The method of procedure is given in more detail at the beginning of each section.

THE PHYSICAL AND FINANCIAL STRUCTURE OF THE ASSOCIATIONS

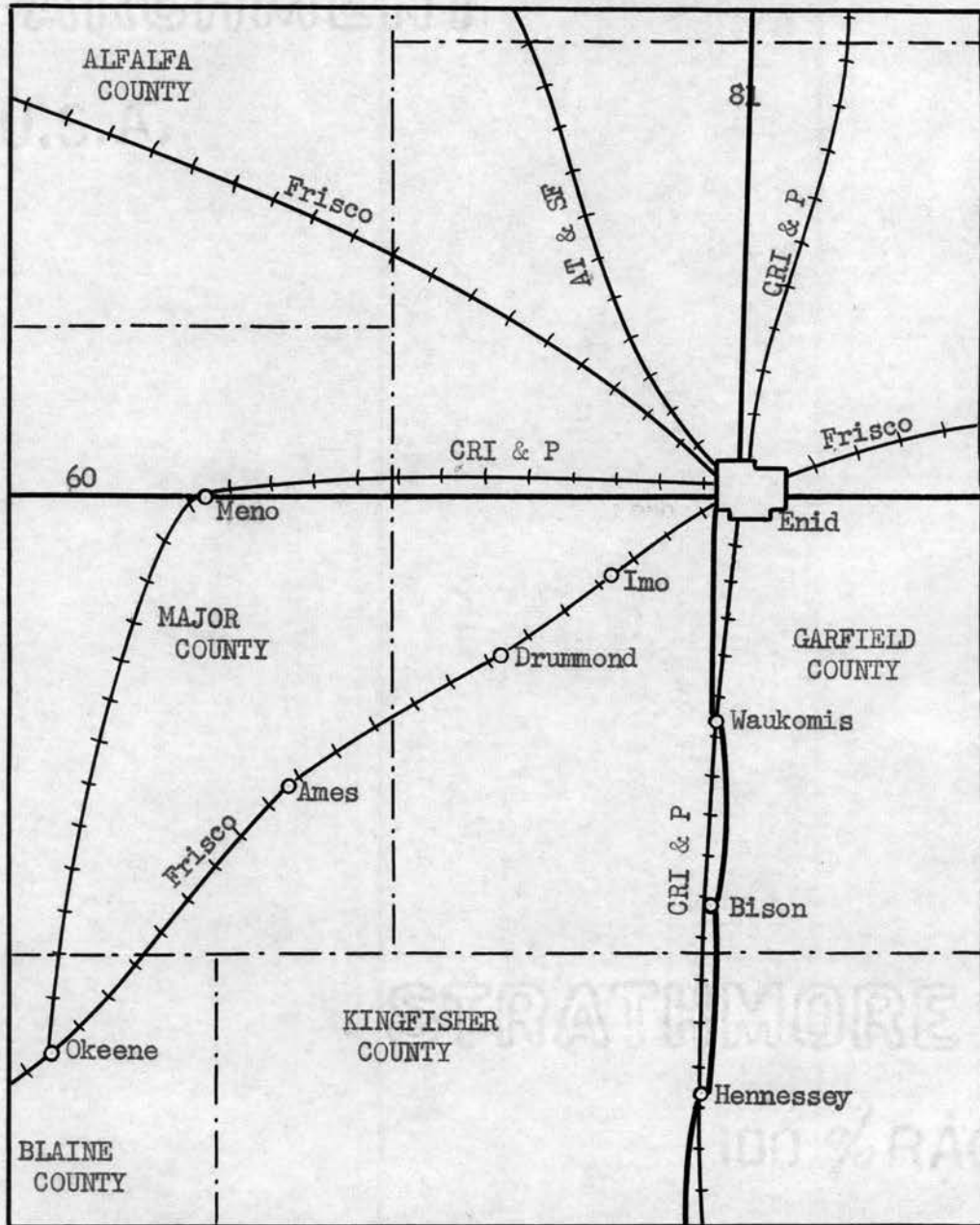
The size and condition of a business unit affects its costs of operation and helps to determine its financial structure. The location, the facilities available, and the commodities handled determine the general physical characteristics of each cooperative. The combination of the two above mentioned factors are important in analyzing cost variance.

Physical Description of the Associations

Location and Market Areas. The five associations studied are located at Bison, Waukomis, Imo, Drummond, and Ames (Figure 1). These cooperatives, located in Garfield and Major Counties, form a cluster in one area. This makes them accessible to survey as single and multiple units. Since this is a wheat producing area, the close proximity of elevators creates keen competition between cooperative grain elevators, as well as independent grain buyers. The five associations that are analyzed have at least one or the other as competitive buyers of wheat. The general extent of the trade territories of each of the five cooperatives is approximately three to twelve miles from the town in which it is located. Since the trade territories overlap, every manager must be cognizant of the service his organization performs and its efficiency in operation.

Facilities Available. The facilities that are available to the five different cooperatives vary slightly. All the elevators are making repairs and building additional storage space. Bison had an elevator capacity of 140,000 bushels. Imo, Waukomis, and Drummond varied around 100,000 bushels

Figure 1. Location and Market Areas of the Five Associations



LEGEND
- - - - - Railroads
————— Principal Highways

and Ames had a capacity of 60,000 bushels, which was the lowest. Each elevator had sufficient office space and other equipment necessary to operate an elevator.

Each of the five associations in the study had warehouse facilities for the merchandising of feed, seed, fertilizer, and all kinds of minor farm supplies. Two of the five cooperatives, Ames and Bison, operated service stations, and two of them, Drummond and Bison, had lumber yards, while Waukonis operated a small locker plant.

Commodities Handled. The five associations handled more than nine different commodities other than wheat. Gasoline, petroleum products, lumber, flour, coal, feed, fertilizer, hardware, rock, sand, and various minor farm supplies were reported as being handled by the organizations.

Imo sold and handled more wheat than any one of the other four elevators. Ames, in Major County, more than doubled any of the other organizations in the amount of sideline sales. Imo sold 24.6 percent of all the wheat sold at the five elevators, while Ames sold 45.3 percent of all the sidelines at the five cooperatives (Table 1). One reason for this is the location of the two associations. Imo is in an area where the soil type is conducive to wheat growing. Ames is located in an area of diversified farming and relatively poor wheat land. This type of farming tends for Ames to stress sideline sales.

All five of the single unit cooperative elevators are members of the Union Equity Cooperative Exchange at Enid, Oklahoma. The Union Equity is a large overhead federated organization buying and handling wheat from single

TABLE 1

AVERAGE ANNUAL WHEAT HANDLED, WHEAT SALES AND
SIDELINE SALES FOR THE FIVE ASSOCIATIONS,
FROM 1946 THROUGH 1948

	<u>Wheat Handled</u> (Bushels)	<u>Wheat Sales</u> (Dollars)	<u>Sideline Sales</u> (Dollars)	<u>Wheat Handled</u> (Percent)	<u>Wheat Sales</u> (Percent)	<u>Sideline Sales</u> (Percent)
Bison	369,485	690,088.98	29,133.09	21.37	23.03	12.17
Waukomis	343,014	501,943.49	52,300.58	19.83	16.75	21.84
Imo	407,126	735,650.54	36,293.95	23.54	24.55	15.16
Drummond	349,010	605,005.87	13,355.26	20.18	20.19	5.57
Ames	260,714	464,368.30	108,382.48	15.08	15.48	45.26
TOTALS	1,729,349	2,997,057.18	239,465.36	100.00	100.00	100.00

Source: Annual Audits of the Associations, from 1946 through 1948.

and multiple unit cooperatives throughout the state and the Panhandle section of Texas. These five cooperatives in the study market their wheat with the Union Equity.

The five cooperatives purchased their feed and grain from local farmers in their trade territories, and also from the various feed manufacturers in the state. Fertilizer, gasoline, oil and general merchandise were purchased from the Consumers Cooperative Association of Kansas City. The Drummond cooperative reported buying lumber from firms located on the West Coast, and in Eastern Oklahoma and Arkansas. Coal in most instances was purchased from coal firms located at McAlester, Oklahoma.

Financial Description of the Associations

The financial description of the five associations will be summarized in two parts, namely, the balance sheets and the operating statements. At the end of each fiscal year each cooperative takes an annual audit that lists the assets, liabilities, net worth, and the operating statements, as well as other operating information pertaining to the organizations. This audit is made in the form of a report to the Board of Directors and the member patrons.

Summary of the Associations' Balance Sheets. A summary of the associations' balance sheets indicates the size of investment of the five associations. The total investment at Bison was \$99,433.97 (Table 2). This was the largest investment of any of the five associations. Ames, which had more sideline sales, had \$36,792.59 invested in fixed assets. Its fixed assets were the largest of any of the other four cooperatives. The largest total investment at Bison was the result of the organization having larger elevator capacity, plus the fact that Bison is one of two associations having a gasoline station. Although Ames sold less wheat, its rather high investment

TABLE 2
 AVERAGE ANNUAL BALANCE SHEETS FOR THE FIVE ASSOCIATIONS,
 FROM 1946 THROUGH 1948
 (Continued)

	BISON		WAUKOMIS		IMO	
	Dollars	Percent	Dollars	Percent	Dollars	Percent
Current Assets	39,108.82	39.33	24,922.73	38.46	39,143.26	43.30
Other Assets	34,439.92	34.64	12,897.52	19.90	27,058.76	29.93
Fixed Assets	25,885.23	26.03	26,986.29	41.64	24,207.89	26.77
TOTAL ASSETS	99,433.97	100.00	64,806.54	100.00	90,409.91	100.00
Current Liabilities	23,271.92	23.40	18,365.63	28.34	27,322.55	30.22
Fixed Liabilities	-0-		-0-		-0-	
TOTAL LIABILITIES	23,271.92	23.40	18,365.63	28.34	27,322.55	30.22
Capital Stock	25,992.17	26.14	26,103.81	40.28	30,795.63	34.06
Reserves	28,642.80	28.81	14,129.46	21.80	10,935.82	12.10
Surplus	21,527.08	21.65	6,207.64	9.58	21,355.91	23.62
TOTAL NET WORTH	76,162.05	76.60	46,440.91	71.66	63,087.36	69.78
TOTAL LIABILITIES AND NET WORTH	99,433.97	100.00	64,806.54	100.00	90,409.91	100.00

Source: Annual Audits of the Associations, from 1946 through 1948.

TABLE 2

AVERAGE ANNUAL BALANCE SHEETS FOR THE FIVE ASSOCIATIONS,
FROM 1946 THROUGH 1948

	DRUMMOND		AMES	
	Dollars	Percent	Dollars	Percent
Current Assets	34,163.61	41.09	29,090.94	35.40
Other Assets	18,754.81	22.55	16,295.61	19.83
Fixed Assets	30,232.90	36.36	36,792.59	44.77
TOTAL ASSETS	83,151.32	100.00	82,179.14	100.00
Current Liabilities	11,573.46	13.92	23,666.39	28.80
Fixed Liabilities	-0-		-0-	
TOTAL LIABILITIES	11,573.46	13.92	23,666.39	28.80
Capital Stock	30,832.27	37.08	25,871.68	31.48
Reserves	31,482.71	37.86	18,521.68	22.54
Surplus	9,262.88	11.14	14,119.39	17.18
TOTAL NET WORTH	71,577.86	86.08	58,512.75	71.20
TOTAL LIABILITIES AND NET WORTH	83,151.32	100.00	82,179.14	100.00

Source: Annual Audits of the Associations, from 1946 through 1948.

comes from a larger sideline business. The total investment at Imo and Drummond was \$90,409.91 and \$83,151.32, respectively (Table 2). This rather high investment, in comparison to the other associations, is the result of Imo selling more wheat than any of the five elevators and Drummond selling the third largest amount of wheat of the five elevators. The low total investment of \$64,806.54 at Waukomis is the result of the organization selling less wheat than the elevators at Bison, Imo, and Drummond. There were no fixed liabilities reported for any of the five organizations. The total net worth at Bison was \$76,162.05, followed by \$71,577.86 at Drummond, \$63,087.36 at Imo, \$58,512.75 at Ames, and \$46,440.91 at Waukomis (Table 2).

Summary of the Associations' Operating Statements. The total sales at Imo were \$771,944.49 for the highest of any of the other four cooperatives (Table 3). Waukomis had the lowest total sales, which were \$554,244.07.

The gross earnings at Imo were \$27,682.14, followed by Ames with a gross earnings of \$26,214.63. The lowest gross earnings were recorded at Drummond, which had \$19,224.69. The reason for the largest gross earnings at Imo is its higher operating income. Imo received more money from wheat storage, treating, grinding and elevator operations than did any of the other elevators.

Waukomis had \$20,323.90 total expenses for the highest, and Drummond had \$11,391.83 for the lowest of the five cooperatives (Table 3). The sideline sales at Waukomis were large enough to greatly influence its total costs, and the same can be said in the wheat sales at Drummond. The sideline sales increased the costs at Waukomis, while the greater volume of wheat handled reduced the costs at Drummond.

The highest net earnings were at Imo, which had \$27,180.09. The lowest net earnings of any of the organizations were \$10,942.12 at Waukomis. Since

TABLE 3

AVERAGE ANNUAL OPERATING STATEMENTS FOR
THE FIVE ASSOCIATIONS, FROM 1946 THROUGH 1948

	BISON		WAUKOMIS		IMO	
	Dollars	Percent	Dollars	Percent	Dollars	Percent
Sales	738,324.65	100.00	554,244.07	100.00	771,944.49	100.00
Cost of Sales	719,205.33	97.41	536,787.30	96.85	755,586.14	97.88
Other Operating Income	1,600.74	.22	6,936.01	1.25	11,323.79	1.47
Gross Earnings	20,720.06	2.81	24,392.78	4.40	27,682.14	3.59
Expenses	17,409.54	2.36	20,323.90	3.67	15,700.35	2.03
Other Deductions	577.12	.08	790.65	.14	110.31	.01
Other Additions	15,722.29	2.13	7,663.89	1.38	15,308.61	1.98
Net Earnings	18,455.69	2.50	10,942.12	1.97	27,180.09	3.53

	DRUMMOND		AMES	
	Dollars	Percent	Dollars	Percent
Sales	618,361.03	100.00	572,750.78	100.00
Cost of Sales	604,662.25	97.78	552,204.22	96.41
Other Operating Income	5,525.91	.89	5,668.07	.99
Gross Earnings	19,224.69	3.11	26,214.63	4.58
Expenses	11,391.83	1.84	19,965.20	3.49
Other Deductions	49.93	.01	52.91	.01
Other Additions	12,004.10	1.94	10,655.42	1.86
Net Earnings	19,787.03	3.20	16,851.94	2.94

Source: Annual Audits of the Associations, from 1946 through 1948.

Ames more than doubled any of the other associations in sideline sales, its net earnings of \$16,851.94 were comparatively high.

The summary of the operating statements shows that Ino did more business than any of the other four elevators. The large gross earnings and lower net earnings of Ames resulted from more sideline business. The net earnings of Drummond were the second largest of the five elevators. The operating expenses of Drummond were the lowest, which may be accounted for by the fact that it handled less sidelines.

THE OPERATING EXPENSES OF THE ASSOCIATIONS

The overhead expenses of a cooperative, which are defined as the operating expenses, are those expenses that are incurred throughout the fiscal year of business performance. In this section a description of the expenses will be given. For ease and convenience of analysis, several of the operating expenses have been combined.

Types of Expenses

Salaries and Wage Expenses. Most of the audits of the associations list manager's salary and other salaries and wages paid the employees. For this study, in most instances, all money paid for wages, including manager's salary and permanent salaries, have been combined into one expense item called salaries and wages.

Physical Facility Expenses. Depreciation, insurance and bonds, and taxes make up the total physical facility expenses. Depreciation consists of the expenses incurred by the wear and tear, or obsolescence on machinery and equipment, buildings, furniture, and fixtures. Insurance expense includes all the insurance affecting the associations. Bonds, listed with insurance, includes warehouse bonds and the manager's bonds. Taxes include social security, sales tax, advalorem tax, and corporation license tax for the period of one fiscal year. The total of the three mentioned expense items above is what each association spends to operate its physical plant. Usually these expenses are more stable, tending to vary less than other operating expenses. Also, these expenses form the larger part of a cooperative's fixed costs.

Calculated Interest Expense. The audits of each of the five cooperatives list interest expense only when this item has been incurred by borrowing money from credit agencies. Usually the bank for cooperatives at Wichita, Kansas is the main source of credit. However, the associations occasionally borrow funds from local banks. In making this study it was felt necessary that a calculated interest expense figure should be borne by each association. Even though this expense was not directly shared by the organization, it was thought that this should be added to bring out an opportunity cost that would otherwise be omitted. Interest on investment should be figured for any going business concern.

Assets of each association were divided into commodity, facility and operating capital. The bank for cooperatives at Wichita, Kansas loans facility capital at four percent interest, commodity capital at 2.25 percent, and operating capital at three percent. After the three breakdowns of assets for the five elevators were totaled and the interest rates of the bank for cooperatives were applied, the sum of the interest expense for each organization was derived.

Other Expenses. Other expenses could be termed a "Catch-All" category to take care of the remaining items listed on the expense audits. In this study other expenses include seven operating expense items, namely, utilities, telephone and telegraph, repairs, supplies, advertising, truck expense, and administrative and selling expense. The administrative and selling costs include donations, travel expense, directors' fees, bad debts expenses, auditing and legal fees, educational expense, and any other miscellaneous items appearing on the expense sheet of the audit. Other expenses will tend to vary more than physical facility expenses, interest expense, and salaries and wages.

Variations of Yearly Expenses by Associations

The expenses of any association vary according to the amount of business and the efficiency in operating the business. For the crop years 1946 through 1948 the expenses of all the elevators increased because of more business and an expansion in the physical plants. In addition the post war period was conducive to a general rise in the price level of our economy, which was reflected by an increase in the operating expenses of the five associations.

Bison. Total expenses at Bison increased from \$11,326.07 in 1946 to \$24,538.33 in 1948 (Table 4). Salaries and wages accounted for the larger share of the total expenses, and also the largest increase in expenses. Salaries and wages were 43.0 percent of the total expenses for 1946, and they increased to 49.7 percent in 1947. They increased in amount for 1948, but the percentage figure decreased to 46.0. This was due to an increase in the total expenses that was comparatively larger than the increase in salaries and wages.

Physical facility expenses increased from \$1,950.92 in 1946 to \$4,508.32 in 1948. The reason for the increase was the construction of additional storage space in 1948, which increased the depreciation figure. This increased the insurance from \$462.52 in 1946 to \$1,577.67 in 1948 (Table 4). The taxes increased slightly for the same period.

Calculated interest expense shows a decrease in percentage of 23.5 for 1946 to 15.0 in 1948. However, the interest expense account increased. This also was due to the total expenses being proportionately larger than the interest expense.

All of the expenses making up other expenses increased on a large scale, except utilities in 1948. Repairs expense increased from \$177.54 in 1946 to

TABLE 4
ANNUAL OPERATING EXPENSES FOR THE
FARMERS COOPERATIVE ASSOCIATION OF BISON, OKLAHOMA,
FROM 1946 THROUGH 1948

	1946		1947		1948	
	Dollars	Percent	Dollars	Percent	Dollars	Percent
Salaries and Wages	4,875.00	43.04	8,126.22	49.66	11,286.64	46.00
Physical Facility Expenses	1,950.92	17.23	2,632.48	16.09	4,508.32	18.37
Depreciation	847.63		1,214.04		2,186.78	
Insurance and Bonds	462.52		693.68		1,577.67	
Taxes	640.77		724.76		743.87	
Interest	2,666.03	23.54	3,133.17	19.15	3,681.72	15.00
Other Expenses	1,834.12	16.19	2,472.34	15.10	5,061.65	20.63
Utilities	297.29		448.20		452.95	
Telephone and Telegraph	82.05		140.91		183.43	
Repairs	177.54		651.09		779.35	
Supplies	118.44		152.52		440.30	
Advertising	130.23		144.73		199.95	
Truck Expense	-0-		-0-		586.84	
Administrative and Selling Expense	1,028.57		934.89		2,418.83	
TOTALS	11,326.07	100.00	16,364.21	100.00	24,538.33	100.00

Source: Annual Audits of the Association, from 1946 through 1948.

\$779.35 in 1948. The expansion of storage space, the addition of new sidelines, and the large wheat crop of 1947 were the primary reasons for the increase.

Waukomis. The Waukomis cooperative did not start making any major changes in its physical plant until after the 1948 crop season. Therefore, the expenses of the organization increased only to the extent of increases in the business done by the cooperative, except for an unusually large repair expense in 1947. The total expenses in 1946 were \$17,155.15; they increased to \$21,089.75 in 1947, and in 1948 they were \$22,726.80 (Table 5).

The salaries and wages increased at Waukomis from \$7,127.36 in 1946 to \$7,431.03 in 1947, and to \$9,601.41 in 1948. The manager's salary increased, as well as hiring more seasonal labor to handle the increase in business.

The physical facility expenses increased from \$4,198.94 in 1946 to \$5,430.96 in 1948. This increase was caused by the general increase in depreciation, insurance, and bonds and taxes.

The calculated interest expense rose from \$1,825.15 in 1946 to \$2,128.45 in 1947, and to \$2,499.64 in 1948. The main reason for this increase was the expanded inventories of the cooperative.

The other expenses were 23.3 percent of the total expenses in 1946. They increased to 31.6 percent in 1947, and they decreased to 22.9 percent of the total in 1948. As stated above, the repair expenses in 1947 caused the fluctuation in other expenses.

Imo. The total expenses at Imo increased 34.6 percent over the three years (Table 6). Salaries and wages remained almost stable with only a slight decrease in percentage of the total expenses in 1948, although the actual amount for salaries and wages increased a little over \$500.00.

TABLE 5
ANNUAL OPERATING EXPENSES FOR THE
WAUKOMIS CO-OPERATIVE SUPPLY COMPANY OF WAUKOMIS, OKLAHOMA,
FROM 1946 THROUGH 1948

	1946		1947		1948	
	Dollars	Percent	Dollars	Percent	Dollars	Percent
Salaries and Wages	7,127.36	41.55	7,431.03	35.24	9,601.41	42.25
Physical Facility Expenses	4,198.94	24.48	4,869.44	23.09	5,430.96	23.90
Depreciation	2,475.81		2,510.98		2,572.55	
Insurance and Bonds	1,167.68		1,555.75		1,841.22	
Taxes	555.45		802.71		1,017.19	
Interest	1,825.15	10.64	2,128.45	10.09	2,499.64	11.00
Other Expenses	4,003.70	23.33	6,660.83	31.58	5,194.79	22.85
Utilities	378.76		328.45		369.21	
Telephone and Telegraph	152.70		172.02		150.21	
Repairs	501.65		2,860.23		1,947.59	
Supplies	1,009.63		863.63		959.11	
Advertising	348.75		332.14		262.48	
Truck Expense	183.77		187.98		326.95	
Administrative and Selling Expense	1,428.44		1,916.38		1,179.24	
TOTALS	17,155.15	100.00	21,089.75	100.00	22,726.80	100.00

Source: Annual Audits of the Association, from 1946 through 1948.

TABLE 6

ANNUAL OPERATING EXPENSES FOR THE
 FARMERS COOPERATIVE ELEVATOR COMPANY OF IMO, OKLAHOMA,
 FROM 1946 THROUGH 1948

	1946		1947		1948	
	Dollars	Percent	Dollars	Percent	Dollars	Percent
Salaries and Wages	5,057.97	37.51	5,869.00	37.64	6,326.50	35.10
Physical Facility Expenses	2,945.79	21.85	3,453.36	22.15	4,401.67	24.42
Depreciation	1,764.00		1,973.48		2,123.23	
Insurance and Bonds	845.72		965.27		1,784.47	
Taxes	336.07		514.61		493.97	
Interest	2,543.88	18.87	2,779.28	17.83	3,472.84	19.26
Other Expenses	2,936.47	21.77	3,490.07	22.38	3,824.22	21.22
Utilities	450.80		427.72		482.96	
Telephone and Telegraph	128.30		128.42		182.73	
Repairs	525.28		895.46		1,165.82	
Supplies	663.65		707.69		612.41	
Advertising	215.58		144.00		104.09	
Truck Expense	-0-		-0-		-0-	
Administrative and Selling Expense	952.86		1,186.78		1,276.21	
TOTALS	13,484.11	100.00	15,591.71	100.00	18,025.23	100.00

Source: Annual Audits of the Association, from 1946 through 1948.

The largest increase in the physical facility expense group was insurance and bonds. This increase was about \$900.00 for the three year period. The depreciation expense increased a little over \$400.00, and taxes increased slightly for the same period. This increased volume of business at Imo was also accompanied by an increase of about \$900.00 in the calculated interest expense.

The repairs increased more than any expense item in the other expense category. The repairs on an old elevator in 1947 and 1948 accounted for repairs expense increasing.

Drummond. The total expenses at Drummond were comparatively low, increasing from \$9,571.57 in 1946 to \$13,358.65 in 1948 (Table 7). This can be expected since the Drummond association did a small amount of sideline business for the three years.²

The salaries and wages increased from \$3,936.17 in 1946 to \$4,812.26 in 1947, and to \$5,773.27 in 1948. This was the largest increase listed on the expense ledger, and it resulted from more wheat business, plus an increase in the manager's salary over the three year period.

The physical facility expenses showed a decrease in 1947 and an increase in 1948. The addition of a lumber yard accounted for this increase. The remainder of the expenses showed a general increase.

Ames. In Ames the total expenses increased 137 percent over the three year period (Table 8). In 1947 and 1948 the elevator added physical facilities for handling more sidelines. Storage space increased, and also the repairs expense increased from \$182.17 to \$1,176.91. The depreciation increased over \$1,000.00 for this same period.

²Cf. ante., page 6.

TABLE 7

ANNUAL OPERATING EXPENSES FOR THE
DRUMMOND COOPERATIVE ELEVATOR COMPANY OF DRUMMOND, OKLAHOMA,
FROM 1946 THROUGH 1948

	1946		1947		1948	
	Dollars	Percent	Dollars	Percent	Dollars	Percent
Salaries and Wages	3,936.17	41.12	4,812.26	42.79	5,773.27	43.22
Physical Facility Expenses	1,978.55	20.67	1,693.51	15.06	2,431.76	18.58
Depreciation	1,128.37		819.46		1,304.70	
Insurance and Bonds	380.59		299.83		537.04	
Taxes	469.59		574.22		640.02	
Interest	2,422.90	25.31	2,596.67	23.09	3,228.60	24.17
Other Expenses	1,233.95	12.90	2,142.82	19.06	1,875.02	14.03
Utilities	351.82		366.60		484.42	
Telephone and Telegraph	50.31		84.97		124.23	
Repairs	135.65		305.75		342.15	
Supplies	125.43		388.16		258.30	
Advertising	58.08		154.25		122.68	
Truck Expense	35.22		-0-		-0-	
Administrative and Selling Expense	427.44		843.09		543.24	
TOTALS	9,571.57	100.00	11,245.26	100.00	13,358.65	100.00

Source: Annual Audits of the Association, from 1946 through 1948.

TABLE 8

ANNUAL OPERATING EXPENSES FOR THE
FARMERS ELEVATOR COMPANY OF AMES, OKLAHOMA,
FROM 1946 THROUGH 1948

	1946		1947		1948	
	Dollars	Percent	Dollars	Percent	Dollars	Percent
Salaries and Wages	4,801.40	44.10	11,589.08	50.04	12,710.39	49.18
Physical Facility Expenses	2,698.59	24.78	4,696.70	20.28	6,057.54	23.44
Depreciation	1,687.22		2,627.60		2,955.86	
Insurance and Bonds	515.13		1,133.76		1,800.33	
Taxes	496.24		935.34		1,301.35	
Interest	2,038.44	18.72	3,181.20	13.74	3,124.98	12.09
Other Expenses	1,349.89	12.40	3,693.59	15.94	3,953.81	15.29
Utilities	304.58		624.06		619.50	
Telephone and Telegraph	109.84		183.76		197.68	
Repairs	182.17		605.89		1,176.91	
Supplies	154.20		343.43		623.59	
Advertising	50.77		142.44		115.67	
Truck Expense	-0-		831.62		347.02	
Administrative and Selling Expense	548.33		962.39		873.44	
TOTALS	10,888.32	100.00	23,160.57	100.00	25,846.72	100.00

Source: Annual Audits of the Association, from 1946 through 1948.

Salaries and wages were 44.1 percent of the total expenses in 1946, 50.0 percent in 1947, and 49.2 percent in 1948. This increase was caused by more sideline business.

The physical facility expenses increased almost \$4,000.00 over the three years studied. The addition of a service station, plus the equipment necessary to operate it, was the chief cause of the increase. This increase in the physical plant caused insurance to increase about \$1,300.00, and taxes rose to \$1,301.35 in 1948 from \$496.24 in 1946. With an increase in physical facilities, the calculated interest increased also.

The largest increase in other expenses was the result of tremendous increases in repairs. The repair expense was \$182.17 in 1946, \$605.89 in 1947, and \$1,176.91 in 1948 (Table 8).

Variations of Expenses Between Associations

This section of the study deals with an analysis of the three year average expenses of the five cooperatives to determine the variation of expenses between associations. Increased business, the construction of new storage space, and more sideline business caused much of the variation between associations.

Comparison of Salaries and Wage Expenses. More money was paid out for salaries and wages than any other expense item. The three year average expenses of the five cooperatives show that Ames paid out 48.6 percent of the total expenses to salaries and wages, Bison 46.5 percent, Drummond 42.5 percent, Waukomis 39.6 percent, and Imo 36.6 percent (Table 9).

Service stations at Ames and Bison were the main reasons for more money being paid out for salaries and wages by them. Imo, the elevator handling and selling more wheat, paid out less for salaries and wages than the other

TABLE 9

AVERAGE ANNUAL OPERATING EXPENSES FOR THE FIVE ASSOCIATIONS,
FROM 1946 THROUGH 1948
(Continued)

	BISON		WAUKOMIS		IWO	
	Dollars	Percent	Dollars	Percent	Dollars	Percent
Salaries and Wages	8,095.96	46.50	8,053.27	39.63	5,751.16	36.63
Physical Facility Expenses	3,030.57	17.41	4,833.10	23.78	3,600.28	22.93
Depreciation	1,416.15		2,519.78		1,953.57	
Insurance and Bonds	911.29		1,521.54		1,198.49	
Taxes	703.13		791.78		448.22	
Interest	3,160.31	18.15	2,151.08	10.58	2,932.00	18.68
Other Expenses	3,122.70	17.94	5,286.45	26.01	3,416.91	21.76
Utilities	399.48		358.81		453.83	
Telephone and Telegraph	135.46		158.31		146.48	
Repairs	535.99		1,769.82		862.19	
Supplies	237.09		944.12		661.25	
Advertising	158.30		314.46		154.56	
Truck Expense	195.62		232.90		-0-	
Administrative and Selling Expense	1,460.76		1,508.03		1,138.60	
TOTALS	17,409.54	100.00	20,323.90	100.00	15,700.35	100.00

Source: Annual Audits of the Associations, from 1946 through 1948.

TABLE 9

AVERAGE ANNUAL OPERATING EXPENSES FOR THE FIVE ASSOCIATIONS,
FROM 1946 THROUGH 1948

	DRUMMOND		AMES	
	Dollars	Percent	Dollars	Percent
Salaries and Wages	4,840.57	42.49	9,700.29	48.59
Physical Facility Expenses	2,051.28	18.01	4,484.28	22.46
Depreciation	1,084.18		2,423.56	
Insurance and Bonds	405.82		1,149.74	
Taxes	561.28		910.98	
Interest	2,749.39	24.13	2,781.54	13.93
Other Expenses	1,750.59	15.37	2,999.09	15.02
Utilities	400.95		516.05	
Telephone and Telegraph	86.50		163.76	
Repairs	277.84		654.99	
Supplies	257.30		373.74	
Advertising	111.67		102.96	
Truck Expense	11.74		392.88	
Administrative and Selling Expense	604.59		794.71	
TOTALS	11,391.83	100.00	19,965.20	100.00

Source: Annual Audits of the Associations, from 1946 through 1948.

four elevators because the handling of wheat was more mechanized and required less labor than sidelines.

Comparison of Physical Facility Expenses. The physical facility expenses were more stable than the others. During periods of new construction the expenses were higher due to increasing depreciation, taxes, and insurance. Waukomis paid out 23.8 percent of its total expenses on physical facilities, Imo 22.9 percent, Ames 22.5 percent, Drummond 18.0 percent, and Bison 17.4 percent (Table 9). Most of the cooperatives were planning or constructing new buildings when this study was made.

Comparison of Calculated Interest Expense. This expense item was calculated from the assets of the associations. The cooperative handling the most sidelines usually has the lowest interest expense since more capital is involved in handling wheat. Interest expense at Drummond was 24.1 percent of the total expenses. Imo paid out 18.7 percent for interest expense, Bison 18.2 percent, Ames 13.9 percent, and Waukomis 10.6 percent (Table 9).

Comparison of Other Expenses. Other expenses, which are more affected by administrative and selling costs, varied about the same as salaries and wages. Waukomis had a total of other expenses amounting to \$5,286.45, Imo \$3,416.91, Bison \$3,122.70, Ames \$2,999.09, and Drummond \$1,750.59 over the three year average period studied (Table 9). The total of other expenses at Waukomis tend to be high when comparing the other expenses of the four cooperatives. Inadequate control of minor sideline costs was probably the chief cause. The Drummond cooperative seemed to be more efficient in the control of these minor costs. Imo, Bison, and Ames were in a comparatively close range of normality when considering the total of other expenses.

AN ANALYSIS OF THE DEPARTMENTAL EXPENSES

An analysis of the departmental expenses includes two separate divisions of each of the five associations studied. The two departments analyzed are the wheat department and the sideline department. The five associations were organized for the purpose of marketing wheat, but the farmers' demands for services other than wheat have created extra business activities performed by the associations.

Since none of the associations employed a cost accounting system, the sidelines of every cooperative were combined into one department. With the combining of activities other than wheat, every cooperative operated a wheat department and a sideline department. The allocation of expenses will be made on the basis of the two departments, wheat and sidelines.

Some of the expenses that were incurred by the associations were easily allocated. There were other expense items that were difficult to determine whether they were spent for wheat or sidelines. All of the managers gave their best estimates in the allocation of expenses. Other help came from personal visits to the cooperatives, thereby gaining knowledge of their operations. Another source for the basis of allocating expenses for the wheat and sideline departments was the departmental gross earnings.

The expense items were carried over to the departmental section. Three year calculations, 1946 through 1948, were tabulated. The percentages that were allocated for wheat and sidelines for each expense item were totaled for the wheat department and the sideline department.

Wheat Department

Expenses for Wheat. The total wheat expenses were the highest at

Waukomis, being \$15,759.05 (Table 10). They were the lowest at Drummond with a total of \$10,705.52. The wheat expenses at Bison were \$11,261.76, \$13,798.90 at Imo, and \$8,840.47 at Ames. The high wheat expenses at Waukomis cannot entirely be justified. However, a \$10,000.00 elevator addition was made in 1948, and this helped to increase the wheat expenses.

The total wheat expenses at Bison and Imo were attributed to the two organizations selling more wheat and having a higher investment in wheat equipment. Drummond was fairly high in wheat sales, but its intensified operations and its efficient management of minor costs helped to keep its total wheat expenses lower. The rather low total wheat expenses at Ames can be attributed to this elevator stressing sideline sales, and as a result having less investment for wheat.

The salaries and wages accounted for 47.9 percent of the total wheat expenses at Bison, 46.9 percent at Waukomis, 36.6 percent at Imo, 42.4 percent at Drummond, and 39.9 percent at Ames (Table 10). The salaries and wages accounted for the largest amount being spent for any expense item at the elevators. The reason for this expense item being higher was the extra hired labor at harvest time. Also, additional labor was needed following harvest to handle the wheat crop. The lowest percent for salaries and wages at Imo was a result of efficiently handling larger volumes of wheat. The small volume of wheat handled at Ames, in comparison to the other elevators, accounted for less being spent for salaries and wages on wheat. The greatest share of the salaries and wage expenses at Ames was expended for sideline operations.

The physical facility expenses were 14.4 percent of the total wheat expenses at Bison, 23.0 percent at Waukomis, 23.6 percent at Imo, 18.4 percent

TABLE 10

AVERAGE ANNUAL WHEAT AND SIDELINE EXPENSES
FOR THE FIVE ASSOCIATIONS,
FROM 1946 THROUGH 1948
(Continued)

	BISON				
	Total Expenses	Wheat		Sidelines	
		Dollars	Percent	Dollars	Percent
Salaries and Wages	8,095.96	5,396.21	47.92	2,699.75	43.91
Depreciation	1,416.15	757.55	6.73	658.60	10.71
Insurance and Bonds	911.29	542.49	4.82	368.80	6.00
Interest	3,160.31	2,329.76	20.69	830.55	13.51
Taxes	703.13	317.38	2.82	385.75	6.27
Utilities	399.48	338.39	3.00	61.09	.99
Telephone and Telegraph	135.46	128.69	1.14	6.77	.11
Repairs	535.99	416.79	3.70	119.20	1.94
Supplies	237.09	225.23	2.00	11.86	.19
Advertising	158.30	116.51	1.03	41.79	.69
Truck Expense	195.62	-0-	-0-	195.62	3.19
Administrative and Selling Expense	1,460.76	692.76	6.15	768.00	12.49
TOTALS	17,409.54	11,261.76	100.00	6,147.78	100.00
Percentage of Total Expenses		64.69		35.31	

Source: Annual Audits of the Associations, from 1946 through 1948, and estimates of the managers.

TABLE 10

AVERAGE ANNUAL WHEAT AND SIDELINE EXPENSES
FOR THE FIVE ASSOCIATIONS,
FROM 1946 THROUGH 1948
(Continued)

	WAUKOMIS				
	Total Expenses	Wheat		Sidelines	
		Dollars	Percent	Dollars	Percent
Salaries and Wages	8,053.27	7,398.80	46.94	654.47	14.34
Depreciation	2,519.78	1,797.78	11.41	722.00	15.82
Insurance and Bonds	1,521.54	1,188.47	7.54	333.07	7.30
Interest	2,151.08	1,314.60	8.34	836.48	18.32
Taxes	791.78	633.12	4.02	158.66	3.47
Utilities	358.81	340.87	2.16	17.94	.39
Telephone and Telegraph	158.31	150.39	.96	7.92	.17
Repairs	1,769.82	1,096.64	6.96	673.18	14.75
Supplies	944.12	789.53	5.01	154.59	3.39
Advertising	314.46	259.69	1.65	54.77	1.20
Truck Expense	232.90	-0-		232.90	5.10
Administrative and Selling Expense	1,508.03	789.16	5.01	718.87	15.75
TOTALS	20,323.90	15,759.05	100.00	4,564.85	100.00
Percentage of Total Expenses		77.54		22.46	

Source: Annual Audits of the Associations, from 1946 through 1948, and estimates of the managers.

TABLE 10

AVERAGE ANNUAL WHEAT AND SIDELINE EXPENSES
FOR THE FIVE ASSOCIATIONS,
FROM 1946 THROUGH 1948
(Continued)

	IMO				
	<u>Total</u> Expenses	Wheat		Sidelines	
		Dollars	Percent	Dollars	Percent
Salaries and Wages	5,751.16	5,050.11	36.60	701.05	36.87
Depreciation	1,953.57	1,857.19	13.46	96.38	5.07
Insurance and Bonds	1,198.49	1,018.72	7.38	179.77	9.45
Interest	2,932.00	2,536.55	18.38	395.45	20.80
Taxes	448.22	380.99	2.76	67.23	3.54
Utilities	453.83	385.63	2.79	68.20	3.58
Telephone and Telegraph	146.48	124.51	.91	21.97	1.16
Repairs	862.19	737.45	5.34	124.74	6.56
Supplies	661.25	557.60	4.04	103.65	5.45
Advertising	154.56	137.81	1.00	16.75	.88
Truck Expense	-0-	-0-	-0-	-0-	-0-
Administrative and Selling Expense	1,138.60	1,012.34	7.34	126.26	6.64
TOTALS	15,700.35	13,798.90	100.00	1,901.45	100.00
Percentage of Total Expenses		87.89		12.11	

Source: Annual Audits of the Associations, from 1946 through 1948, and estimates of the managers.

TABLE 10
 AVERAGE ANNUAL WHEAT AND SIDELINE EXPENSES
 FOR THE FIVE ASSOCIATIONS,
 FROM 1946 THROUGH 1948
 (Continued)

	DRUMMOND				
	Total Expenses	Wheat		Sidelines	
		Dollars	Percent	Dollars	Percent
Salaries and Wages	4,840.57	4,540.40	42.41	300.17	43.74
Depreciation	1,084.18	1,064.80	9.95	19.38	2.82
Insurance and Bonds	405.82	386.30	3.61	19.52	2.85
Interest	2,749.39	2,601.92	24.30	147.47	21.49
Taxes	561.28	516.52	4.83	44.76	6.52
Utilities	400.95	397.72	3.72	3.23	.47
Telephone and Telegraph	86.50	79.92	.75	6.58	.96
Repairs	277.84	275.56	2.57	2.28	.33
Supplies	257.30	252.99	2.36	4.31	.63
Advertising	111.67	108.42	1.01	3.25	.47
Truck Expense*	11.74	-0-	-0-	11.74	1.71
Administrative and Selling Expense	604.59	480.97	4.49	123.62	18.01
TOTALS	11,391.83	10,705.52	100.00	686.31	100.00
Percentage of Total Expenses		93.98		6.02	

*Truck operated only in 1946

Source: Annual Audits of the Associations, from 1946 through 1948, and estimates of the managers.

TABLE 10

AVERAGE ANNUAL WHEAT AND SIDELINE EXPENSES
FOR THE FIVE ASSOCIATIONS,
FROM 1946 THROUGH 1948

	AMES				
	<u>Total</u> Expenses	Wheat		Sidelines	
		Dollars	Percent	Dollars	Percent
Salaries and Wages	9,700.29	3,523.84	39.86	6,176.45	55.52
Depreciation	2,423.56	1,220.09	13.80	1,203.47	10.82
Insurance and Bonds	1,149.74	732.77	8.29	416.97	3.75
Interest	2,781.54	1,388.95	15.71	1,392.59	12.52
Taxes	910.98	507.58	5.74	403.40	3.62
Utilities	516.05	310.31	3.51	205.74	1.85
Telephone and Telegraph	163.76	102.39	1.16	61.37	.55
Repairs	654.99	399.29	4.52	255.70	2.30
Supplies	373.74	154.84	1.75	218.90	1.97
Advertising	102.96	49.47	.56	53.49	.48
Truck Expense	392.88	-0-	-0-	392.88	3.53
Administrative and Selling Expense	794.71	450.94	5.10	343.77	3.09
TOTALS	19,965.20	8,840.47	100.00	11,124.73	100.00
Percentage of Total Expenses		44.28		55.72	

Source: Annual Audits of the Associations, from 1946 through 1948, and estimates of the managers.

at Drummond, and 27.8 percent at Ames (Table 10). The high physical facility expenses at Ames were the results of an increase in insurance and bonds, taxes, and depreciation. Ames had smaller storage space, but it was a concrete structure. The Ames association also purchased a gasoline station in 1947 and all the equipment necessary to operate the station. These factors increased the physical facility expenses. The rather high physical facility expenses at Imo were the result of adding a grain cleaning building in 1948.

The interest expense for wheat was \$2,329.76 at Bison, \$1,314.60 at Waukomis, \$2,536.55 at Imo, \$2,601.92 at Drummond, and \$1,388.95 at Ames (Table 10). Since the wheat assets were smaller at Ames and Waukomis, the two largest sideline selling cooperatives, the total interest expense for wheat was smaller than at the other three elevators. The larger interest expense for wheat at Imo, Drummond, and Bison was due to the three associations having larger investments in wheat facilities.

The other expenses were 17.0 percent of the total wheat expenses at Bison, 21.8 percent at Waukomis, 21.4 percent at Imo, 14.9 percent at Drummond, and 16.6 percent at Ames (Table 10). As has been pointed out before, Waukomis was more inefficient on minor costs that were more variable, while Drummond was more efficient on the same type of costs.³ The lower percent of other expenses going to wheat at Ames was the result of the organization having higher total sideline expenses. The other wheat expenses were higher at Imo and Bison because of larger volumes of wheat being sold by the two elevators.

³Cf. ante., page 28.

Unit Costs for Wheat. The unit costs for wheat were an indication of the operating efficiency of the cooperatives. To derive the cost per bushel handled and the cost per dollar of wheat sales, the wheat handled and sold was divided into the amount of expenses allocated to wheat (Table 11).

Imo handled 407,126 bushels of wheat for \$13,798.89. The cost per bushel handled was 3.39 cents, and the cost per dollar of the wheat sold was 1.88 cents (Table 11). The total sales at Imo amounted to \$735,650.54. The amount sold and handled at Imo was the largest of any of the other four elevators. Bison handled wheat for 3.05 cents per bushel, and its cost per dollar of wheat sales was 1.63 cents. The amount of wheat handled at Bison was 369,485 bushels. The handling costs at Bison were the lowest of any of the elevators. Even though Imo handled the largest volume, its handling costs were higher than Bison because the repairs and insurance expense caused the total wheat expenses at Imo to exceed Bison's expenses by more than \$2,000.00.

Drummond handled 349,010 bushels of wheat for the three years studied at a cost of 3.07 cents per bushel. The cost per dollar of wheat sales at Drummond was 1.77 cents. This amount was slightly higher than the cost at Bison and a little lower than the cost at Imo (Table 11).

The wheat department at Ames was operating on an efficient costs basis. This can be assumed since Ames handled 260,714 bushels for the lowest volume of wheat handled by any of the five elevators, and its costs of operation were 3.39 cents per bushel with a cost of 1.90 cents per dollar of wheat sold (Table 11). This was just about the same handling costs as were incurred by the Imo elevator.

TABLE 11

AVERAGE ANNUAL COSTS PER BUSHEL OF WHEAT HANDLED
AND COSTS PER DOLLAR OF WHEAT SALES AT THE FIVE ASSOCIATIONS,
FROM 1946 THROUGH 1948

	<u>Total</u> <u>Wheat</u> <u>Expenses</u> <u>(Dollars)</u>	<u>Total</u> <u>Wheat</u> <u>Handled</u> <u>(Bushels)</u>	<u>Total</u> <u>Wheat</u> <u>Sales</u> <u>(Dollars)</u>	<u>Cost per</u> <u>Bushel Wheat</u> <u>Handled</u> <u>(Cents)</u>	<u>Cost per</u> <u>Dollar</u> <u>Wheat Sales</u> <u>(Cents)</u>
Bison	11,273.29	369,485	690,088.98	3.05	1.63
Waukonis	15,759.05	343,014	501,943.49	4.59	3.14
Ino	13,798.89	407,126	735,650.54	3.39	1.88
Drummond	10,717.27	349,010	605,005.87	3.07	1.77
Ames	8,840.47	260,714	464,368.20	3.39	1.90

Source: Annual Audits of the Associations, from 1946 through 1948.

The unit costs for wheat indicated that Waukomis was the most inefficient in controlling costs. The cost per bushel of wheat handled at Waukomis was 4.59 cents, and the cost per dollar of sales was 3.14 cents. This was more significant when comparing the amount of wheat handled at the four other elevators because Waukomis handled 343,014 bushels. The total wheat expenses at Waukomis were too high due to inefficient labor costs and a failure to control other expenses.

Sideline Department

Expenses for Sidelines. The Ames cooperative was the only association of the five having a larger total expense for sidelines than for wheat. The total wheat expense at Ames was \$8,840.47, and its total sideline expense was \$11,124.73 (Table 10). This was accounted for because Ames more than doubled any of the five other organizations in total sideline sales. The total sideline expenses at Bison were \$6,147.78; they were \$4,564.85 at Waukomis, \$1,901.45 at Imo, and \$686.31 at Drummond.

Salaries and wages accounted for 43.9 percent of the total sideline expenses at Bison, 14.3 percent at Waukomis, 36.9 percent at Imo, 43.7 percent at Drummond, and 55.5 percent at Ames (Table 10). The low percentage of salaries and wage expenses for sidelines at Waukomis was due to the manager including most of the locker plant labor in the wheat department. Some of the locker plant labor was used in the wheat department, but probably not as much as indicated by the manager of Waukomis.

The physical facility expenses for sidelines were \$1,413.15 at Bison, \$1,213.73 at Waukomis, \$343.38 at Imo, \$83.66 at Drummond, and \$2,023.84 at Ames (Table 10). The larger physical facility expenses at Bison and Ames were the results of each of the cooperatives operating service stations.

These stations increased the amounts of depreciation, insurance and bonds, and tax expenses for the two associations. Imo and Drummond did not concentrate on sideline sales as much as the other cooperatives. Therefore, their physical facility expenses were lower.

The calculated interest expense for sidelines at Bison was \$830.55; it was \$836.48 at Waukomis, \$395.45 at Imo, \$147.47 at Drummond, and \$1,392.59 at Ames (Table 10). The organization having more sideline facilities and sales had higher calculated interest expense.

The total of other expenses for sidelines was \$1,204.33 at Bison, \$1,860.17 at Waukomis, \$461.57 at Imo, \$155.01 at Drummond, and \$1,541.85 at Ames (Table 10). The higher total of other expenses at Waukomis was the result of repairs, and administrative and selling costs being too high. More efficient control of administrative and selling costs should have been made because this expense item contained more of the variable expenses incurred by the association. The total of the other expenses at the four cooperatives seemed to be in proportion to the volume of sideline business done by each.

Unit Costs for Sidelines. The total sideline sales at Ames were \$108,382.48, and the total sideline expenses were \$11,124.73 (Table 12). The sideline sales at Ames more than doubled any of the other cooperatives, and the same was true for the total sideline expenses. As a result of this volume of business, Ames operated for 10.26 cents for every dollar of the sidelines sold.

Waukomis, the second largest from standpoint of sideline sales, sold \$52,300.58 in merchandise. The cost per dollar of sales at Waukomis was 8.73 cents. Bison's cost per dollar of sidelines sold, being 21.10 cents, was the highest cost of any of the associations (Table 12). This was possibly

TABLE 12

AVERAGE ANNUAL COSTS PER DOLLAR OF SIDELINE SALES
 AT THE FIVE ASSOCIATIONS,
 FROM 1946 THROUGH 1948

	<u>Total Sideline Expenses</u> (Dollars)	<u>Total Sideline Sales</u> (Dollars)	<u>Cost per Dollar of Sideline Sales</u> (Cents)
Bison	6,147.78	29,133.09	21.10
Waukomis	4,564.85	52,300.58	8.73
Imo	1,901.45	36,293.95	5.24
Drummond	686.31	13,355.26	5.14
Anes	11,124.73	108,382.48	10.26

Source: Annual Audits of the Associations, from 1946 through 1948.

due to the addition of a service station to its sideline facilities.

Drummond and Imo operated at a cost per dollar of sideline sales for 5.14 cents and 5.24 cents, respectively (Table 12). This was exceptionally low for Imo since the association exceeded the Bison cooperative approximately \$7,000.00 in sideline sales. Drummond's small amount of sideline sales was the reason for its costs of operation being almost equal to Imo's unit costs for sidelines.

Operating Statements for the Wheat and Sideline Departments

The departmental operating statement gives the financial operating efficiency of the wheat and sideline departments of the five organizations. The sales, cost of sales, other operating income, gross earnings, expenses, deductions, and additions were calculated to derive the departmental net earnings of each cooperative. The calculations for the operating statements were based on the wheat and sideline allocations of expenses. The operating statements were calculated on three year averages for the years 1946 through 1948.

Sales. The wheat sales were \$690,088.98 at Bison, \$501,943.49 at Waukomis, \$735,650.54 at Imo, \$605,005.87 at Drummond, and \$464,368.30 at Ames (Table 13). The largest wheat crop was in 1948, but since the price was higher in 1947, the dollar sales were higher for this year. There was also a larger inventory of farmer owned wheat after the 1948 crop than after the 1946 and 1947 crops.

The sideline sales were the highest at Ames with \$108,382.48 in sales of merchandise. Following Ames in order of sideline sales were Waukomis with \$52,300.58, Imo with \$36,293.95, Bison with \$29,133.09, and Drummond with \$13,355.26 in sales of merchandise (Table 13). The two largest sideline

TABLE 13

AVERAGE ANNUAL OPERATING STATEMENTS OF THE
WHEAT AND SIDELINE DEPARTMENTS FOR THE FIVE ASSOCIATIONS,
FROM 1946 THROUGH 1948
(Continued)

	BISON			WAUKOMIS		
	Total	Wheat D O L L A R S	Sidelines	Total	Wheat D O L L A R S	Sidelines
Sales	719,222.07	690,088.98	29,133.09	554,244.07	501,913.49	52,300.58
Cost of Sales	702,940.23	675,992.69	26,947.54	536,787.30	487,447.85	49,339.45
Other Operating Income	1,600.74	1,494.59	106.15	6,936.01	3,924.41	3,011.60
Gross Earnings	17,882.58	15,590.88	2,291.70	24,392.78	18,420.05	5,972.73
Expenses	17,409.54	11,261.76	6,147.78	20,323.90	15,759.05	4,564.85
Other Deductions	753.60	577.12	176.48	790.65	595.41	195.24
Other Additions	14,981.36	13,095.24	1,886.12	7,663.89	6,290.53	1,373.36
Net Earnings	14,700.80	16,847.24	- 2,146.44	10,942.12	8,356.12	2,586.00

Source: Annual Audits of the Associations, from 1946 through 1948.

TABLE 13

AVERAGE ANNUAL OPERATING STATEMENTS OF THE
WHEAT AND SIDELINE DEPARTMENTS FOR THE FIVE ASSOCIATIONS,
FROM 1946 THROUGH 1948
(Continued)

	IMO			DRUMMOND		
	Total	Wheat	Sidelines	Total	Wheat	Sidelines
	D O L L A R S					
Sales	771,944.49	735,650.54	36,293.95	618,361.03	605,005.87	13,355.26
Cost of Sales	755,586.14	721,134.54	34,451.60	604,662.25	591,882.18	12,780.07
Other Operating Income	11,323.79	10,712.13	611.66	5,525.91	5,525.91	-0-
Gross Earnings	27,682.14	25,228.13	2,454.01	19,224.69	18,649.60	575.19
Expenses	15,700.35	13,798.90	1,901.45	11,391.83	10,705.52	686.31
Other Deductions	110.31	95.00	15.31	49.93	-0-	49.93
Other Additions	15,308.61	14,652.45	656.16	12,004.10	11,921.93	82.17
Net Earnings	27,180.09	25,986.68	1,193.41	19,787.03	19,866.01	- 78.88

Source: Annual Audits of the Associations, from 1946 through 1948.

TABLE 13

AVERAGE ANNUAL OPERATING STATEMENTS OF THE
WHEAT AND SIDELINE DEPARTMENTS FOR THE FIVE ASSOCIATIONS,
FROM 1946 THROUGH 1948

	Total	AMES	
		Wheat	Sidelines
D O L L A R S			
Sales	572,750.78	464,368.30	108,382.48
Cost of Sales	552,204.22	454,841.09	97,363.13
Other Operating Income	5,668.07	4,881.32	786.75
Gross Earnings	26,214.63	14,408.53	11,806.10
Expenses	19,965.20	8,840.47	11,124.73
Other Deductions	52.91	-0-	52.91
Other Additions	10,655.42	7,726.69	2,928.73
Net Earnings	16,851.94	13,294.75	3,557.19

Source: Annual Audits of the Associations, from 1946 through 1948.

selling cooperatives, Ames and Waukomis, sold less wheat than the other three associations. The sideline sales were larger at Bison than at Drummond because of a service station operated at Bison. Imo sold more sidelines than Bison and Drummond because it exceeded the two cooperatives in feed sales.

Cost of Sales. The cost of sales included the purchases of the commodities. An increase or decrease in the inventories of a cooperative have a direct effect on the value of the cost of sales. The cost of sales for each of the five associations followed much the same pattern as did the sales of the organizations (Table 13). Changes in the prices of commodities were reflected by dollar value changes in the cost of sales and the total sales made by the associations.

Other Operating Income. The other operating income for wheat was \$1,494.59 at Bison, \$3,924.41 at Waukomis, \$10,712.13 at Imo, \$5,525.91 at Drummond, and \$4,881.32 at Ames. The sideline department had other operating income amounting to \$106.15 at Bison, \$3,011.60 at Waukomis, \$611.66 at Imo, \$0.00 at Drummond, and \$786.75 at Ames (Table 13). The other operating income was money received from wheat storage, cleaning and treating of grains, custom grinding, and labor income.

Gross Earnings. The total gross earnings included earnings on the sale of commodities with the addition of the other operating income. They were primarily composed of the difference in the sales and the cost of sales. This was the margin from which the operating expenses were paid. The gross earnings were a measure of the ability for each association to meet the operating expenses (Table 13).

The gross earnings for the wheat department were \$15,590.88 at Bison, \$18,420.05 at Waukomis, \$25,228.13 at Imo, \$18,649.60 at Drummond, and

\$14,408.53 at Ames. The sideline department accounted for \$2,291.70 at Bison, \$5,972.73 at Waukomis, \$2,454.01 at Imo, \$575.19 at Drummond, and \$11,806.10 at Ames (Table 13).

Other Additions. The major sources of income coming from other additions were investments and financial income. The major items that were included in other additions were dividends received on wheat from the Union Equity of Enid and dividends on sidelines from the Consumers Cooperative of Kansas City. Other additions received were interest, cash long, and money received from the sale of equipment. These additions were sometimes sufficient to compensate for operating losses made by the associations (Table 13).

Other Deductions. Other deductions included cash short, loss on sale of capital assets, cash unaccounted for, and other miscellaneous losses that were not actually operating expenses. These deductions were unimportant except at Bison and Waukomis where they were particularly high. They were high at Bison because of an adjustment in the cash account in 1947. They were high at Waukomis because of notes and checks that were cleared in 1947 (Table 13).

Net Earnings. The success of the business operations of the five cooperatives was measured by the amount of the net earnings incurred at the end of each fiscal period. Each of the five associations realized a profit in the wheat department for the three years studied, 1946-1948. The wheat department had average net earnings of \$16,847.24 at Bison, \$8,356.12 at Waukomis, \$25,986.68 at Imo, \$19,866.01 at Drummond, and \$13,294.75 at Ames (Table 13).

Bison lost \$2,146.44 in the sideline department. This was the result of not controlling the management of the service station costs. Drummond

lost \$78.88 in the sideline department. This loss resulted from sidelines being operated on such a small volume basis. Even though a loss was incurred in this department, it might be profitable to maintain the department. If the loss were sufficiently large to impair cost efficiency, the department should be discontinued. However, if the discontinuance of one department would cause a decrease in volume in another department, it would be well to keep the one where the loss was incurred. This is true especially if the gain in the profitable department would more than offset the loss in the unprofitable department. Waukomis had \$2,586.00 earned in the sideline department, Imo had \$1,193.41, and Ames had \$3,557.19 (Table 13).

The total net earnings resulting from the wheat and sideline departments were \$14,700.80 at Bison, \$10,942.12 at Waukomis, \$27,180.09 at Imo, \$19,787.03 at Drummond, and \$16,851.94 at Ames (Table 13). Usually the cooperatives selling the most wheat have the highest net returns. This situation was only partially true in this study. Imo sold more wheat and had the highest net return. Drummond and Ames sold less wheat than Bison, but they had larger net returns. Waukomis sold more wheat than Ames, but its net returns were smaller. This was partly accounted for by the fact that Ames more than doubled any of the other associations in sideline sales. The failure to control service station labor at Bison caused a lower total net return to the cooperative. The lower total net returns at Waukomis were caused by inefficient control of expenses in both the wheat and sideline departments.

AN ANALYSIS OF THE SEASONAL EXPENSES

The expenses of a wheat cooperative fluctuate during the year as they do in any business concern. The expenses of an elevator reach their peak during the month of June. This is to be expected since in this area harvesting of wheat occurs in June. The sideline business of the wheat cooperative tends to cause more fluctuation in expenses for each month. The more sideline business handled by an elevator the greater will be the expenses; therefore, the expenses will vary more from month to month.

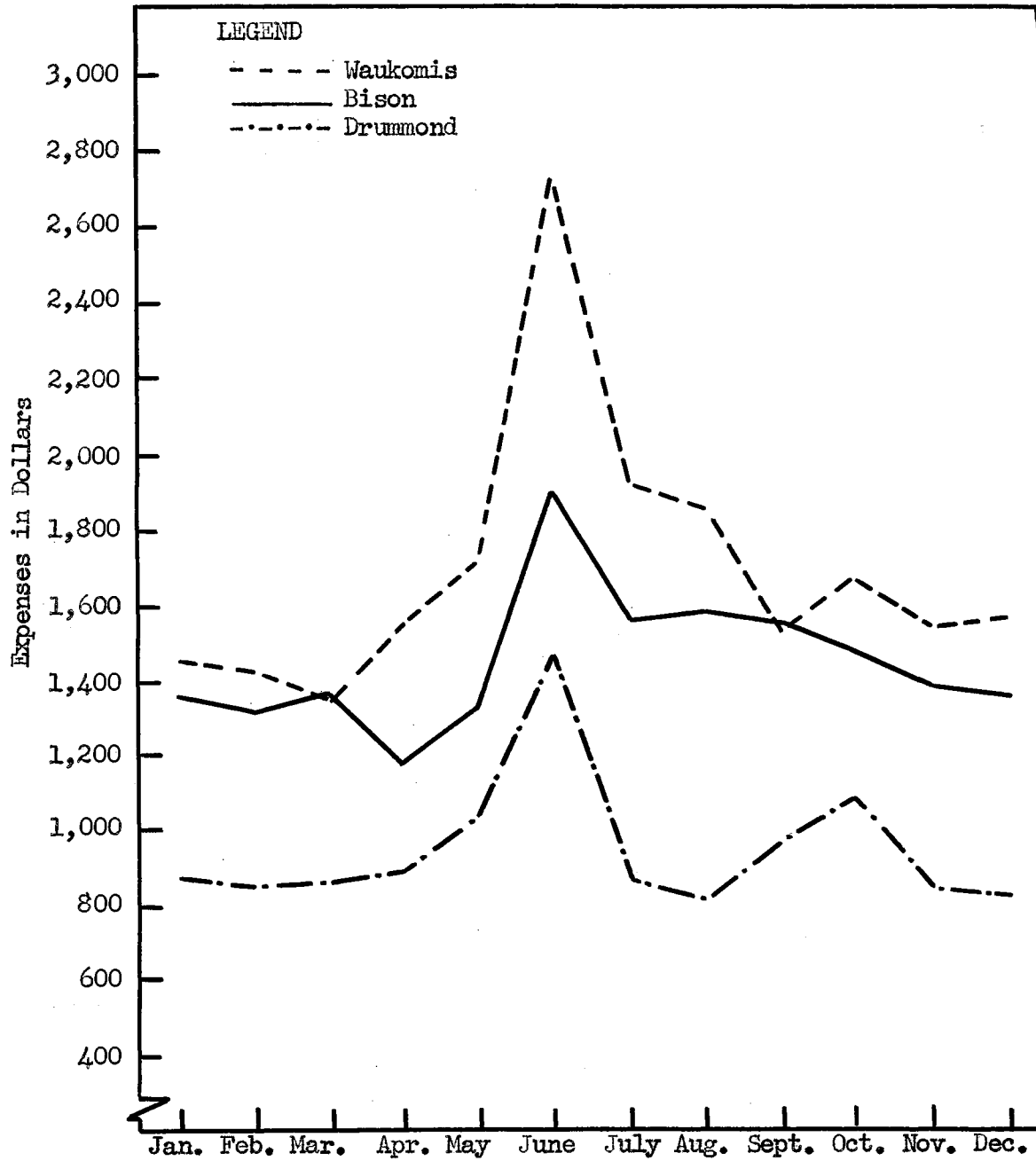
The expense ledgers were used to obtain the monthly expense totals for each crop year studied. The accumulative expenses which were paid once a year were divided equally among the twelve months. The accumulative expenses were taxes, insurance and bonds, and calculated interest expense. The payroll taxes were omitted from this group since they were paid each month according to the labor used for the month.

Seasonal Fluctuations of the Associations

Bison. The seasonal expenses at Bison fluctuated considerably before harvest time (Figure 2). They varied slightly in February and March. The expenses of the association dropped about \$200.00 in April and gained this amount in May. Most all of the expense items decreased for April. The largest decrease was in the salaries and wages. It is significant to note that Bison and Ames were the only cooperatives showing a decrease in expenses for April, and these two associations were the only ones that operated service stations.

Expenses increased during the harvest month to about \$1,900.00. The expenses were a little over \$1,300.00 for May. During the post-harvest

Figure 2. Average Seasonal Variation of the Operating Expenses for Three Associations, From 1946 Through 1948



Source: Tables 22, 23, and 25.

period the expenses had one slight increase, and this was about \$20.00 in August. The remaining months leveled off in a gradual decline to \$1,365.54 for December (Figure 2).

Waukomis. The Waukomis cooperative is a large sideline organization when comparing its operations with Bison, Imo, and Drummond. The expenses varied a little more from month to month at Waukomis than at any other of the four elevators (Figure 2).

The pre-harvest months of February and March at Waukomis varied only slightly. The expenses steadily increased from about \$1,400.00 in March to over \$2,700.00 for the harvest month of June. The post-harvest months decreased from \$1,900.00 in July to about \$1,600.00 in September. They increased about \$100.00 in October, and the expenses decreased about the same amount in November. They increased again in December about \$30.00. The salaries and wages and the administrative and selling expenses were the main causes for the seasonal fluctuation at Waukomis.

Drummond. The Drummond association had two noticeable peaks in its seasonal variation of operating expenses (Figure 2). Besides the usual harvest peak in June, the expenses for October were more accentuated than at the other associations. The pre-harvest months were almost stable from January to March. The expenses increased about \$40.00 from March to April, and about \$125.00 from April to May.

The expenses during harvest were almost \$1,500.00. After harvest the expenses decreased to \$800.00 in August. From August to October the expenses increased to about \$1,100.00, and they decreased to approximately \$800.00 in December. The rather high peak in October occurred as a result of fall planting and the treating of seed wheat.

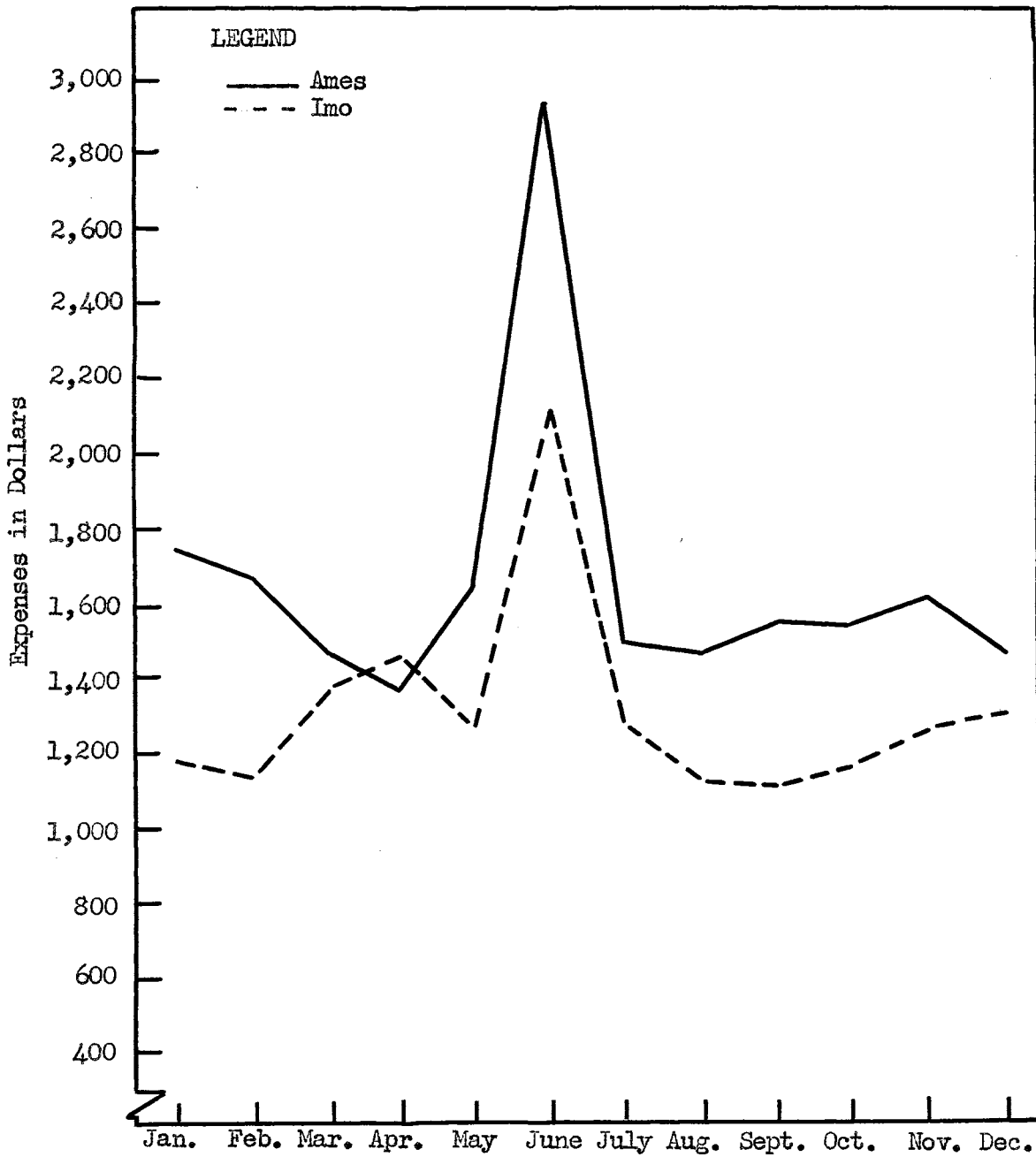
The total operating expenses at Drummond were smaller than at any of the other cooperatives. Generally, the seasonal pattern at Drummond did not fluctuate quite as much as the seasonal patterns at the other associations (Figure 2). This can partly be attributed to the small amount of sideline sales made by the cooperative.

Imo. The seasonal expenses at Imo decreased from about \$1,180.00 in January to \$1,140.00 in February (Figure 3). During the pre-harvest season the expenses steadily increased except for the month of May. The expenses decreased about \$200.00 in May. Imo was the only cooperative of the five showing a decrease for May. Some expenses were not paid in the month the expenses were incurred. This possibly could have happened in May; however, there was a very large repair expense for April. Also, the repairs decreased more than \$200.00 in May.

The expenses for June were about \$2,100.00, and they decreased to about \$1,100.00 in August. The expenses for the post-harvest months steadily increased from \$1,100.00 in August to almost \$1,300.00 in December (Figure 3). The seasonal pattern of expenses for the post-harvest months did not fluctuate as much as the pre-harvest months. There could have been more pre-harvest work to be done at Imo since the organization handled more wheat. At least this assumption could be true for selected years.

Ames. The total operating expenses at Ames and the seasonal peak of expenses in June were higher than any of the other four associations (Figure 3). The expenses decreased from over \$1,700.00 in January to about \$1,400.00 in April. The most noticeable drop in expenses was the salaries and wages. Possibly this decrease occurred in the sideline department. This can be assumed because Ames handled less wheat and sold more sidelines

Figure 3. Average Seasonal Variation of the Operating Expenses for Two Associations, From 1946 Through 1948



Source: Tables 24 and 26.

than any of the other organizations. There would be less preparation made during the pre-harvest months to handle the wheat crop.

The expenses increased from \$1,400.00 in April to over \$2,900.00 in June. The high total expenses in June were caused by an increase in labor. The salaries and wages increased approximately \$1,200.00 from May to June. It is assumed that there was an extra large amount of sideline business carried on during the heavy month of wheat marketing.

The post-harvest months increased from about \$1,500.00 in August to \$1,600.00 in November. The expenses decreased about \$150.00 in December (Figure 3). It would seem that the expenses for the months preceding harvest were more affected by sideline sales than the post-harvest months.

AN ANALYSIS OF THE FIXED AND VARIABLE EXPENSES

Fixed costs are those costs which remain relatively fixed for a production period. Variable costs are directly related to the volume output of a business. This definition is not entirely valid unless it is used in relation to a specified length of time. For the analysis of this section, it would be well to examine a definition of fixed costs.

"Fixed costs are those which are stationary for a particular production period of time, while variable costs are not for the same period. Fixed costs cannot be considered as being 'just fixed' without reference to some particular standard or bench mark. They do vary with production."⁴

Since a period of time must be used, the practical length of time for use in this study would be one year. The fixed costs are those which extend beyond one year. Any particular cost would not necessarily be 100 percent fixed or 100 percent variable for this period.

The manager's salary was considered as 100 percent fixed, while other salaries and wages were considered as being 50 percent fixed and 50 percent variable. This was assumed because the manager would always be employed. The number of other employees of a cooperative depend upon the season of the year and the volume and type of business done by the association.

The depreciation was 100 percent fixed. Insurance and bonds was 75 percent fixed, and the degree of fixity of the taxes depended on the type of tax. Facility interest was 100 percent fixed. Operating interest was 50 percent fixed, and commodity interest expense was 100 percent variable. The other expenses were the most variable of the expense items

⁴Adlowe L. Larson, "The Fixity Gradient: A Tool for Fixed and Variable Cost Analysis," Journal of Farm Economics, Vol. XXVIII (August 1946), pp. 826-827.

because their total amounts depended more than 50 percent upon the volume of business.

Yearly Variations in Fixed and Variable Expenses for the Associations

The variations in expenses from year to year caused variations in the amount of fixed costs between years. Some expenses increased more than others causing the amount of fixed costs to fluctuate. These variations were limited since there was a constant increase between the expenses over the three years of this study. The changes that did occur over the three years will be discussed by associations.

Bison. The fixed costs increased each year at Bison totaling \$7,866.03 in 1946, \$10,733.74 in 1947, and \$16,207.70 in 1948 (Table 14). The increase was largely due to increased salaries and wage expenses, and an increase in the depreciation and insurance and bond expenses. Bison started construction on additional storage space which accounted for larger physical facility expenses.

The variable costs at Bison increased from \$3,460.04 in 1946 to \$5,630.47 in 1947, and further increased to \$8,330.63 in 1948. The increase in variable costs was due to a large increase in labor expenses. The handling of more wheat and sidelines necessitated the hiring of extra seasonal labor.

Waukomis. The fixed costs at Waukomis increased more from 1946 to 1947 than from 1947 to 1948. The increase in 1947 was about \$2,000.00 while the increase in 1948 was only \$1,400.00 (Table 15). The increase in the fixed costs was more influenced by the other expenses. The other expenses were more variable, but their degree of fixity affected the total costs.

The variable costs at Waukomis followed the general pattern of the fixed costs except for 1948. The variable costs in 1948 increased \$205.70 over the

TABLE 14
ANNUAL AND AVERAGE ANNUAL FIXED AND VARIABLE EXPENSES
FOR THE FARMERS COOPERATIVE ASSOCIATION OF BISON, OKLAHOMA,
FROM 1946 THROUGH 1948 (Continued)

	Vari-		1946			1947		
	Fixed	able	Total	Fixed	Variable	Total	Fixed	Variable
	PERCENT		DOLLARS					
Salaries and Wages			4,875.00	3,637.50	1,237.50	8,126.22	5,563.11	2,563.11
Manager's Salary	100	0	2,400.00	2,400.00	-0-	3,000.00	3,000.00	-0-
Other Salaries and Wages	50	50	2,475.00	1,237.50	1,237.50	5,126.22	2,563.11	2,563.11
Depreciation	100	0	847.63	847.63	-0-	1,214.04	1,214.04	-0-
Insurance and Bonds	75	25	462.52	346.89	115.63	693.68	520.26	173.42
Interest			2,666.03	1,647.12	1,018.91	3,133.17	1,978.88	1,154.29
Facility	100	0	793.61	793.61	-0-	1,116.06	1,116.06	-0-
Operating	50	50	1,707.03	853.51	853.52	1,725.65	862.82	862.83
Commodity	0	100	165.39	-0-	165.39	291.46	-0-	291.46
Taxes			640.77	298.18	342.59	724.76	545.85	178.91
Pay Roll	60	40	46.67	28.00	18.67	156.47	93.88	62.59
Advalorem	100	0	187.68	187.68	-0-	242.72	242.72	-0-
Corporation License	100	0	82.50	82.50	-0-	88.75	88.75	-0-
Sales Tax	0	100	323.92	-0-	323.92	113.32	-0-	113.32
Truck License	100	0	-0-	-0-	-0-	120.50	120.50	-0-
Other Taxes	0	100	-0-	-0-	-0-	3.00	-0-	3.00
Utilities	20	80	297.29	59.46	237.83	448.20	89.64	358.56
Telephone and Telegraph	25	75	82.05	20.51	61.54	140.91	35.23	105.68
Repairs	30	70	177.54	53.26	124.28	651.09	195.33	455.76
Supplies	25	75	118.44	29.61	88.83	152.52	38.13	114.39
Advertising	50	50	130.23	65.12	65.11	144.73	72.36	72.37
Truck Expense	25	75	-0-	-0-	-0-	-0-	-0-	-0-
Administrative and Selling Expense			1,028.57	860.75	167.82	934.89	480.91	453.98
TOTALS			11,326.07	7,866.03	3,460.04	16,364.21	10,733.74	5,630.47

Source: Annual Audits of the Association, from 1946 through 1948.

TABLE 14
ANNUAL AND AVERAGE ANNUAL FIXED AND VARIABLE EXPENSES
FOR THE FARMERS COOPERATIVE ASSOCIATION OF BILSON, OKLAHOMA,
FROM 1946 THROUGH 1948

	Vari-		1948			Three Year Average		
	Fixed	able	Total	Fixed	Variable	Total	Fixed	Variable
	PERCENT		DOLLARS					
Salaries and Wages			11,286.64	7,356.32	3,930.32	8,095.96	5,518.98	2,576.98
Manager's Salary	100	0	3,426.00	3,426.00	-0-	2,942.00	2,942.00	-0-
Other Salaries and Wages	50	50	7,860.64	3,930.32	3,930.32	5,153.96	2,576.98	2,576.98
Depreciation	100	0	2,186.78	2,186.78	-0-	1,416.15	1,416.15	-0-
Insurance and Bonds	75	25	1,577.67	1,183.25	394.42	911.29	683.47	227.82
Interest			3,681.72	2,300.52	1,381.20	3,160.31	1,975.51	1,184.80
Facility	100	0	1,196.56	1,196.56	-0-	1,035.41	1,035.41	-0-
Operating	50	50	2,207.93	1,103.96	1,103.97	1,880.20	940.10	940.10
Commodity	0	100	277.23	-0-	277.23	244.70	-0-	244.70
Taxes			743.87	485.99	257.88	703.13	443.33	259.80
Pay Roll	60	40	112.96	67.78	45.18	105.37	63.22	42.15
Advalorem	100	0	321.96	321.96	-0-	250.79	250.79	-0-
Corporation License	100	0	96.25	96.25	-0-	89.16	89.16	-0-
Sales Tax	0	100	212.70	-0-	212.70	216.65	-0-	216.65
Truck License	100	0	-0-	-0-	-0-	40.16	40.16	-0-
Other Taxes	0	100	-0-	-0-	-0-	1.00	-0-	1.00
Utilities	20	80	452.95	90.59	362.36	399.48	79.90	319.58
Telephone and Telegraph	25	75	183.43	45.86	137.57	135.46	33.87	101.59
Repairs	30	70	779.35	233.81	545.54	535.99	160.80	375.19
Supplies	25	75	440.30	110.08	330.22	237.09	59.27	177.82
Advertising	50	50	199.95	99.97	99.98	158.30	79.15	79.15
Truck Expense	25	75	586.84	146.71	440.13	195.61	48.90	146.71
Administrative and Selling Expense			2,418.83	1,967.82	451.01	1,460.76	1,103.16	357.60
TOTALS			24,538.33	16,207.70	8,330.63	17,409.54	11,602.50	5,807.04

Source: Annual Audits of the Association, from 1946 through 1948.

TABLE 15
ANNUAL AND AVERAGE ANNUAL FIXED AND VARIABLE EXPENSES
FOR THE WAUKOMIS CO-OPERATIVE SUPPLY COMPANY OF WAUKOMIS, OKLAHOMA,
FROM 1946 THROUGH 1948 (Continued)

	Vari-		1946			1947		
	Fixed	able	Total	Fixed	Variable	Total	Fixed	Variable
	PERCENT		DOLLARS					
Salaries and Wages			7,127.36	4,703.68	2,423.68	7,431.03	4,895.51	2,535.52
Manager's Salary	100	0	2,280.00	2,280.00	-0-	2,360.00	2,360.00	-0-
Other Salaries and Wages	50	50	4,847.36	2,423.68	2,423.68	5,071.03	2,535.51	2,535.52
Depreciation	100	0	2,475.81	2,475.81	-0-	2,510.98	2,510.98	-0-
Insurance and Bonds	75	25	1,167.68	875.76	291.92	1,555.75	1,166.81	388.94
Interest			1,825.15	1,309.73	515.42	2,128.45	1,424.16	704.29
Facility	100	0	992.17	992.17	-0-	922.83	922.83	-0-
Operating	50	50	635.12	317.56	317.56	1,002.67	501.33	501.34
Commodity	0	100	197.86	-0-	197.86	202.95	-0-	202.95
Taxes			555.45	417.88	137.57	802.71	690.23	112.48
Pay Roll	60	40	135.47	81.28	54.19	142.74	85.64	57.10
Advalorem	100	0	280.35	280.35	-0-	549.09	549.09	-0-
Corporation License	100	0	36.25	36.25	-0-	45.00	45.00	-0-
Sales Tax	0	100	72.38	-0-	72.38	10.06	-0-	10.06
Truck License	100	0	20.00	20.00	-0-	10.50	10.50	-0-
Other Taxes	0	100	11.00	-0-	11.00	45.32	-0-	45.32
Utilities	20	80	378.76	75.75	303.01	328.45	65.69	262.76
Telephone and Telegraph	25	75	152.70	38.18	114.52	172.02	43.01	129.01
Repairs	30	70	501.65	150.50	351.15	2,860.23	858.07	2,002.16
Supplies	25	75	1,009.63	252.41	757.22	863.63	215.91	647.72
Advertising	50	50	348.75	174.37	174.38	332.14	166.07	166.07
Truck Expense	25	75	183.77	45.94	137.83	187.98	47.00	140.98
Administrative and Selling Expense			1,428.44	987.65	440.79	1,916.38	1,344.02	572.36
TOTALS			17,155.15	11,507.66	5,647.49	21,089.75	13,427.46	7,662.29

Source: Annual Audits of the Association, from 1946 through 1948.

TABLE 15
ANNUAL AND AVERAGE ANNUAL FIXED AND VARIABLE EXPENSES
FOR THE WAUKOMIS CO-OPERATIVE SUPPLY COMPANY OF WAUKOMIS, OKLAHOMA,
FROM 1946 THROUGH 1948

	Vari-		1948			Three Year Average		
	Fixed	able	Total	Fixed	Variable	Total	Fixed	Variable
	PERCENT		DOLLARS					
Salaries and Wages			9,601.41	6,090.20	3,510.21	8,053.27	5,229.97	2,823.30
Manager's Salary	100	0	2,580.00	2,580.00	-0-	2,406.67	2,406.67	-0-
Other Salaries and Wages	50	50	7,021.41	3,510.70	3,510.71	5,646.60	2,823.30	2,823.30
Depreciation	100	0	2,572.55	2,572.55	-0-	2,519.78	2,519.78	-0-
Insurance and Bonds	75	25	1,841.22	1,380.92	460.30	1,521.54	1,141.16	380.38
Interest			2,499.64	1,828.47	671.17	2,151.08	1,520.79	630.29
Facility	100	0	1,323.37	1,323.37	-0-	1,079.46	1,079.46	-0-
Operating	50	50	1,010.20	505.10	505.10	882.66	441.33	441.33
Commodity	0	100	166.07	-0-	166.07	188.96	-0-	188.96
Taxes			1,017.19	942.76	74.43	791.78	683.63	108.16
Pay Roll	60	40	136.08	81.65	54.43	138.10	82.86	55.24
Advalorem	100	0	790.61	790.61	-0-	540.02	540.02	-0-
Corporation License	100	0	60.00	60.00	-0-	47.08	47.08	-0-
Sales Tax	0	100	-0-	-0-	-0-	27.48	-0-	27.48
Truck License	100	0	10.50	10.50	-0-	13.67	13.67	-0-
Other Taxes	0	100	20.00	-0-	20.00	25.44	-0-	25.44
Utilities	20	80	369.21	73.84	295.37	358.81	71.76	287.05
Telephone and Telegraph	25	75	150.21	37.55	112.66	158.31	39.58	118.73
Repairs	30	70	1,947.59	584.28	1,363.31	1,769.82	530.95	1,238.87
Supplies	25	75	959.11	239.78	719.33	944.12	236.03	708.09
Advertising	50	50	262.48	131.24	131.24	314.46	157.23	157.23
Truck Expense	25	75	326.95	81.74	245.21	232.90	58.22	174.68
Administrative and Selling Expense			1,179.24	894.98	284.26	1,508.03	1,075.55	432.47
TOTALS			22,726.80	14,858.81	7,867.99	20,323.90	13,264.65	7,059.25

Source: Annual Audits of the Association, from 1946 through 1948.

1947 crop season. The large increase in variable costs was in 1947. This amount was \$1,014.80 larger than in 1946. The reason for this increase was an increase of \$1,651.01 in repairs in 1947. Repairs were approximately 70 percent variable.

Imo. The fixed costs increased each year at Imo totaling \$9,567.40 in 1946, \$11,316.09 in 1947, and \$12,814.21 in 1948 (Table 16). A number of factors were responsible for this increase. The manager's salary, which was 100 percent fixed, was increased each year. The physical facility expenses increased, especially insurance and bonds, and interest. Some of the other expenses also increased, and although most of them were highly variable, their small portion of fixity had an effect on the total fixed costs. The increase of about \$300.00 in administration and selling expenses in 1947 had an effect on the fixed costs.

The variable costs at Imo increased from \$3,916.71 in 1946 to \$4,275.62 in 1947, and to \$5,211.02 in 1948. The increase in variable expenses was the result of an increase in volume of business in 1947. The 1947 crop was larger than the 1948 crop. As a result such expense items as repairs, administrative and selling expense, and the lesser expense items increased to take care of the larger inventory of wheat at the end of the 1947 crop season. The amount stored in 1948 was larger by about 40,000 bushels than in 1947.

Drummond. The total fixed costs at Drummond increased from \$7,191.06 in 1946 to \$7,725.36 in 1947, and to \$9,636.47 in 1948 (Table 17). There were two reasons that accounted for most of the increase at Drummond. The first reason was the increase in manager's salary and other salaries and wages. The other reason for the increase in 1948 was the increase in

TABLE 16
ANNUAL AND AVERAGE ANNUAL FIXED AND VARIABLE EXPENSES
FOR THE FARMERS COOPERATIVE ELEVATOR COMPANY OF IMO, OKLAHOMA,
FROM 1946 THROUGH 1948 (Continued)

	Vari-		1946			1947		
	Fixed	able	Total	Fixed	Variable	Total	Fixed	Variable
	PERCENT		DOLLARS					
Salaries and Wages			5,057.97	3,803.98	1,253.99	5,869.00	4,502.00	1,367.00
Manager's Salary	100	0	2,550.00	2,550.00	-0-	3,135.00	3,135.00	-0-
Other Salaries and Wages	50	50	2,507.97	1,253.98	1,253.99	2,734.00	1,367.00	1,367.00
Depreciation	100	0	1,764.00	1,764.00	-0-	1,973.48	1,973.48	-0-
Insurance and Bonds	75	25	845.72	634.29	211.43	965.27	723.95	241.32
Interest			2,543.88	1,621.92	921.96	2,779.28	1,859.03	920.25
Facility	100	0	824.66	824.66	-0-	983.94	983.94	-0-
Operating	50	50	1,594.52	797.26	797.26	1,750.19	875.09	875.10
Commodity	0	100	124.70	-0-	124.70	45.15	-0-	45.15
Taxes			336.07	314.64	21.43	514.61	488.87	25.74
Pay Roll	60	40	53.58	32.15	21.43	56.84	34.10	22.74
Advalorem	100	0	218.74	218.74	-0-	386.02	386.02	-0-
Corporation License	100	0	63.75	63.75	-0-	68.75	68.75	-0-
Sales Tax	0	100	-0-	-0-	-0-	-0-	-0-	-0-
Truck License	100	0	-0-	-0-	-0-	-0-	-0-	-0-
Other Taxes	0	100	-0-	-0-	-0-	3.00	-0-	3.00
Utilities	20	80	450.80	90.16	360.64	427.72	85.54	342.18
Telephone and Telegraph	25	75	128.30	32.08	96.22	128.42	32.11	96.31
Repairs	30	70	525.28	157.58	367.70	895.46	268.64	626.82
Supplies	25	75	663.65	165.91	497.74	707.69	176.92	530.77
Advertising	50	50	215.58	107.79	107.79	144.00	72.00	72.00
Truck Expense	25	75	-0-	-0-	-0-	-0-	-0-	-0-
Administrative and Selling Expense			952.86	875.05	77.81	1,186.78	1,133.55	53.23
TOTALS			13,484.11	9,567.40	3,916.71	15,591.71	11,316.09	4,275.62

Source: Annual Audits of the Association, from 1946 through 1948.

TABLE 16

ANNUAL AND AVERAGE ANNUAL FIXED AND VARIABLE EXPENSES
FOR THE FARMERS COOPERATIVE ELEVATOR COMPANY OF IMO, OKLAHOMA,
FROM 1946 THROUGH 1948

	Fixed	Vari- able	1948			Three Year Average		
			PERCENT	Total	Fixed	Variable	Total	Fixed
DOLLARS								
Salaries and Wages			6,326.50	4,798.25	1,528.25	5,751.16	4,368.08	1,383.08
Manager's Salary	100	0	3,270.00	3,270.00	-0-	2,985.00	2,985.00	-0-
Other Salaries and Wages	50	50	3,056.50	1,528.25	1,528.25	2,766.16	1,383.08	1,383.08
Depreciation	100	0	2,123.23	2,123.23	-0-	1,953.57	1,953.57	-0-
Insurance and Bonds	75	25	1,784.47	1,338.35	446.12	1,198.49	898.87	299.62
Interest			3,472.84	2,268.82	1,204.02	2,932.00	1,916.59	1,015.41
Facility	100	0	1,096.34	1,096.34	-0-	968.31	968.31	-0-
Operating	50	50	2,344.97	1,172.48	1,172.49	1,896.56	948.28	948.28
Commodity	0	100	31.53	-0-	31.53	67.13	-0-	67.13
Taxes			493.97	444.40	49.57	448.22	415.97	32.25
Pay Roll	60	40	61.49	36.89	24.60	57.30	34.38	22.92
Advalorem	100	0	328.76	328.76	-0-	311.17	311.17	-0-
Corporation License	100	0	78.75	78.75	-0-	70.42	70.42	-0-
Sales Tax	0	100	-0-	-0-	-0-	-0-	-0-	-0-
Truck License	100	0	-0-	-0-	-0-	-0-	-0-	-0-
Other Taxes	0	100	24.97	-0-	24.97	9.33	-0-	9.33
Utilities	20	80	482.96	96.59	386.37	453.83	90.77	363.06
Telephone and Telegraph	25	75	182.73	45.68	137.05	146.48	36.62	109.86
Repairs	30	70	1,165.82	349.75	816.07	862.19	258.66	603.53
Supplies	25	75	612.41	153.10	459.31	661.25	165.31	495.94
Advertising	50	50	104.09	52.04	52.05	154.56	77.28	77.28
Truck Expense	25	75	-0-	-0-	-0-	-0-	-0-	-0-
Administrative and Selling Expense			1,276.21	1,144.00	132.21	1,138.60	1,050.85	87.75
TOTALS			18,025.23	12,814.21	5,211.02	15,700.35	11,232.57	4,467.78

Source: Annual Audits of the Association, from 1946 through 1948.

TABLE 17
ANNUAL AND AVERAGE ANNUAL FIXED AND VARIABLE EXPENSES
FOR THE DRUMMOND COOPERATIVE ELEVATOR COMPANY OF DRUMMOND, OKLAHOMA,
FROM 1946 THROUGH 1948 (Continued)

	Vari-		1946			1947		
	Fixed	able	Total	Fixed	Variable	Total	Fixed	Variable
	PERCENT		DOLLARS					
Salaries and Wages			3,936.17	3,055.58	880.59	4,812.26	3,531.13	1,281.13
Manager's Salary	100	0	2,175.00	2,175.00	-0-	2,250.00	2,250.00	-0-
Other Salaries and Wages	50	50	1,761.17	880.58	880.59	2,562.26	1,281.13	1,281.13
Depreciation	100	0	1,128.37	1,128.37	-0-	819.46	819.46	-0-
Insurance and Bonds	75	25	380.59	285.44	95.15	299.83	224.87	74.96
Interest			2,422.90	1,719.42	703.48	2,596.67	1,695.76	900.91
Facility	100	0	1,098.37	1,098.37	-0-	996.22	996.22	-0-
Operating	50	50	1,242.11	621.05	621.06	1,399.08	699.54	699.54
Commodity	0	100	82.42	-0-	82.42	201.37	-0-	201.37
Taxes			469.59	427.40	42.19	574.22	546.52	27.70
Pay Roll	60	40	37.69	22.61	15.08	44.25	26.55	17.70
Advalorem	100	0	338.54	338.54	-0-	440.72	440.72	-0-
Corporation License	100	0	66.25	66.25	-0-	79.25	79.25	-0-
Sales Tax	0	100	8.51	-0-	8.51	-0-	-0-	-0-
Truck License	100	0	-0-	-0-	-0-	-0-	-0-	-0-
Other Taxes	0	100	18.60	-0-	18.60	10.00	-0-	10.00
Utilities	20	80	351.82	70.36	281.46	366.60	73.32	293.28
Telephone and Telegraph	25	75	50.31	12.58	37.73	84.97	21.24	63.73
Repairs	30	70	185.65	55.70	129.95	305.75	91.73	214.02
Supplies	25	75	125.43	31.36	94.07	388.16	97.04	291.12
Advertising	50	50	58.08	29.04	29.04	154.25	77.12	77.13
Truck Expense	25	75	35.22	8.81	26.41	-0-	-0-	-0-
Administrative and Selling Expense			427.44	367.00	60.44	843.09	547.17	295.92
TOTALS			9,571.57	7,191.06	2,380.51	11,245.26	7,725.36	3,519.90

Source: Annual Audits of the Association, from 1946 through 1948.

TABLE 17
ANNUAL AND AVERAGE ANNUAL FIXED AND VARIABLE EXPENSES
FOR THE DRUMMOND COOPERATIVE ELEVATOR COMPANY OF DRUMMOND, OKLAHOMA,
FROM 1946 THROUGH 1948

	Vari-		1948			Three Year Average		
	Fixed	able	Total	Fixed	Variable	Total	Fixed	Variable
	PERCENT		DOLLARS					
Salaries and Wages			5,773.27	4,236.63	1,536.64	4,840.57	3,607.78	1,232.79
Manager's Salary	100	0	2,700.00	2,700.00	-0-	2,375.00	2,375.00	-0-
Other Salaries and Wages	50	50	3,073.27	1,536.63	1,536.64	2,465.57	1,232.78	1,232.79
Depreciation	100	0	1,304.70	1,304.70	-0-	1,084.18	1,084.18	-0-
Insurance and Bonds	75	25	537.04	402.78	134.26	405.82	304.36	101.46
Interest			3,228.60	2,309.21	919.39	2,749.39	1,908.13	841.26
Facility	100	0	1,533.36	1,533.36	-0-	1,209.32	1,209.32	-0-
Operating	50	50	1,551.70	775.85	775.85	1,397.63	698.81	698.82
Commodity	0	100	143.54	-0-	143.54	142.44	-0-	142.44
Taxes			640.02	606.99	33.03	561.28	526.97	34.31
Pay Roll	60	40	75.08	45.05	30.03	52.34	31.40	20.94
Advalorem	100	0	476.94	476.94	-0-	418.73	418.73	-0-
Corporation License	100	0	85.00	85.00	-0-	76.84	76.84	-0-
Sales Tax	0	100	-0-	-0-	-0-	2.84	-0-	2.84
Truck License	100	0	-0-	-0-	-0-	-0-	-0-	-0-
Other Taxes	0	100	3.00	-0-	3.00	10.53	-0-	10.53
Utilities	20	80	484.42	96.88	387.54	400.95	80.19	320.76
Telephone and Telegraph	25	75	124.23	31.06	93.17	86.50	21.62	64.88
Repairs	30	70	342.15	102.64	239.51	277.84	83.35	194.49
Supplies	25	75	258.30	64.57	193.73	237.30	64.32	192.98
Advertising	50	50	122.68	61.34	61.34	111.67	55.83	55.84
Truck Expense	25	75	-0-	-0-	-0-	11.74	2.93	8.81
Administrative and Selling Expense			543.24	419.67	123.57	604.59	444.61	159.98
TOTALS			13,358.65	9,636.47	3,722.18	11,391.83	8,184.27	3,207.56

Source: Annual Audits of the Association, from 1946 through 1948.

physical facilities which was due to the construction of a cleaner building amounting to more than \$8,000.00.

The variable costs increased more in 1947 than in 1948. The total amounts of variable costs were \$2,380.51 in 1946, \$3,519.90 in 1947, and \$3,722.18 in 1948. The reason for the larger increase in 1947 was due to a larger wheat crop, and the variable costs fluctuated more with the volume of business than did the fixed costs.

Ames. The fixed costs increased at Ames more than at any of the four other associations. They were \$8,250.05 in 1946, \$14,912.90 in 1947, and \$16,699.00 in 1948 (Table 18). The increase resulted in the acquisition of a gasoline station in March of 1947. Building and all equipment necessary to operate a gasoline station were purchased. This increased the depreciation about \$1,000.00 in 1947. Other salaries and wages which were 50 percent fixed increased over \$3,000.00 in 1947. This was due to the extra help needed to operate the service station. Insurance and bonds increased over \$900.00, and taxes increased almost \$600.00 for the same period.

The physical facility expenses were more affected by sidelines than wheat because this cooperative is located in the poorest wheat producing area of any of the five cooperatives in the cluster. It would be natural that Ames would stress sideline sales since the farming in the area is more diversified.

The variable costs at Ames increased from \$2,638.27 in 1946 to \$8,247.67 in 1947, and to \$9,147.72 in 1948. This increase was the result of a general increase in sideline business, and especially the addition of the service station.

TABLE 18
ANNUAL AND AVERAGE ANNUAL FIXED AND VARIABLE EXPENSES
FOR THE FARMERS ELEVATOR COMPANY OF AMES, OKLAHOMA,
FROM 1946 THROUGH 1948 (Continued)

	Vari-		1946			1947		
	Fixed	able	Total	Fixed	Variable	Total	Fixed	Variable
	PERCENT		DOLLARS					
Salaries and Wages			4,801.40	3,465.70	1,335.70	11,589.08	6,994.54	4,594.54
Manager's Salary	100	0	2,130.00	2,130.00	-0-	2,400.00	2,400.00	-0-
Other Salaries and Wages	50	50	2,671.40	1,335.70	1,335.70	9,189.08	4,594.54	4,594.54
Depreciation	100	0	1,687.22	1,687.22	-0-	2,627.60	2,627.60	-0-
Insurance and Bonds	75	25	515.13	386.35	128.78	1,133.76	850.32	283.44
Interest			2,038.44	1,589.34	449.10	3,181.20	2,285.74	895.46
Facility	100	0	1,274.55	1,274.55	-0-	1,563.14	1,563.14	-0-
Operating	50	50	629.59	314.79	314.80	1,445.20	722.60	722.60
Commodity	0	100	134.30	-0-	134.30	172.86	-0-	172.86
Taxes			496.24	478.86	17.38	935.34	861.70	73.64
Pay Roll	60	40	43.44	26.06	17.38	121.60	72.96	48.64
Advalorem	100	0	421.55	421.55	-0-	701.09	701.09	-0-
Corporation License	100	0	31.25	31.25	-0-	66.75	66.75	-0-
Sales Tax	0	100	-0-	-0-	-0-	25.00	-0-	25.00
Truck License	100	0	-0-	-0-	-0-	20.90	20.90	-0-
Other Taxes	0	100	-0-	-0-	-0-	-0-	-0-	-0-
Utilities	20	80	304.58	60.92	243.66	624.06	124.81	499.25
Telephone and Telegraph	25	75	109.84	27.46	82.38	183.76	45.94	137.82
Repairs	30	70	182.17	54.65	127.52	605.89	181.77	424.12
Supplies	25	75	154.20	38.55	115.65	343.43	85.86	257.57
Advertising	50	50	50.77	25.38	25.39	142.44	71.22	71.22
Truck Expense	25	75	-0-	-0-	-0-	831.62	207.91	623.71
Administrative and Selling Expense			548.33	435.62	112.71	962.39	575.49	386.90
TOTALS			10,888.32	8,250.05	2,638.27	23,160.57	14,912.90	8,247.67

Source: Annual Audits of the Association, from 1946 through 1948.

TABLE 18
ANNUAL AND AVERAGE ANNUAL FIXED AND VARIABLE EXPENSES
FOR THE FARMERS ELEVATOR COMPANY OF AMES, OKLAHOMA,
FROM 1946 THROUGH 1948

	Vari-		1948			Three Year Average		
	Fixed	able	Total	Fixed	Variable	Total	Fixed	Variable
	PERCENT		DOLLARS					
Salaries and Wages			12,710.39	7,667.69	5,042.70	9,700.29	6,042.64	3,657.65
Manager's Salary	100	0	2,625.00	2,625.00	-0-	2,385.00	2,385.00	-0-
Other Salaries and Wages	50	50	10,085.39	5,042.69	5,042.70	7,315.29	3,657.64	3,657.65
Depreciation	100	0	2,955.86	2,955.86	-0-	2,423.56	2,423.56	-0-
Insurance and Bonds	75	25	1,800.33	1,350.25	450.08	1,149.74	862.31	287.43
Interest			3,124.98	2,271.86	853.12	2,781.54	2,048.98	732.56
Facility	100	0	1,577.41	1,577.41	-0-	1,471.70	1,471.70	-0-
Operating	50	50	1,388.91	694.45	694.46	1,154.57	577.28	577.29
Commodity	0	100	158.66	-0-	158.66	155.27	-0-	155.27
Taxes			1,301.35	1,077.72	223.63	910.98	806.09	104.89
Pay Roll	60	40	124.20	74.52	49.68	96.42	57.85	38.57
Advalorem	100	0	868.95	868.95	-0-	663.86	663.86	-0-
Corporation License	100	0	83.75	83.75	-0-	60.58	60.58	-0-
Sales Tax	0	100	170.95	-0-	170.95	65.32	-0-	65.32
Truck License	100	0	50.50	50.50	-0-	23.80	23.80	-0-
Other Taxes	0	100	3.00	-0-	3.00	1.00	-0-	1.00
Utilities	20	80	619.50	123.90	495.60	516.05	103.21	412.84
Telephone and Telegraph	25	75	197.68	49.42	148.26	163.76	40.94	122.82
Repairs	30	70	1,176.91	353.07	823.84	654.99	196.50	458.49
Supplies	25	75	623.59	155.90	467.69	373.74	93.43	280.31
Advertising	50	50	115.67	57.83	57.84	102.96	51.48	51.48
Truck Expense	25	75	347.02	86.76	260.26	392.88	98.22	294.66
Administrative and Selling Expense			873.44	548.74	324.70	794.71	519.94	274.77
TOTALS			25,846.72	16,699.00	9,147.72	19,965.20	13,287.30	6,677.90

Source: Annual Audits of the Association, from 1946 through 1948.

Variations of Fixed and Variable Expenses Between Associations

A comparison between the different associations shows the relationship between the types of businesses operated by the cooperatives. The larger wheat organizations usually had more fixed costs invested, while the larger sideline cooperatives had more variable costs.

Comparison of Salaries and Wage Expenses. More labor was required for sidelines than for wheat business. The surplus labor in turn increased both fixed and variable costs. As the manager's salary did not vary materially between associations, and the remainder of the labor was 50 percent fixed, the larger labor cost decreased the percentage of the total labor cost that was fixed.

The three year average fixed labor costs were \$5,518.98 at Bison, \$5,229.97 at Waukomis, \$4,368.08 at Imo, \$3,607.78 at Drummond, and \$6,042.64 at Ames (Tables 14, 15, 16, 17, and 18). Since Ames and Waukomis were the largest sideline associations, it would be expected that their labor costs would be higher. The only reason that this is not true is because Bison paid its manager the largest salary of any of the cooperatives studied. The variable labor at Waukomis was about \$300.00 higher than at Bison.

Comparison of Physical Facility Expenses. Wheat requires more physical facilities than sidelines. The expenses related to these physical assets are the most highly fixed group of expenses. The depreciation expense was 100 percent fixed. The highest depreciation expense was \$2,519.78 at Waukomis, followed by \$2,423.56 at Ames, \$1,953.57 at Imo, \$1,416.15 at Bison, and \$1,084.18 at Drummond (Tables 14, 15, 16, 17, and 18). The reasons for the two largest sideline selling cooperatives having higher depreciation expenses were because Waukomis had an addition in elevator

structure amounting to about \$10,000.00 in 1948. The Ames association constructed a service station and acquired the necessary equipment to operate it in 1947.

The insurance and bonds were 75 percent fixed. The fixed amount of this expense was \$683.47 at Bison, \$1,141.16 at Waukomis, \$898.87 at Imo, \$304.36 at Drummond, and \$862.31 at Ames. The fixed tax expense ranged from \$415.97 to \$806.09 at the five associations. The largest taxes were paid by Ames which sold more sidelines than the other associations. The smallest amount was paid by Imo which sold more wheat than any of the associations. Advalorem taxes accounted for the greater amount of taxes paid out by the cooperatives.

Comparison of Calculated Interest Expense. The cooperatives having the highest investment also had higher fixed interest expenses because the facility expense was 100 percent fixed, and the facilities accounted for more of the total interest expense than did the operating and commodity capital (Tables 14, 15, 16, 17, and 18). The facility capital was calculated at four percent, commodity capital at 2.25 percent, and operating capital at three percent. Ames had the largest fixed investment, while Bison had the largest total investment of all assets of the five associations. A large share of the investments at Ames was for sidelines.

Comparison of Other Expenses. The total of the other expenses was \$3,122.70 at Bison, \$5,286.45 at Waukomis, \$3,416.91 at Imo, \$1,750.59 at Drummond, and \$2,999.09 at Ames (Tables 14, 15, 16, 17, and 18). The other expenses were the most variable of any of the expense items. The nature of other expenses caused them to vary with the volume of business.

The total other fixed expenses were \$1,565.06 at Bison, followed by \$2,169.32 at Waukomis, \$1,679.49 at Imo, \$752.85 at Drummond, and \$1,103.72

at Ames. Waukomis had more than \$3,000.00 of the other expenses as variable. About half of the other expenses at Bison were variable, as well as at Imo. More than half of the other expenses at Drummond and Ames were variable.

The administrative and selling expense had the greatest effect in causing the differences between associations as to the fixity of this group of expenses. This group of expenses included donations, travel, directors' fees, bad debts, auditing and legal fees. An increase in merchandise sales caused this expense group to vary considerably.

Comparison of Total Expenses. Of the total expenses, 66.6 percent was fixed at Bison, 65.3 percent at Waukomis, 71.5 percent at Imo, 71.8 percent at Drummond, and 66.6 percent of the expenses were fixed at Ames (Tables 14, 15, 16, 17, and 18). The associations that handled and sold the most wheat had the largest percentage of fixed costs. This was to be expected since it required more facilities to operate the wheat department. If the fixed investments of the cooperatives had remained the same, an increase in the volume of business would not materially affect the fixed costs. The fixed costs would be influenced slightly by the variability of expenses.

AN ANALYSIS OF THE PROPOSED MULTIPLE UNIT ASSOCIATION

Each preceding section has been an analysis of the cost structures of five single unit grain associations. This portion of the study deals with the assumed formation of a multiple unit association. The multiple unit is to be formed on the basis of the cost data of the five single units, and the cost conditions will be for the same period of time, 1946-1948. The cost of operating the five single unit cooperatives will be compared with what the costs would be under one multiple unit organization. More efficient business operations usually result when one or more units are integrated.

To arrive at the degree of efficiency for the multiple unit grain association, certain assumptions will have to be made. These assumptions are necessary because the business unit does not exist. In organizing the multiple unit grain association, it is necessary to assume that the volume of business of the five local cooperatives does not change. The physical facilities are assumed as remaining the same since the volume of business is unchanged. However, over a long period of operation, additional services and facilities would be provided to the farmer members. This would result from the members having access to four other stations from which they could do business. An example of this could be shown by the Waukomis members buying gas and oil from Bison. The Bison cooperative operates a gasoline station while Waukomis does not. The combining of sideline services would eventually lead to an increase in the volume of sideline business.

The site for the administrative headquarters of the multiple unit would be at Drummond. The important factor in selecting Drummond as the

headquarters is its location in respect to the other cooperatives. Amos is twelve miles southwest, Bison is sixteen miles southeast, Waukomis is ten miles east, and Imo is six miles northeast of Drummond. It is true that some of the other cooperatives need more attention in their sideline business since Drummond has the smallest volume of sideline sales.

However, this would be a management problem which could be solved in a short period of time. If future operations required larger sideline facilities, Drummond has the necessary space, and the convenience of its location would require less managerial supervision.

The Operating Expenses of the Proposed Association

The average operating expenses for 1946-1948 were totaled for the five associations by each individual expense item. The operating expenses for the multiple grain association were projected from the averages of the five single units (Table 19). Some of the expenses remained the same since only the organizational structure was changed and not the physical structure. The expenses relating to the physical structure that did not change were depreciation, insurance and bonds, and calculated interest expense. Since the physical assets were to remain the same, along with volume of business, these expenses were unchanged.

Utilities, repairs, and truck expense are more variable, but in proposing the multiple association these expenses remained unchanged because the volume of business was kept constant.

Salaries and wages, taxes, telephone and telegraph, supplies, advertising, and administrative and selling expense are the expenses that varied under the new organization. These expenses will be discussed with supporting evidence for their decrease.

TABLE 19

AVERAGE ANNUAL OPERATING EXPENSES FOR THE FIVE SINGLE UNIT ASSOCIATIONS
AND THE PROPOSED MULTIPLE UNIT ASSOCIATION
FROM 1946 THROUGH 1948

	<u>Five Single Unit Associations</u> (Dollars)	<u>Proposed Multiple Unit Association</u> (Dollars)	<u>Reduction of Expense</u> (Dollars)	<u>Percentage Reduction*</u> (Percent)
Salaries and Wages	36,441.25	33,600.00	2,841.25	7.80
Depreciation	9,397.24	9,397.24	-0-	
Insurance and Bonds	5,186.88	5,186.88	-0-	
Taxes	3,415.39	3,298.75	116.64	3.42
Interest	13,774.32	13,774.32	-0-	
Utilities	2,129.12	2,129.12	-0-	
Telephone and Telegraph	690.51	610.41	80.10	11.60
Repairs	4,100.83	4,100.83	-0-	
Supplies	2,473.50	2,102.48	371.02	15.00
Advertising	841.95	715.66	126.29	15.00
Truck Expense	833.14	833.14	-0-	
Administrative and Selling Expense	5,506.69	4,648.20	858.49	15.59
TOTALS	84,790.82	80,397.03	4,393.79	5.18

Source: Annual Audits of the Associations, from 1946 through 1948.

*The reduction as a percentage of the expense of the single unit associations.

Salaries and Wages. The salaries and wages decreased more in total amounts than any of the other expense items. The decrease was from \$36,441.25 to \$33,600.00 (Table 19). The multiple unit would require one manager and one bookkeeper. It is proposed to pay each of these employees more than they would now receive at any one of the five single unit cooperatives. A permanent station manager would be employed at each of the stations, plus two additional permanent employees at Ames and Bison to operate the service stations. One additional employee would be retained at Waukomis to operate the locker plant. The salary and wage schedule for the multiple unit association would be as follows: \$9,000.00 at Drummond, \$2,400.00 at Imo, \$6,400.00 at Bison, \$6,400.00 at Ames, and \$4,400.00 at Waukomis. For extra harvest labor, \$1,000.00 would be added for salaries and wages at each station, which would total \$5,000.00. This breakdown of labor makes a saving of \$2,841.25 for salaries and wages.

Taxes. The saving in labor costs would result in less payroll taxes being paid. The saving would amount to \$116.64 or 3.4 percent of the total taxes paid (Table 19). The remaining taxes would remain the same under the multiple organization. Since the physical facilities and equipment of the new organization would remain the same, there would be no appreciable change in advalorem taxes and truck license tax. With the volume of business remaining unchanged and the capital structure of the association identical, there would be no significant increase or decrease in the sales tax or corporation license tax.

Telephone and Telegraph. Operations under the multiple unit would decrease the telephone and telegraph expense \$30.10 or a 11.6 percent reduction from the expenses as incurred by the five single unit cooperatives.

In arriving at the decrease in telephone and telegraph expense, it was estimated that the expense would decrease approximately \$20.00 per year at each of the four subsidiary stations. Therefore, 11.6 percent of the original costs for telephone and telegraph for the five units was calculated, and this figure was used as the decrease (Table 19). This would allow about \$200.00 per year for the headquarters station and about \$100.00 per year for the other four stations. Even though the administrative headquarters would handle all the calls to Enid, the single units would in turn have to call the multiple unit at least once daily, especially in harvest season. This would allow about \$8.00 or \$9.00 per month for each of the four stations. Considering telegraphic expense, this is reasonable because usually telephone services are about \$5.00 per month regardless of long distance calls.

Supplies. The supplies were reduced 15.0 percent or \$371.02 when brought under control by the multiple unit (Table 19). The supplies accounted for about 3.0 percent of the total expenses in both the single and multiple unit operations. There would be a saving in office supplies since one bookkeeper would handle the major books or forms. Office supplies at the four local points would consist of report forms instead of a major set of books. The major savings would result from one person controlling all the supplies where heretofore five persons have been charged with the responsibility.

Advertising. The advertising expense was reduced 15.0 percent or a saving of \$126.29 (Table 19). The saving in advertising expense would come from a more intensified advertising campaign from the multiple headquarters, and this would cut the expense of advertising locally by the four stations.

Administrative and Selling Expense. With the formation of a multiple unit from the five single unit cooperatives, the greatest reduction in the other expense items would come from the administrative and selling expense (Table 19). This reduction will primarily come from six expense items within the administrative and selling expense. These six items are audit and legal expense, travel and meeting expense, directors' fees, donations, educational expense, and dues and subscriptions.

The Board of Directors would consist of five men as compared to 25 under the five single unit cooperatives. The saving would be \$250.00. The educational and meeting expense would be reduced about \$50.00, and the legal and auditing expense would be reduced from \$750.00 to \$350.00, or a saving of \$400.00. Dues and subscriptions would be reduced approximately \$100.00, and about \$50.00 would be saved by having approval made on all donations at the main headquarters.

The savings of the six items would amount to about \$850.00. Adjusting to a percentage basis, 15.6 percent of the administrative and selling costs would be reduced or a reduction from \$5,506.69 to \$4,648.20 (Table 19).

Total Operating Expenses. The operating expenses under the multiple unit were estimated at \$80,397.03 (Table 19). This was a decrease from \$84,790.82 when comparing the five single unit cooperatives. The reduction in total expenses was \$4,393.79 or a 5.2 percent decrease in total expenses when operated under one headquarters.

The expenses that have been set for the multiple unit grain association are only indications. The indications have been derived from the existing costs of the five single unit grain associations. The estimates of expenses could only be accurately checked if the multiple unit went into operation.

Comparison of the Departmental Expenses

The basis for allocating the expenses to the wheat and sideline departments was the same for the multiple unit as was used for the five single unit cooperatives. The departmental allocation of expenses would change for the multiple organization with changes in facilities, services, and volume of business.

Wheat Expenses and Unit Costs. The formation of the multiple unit would reduce the wheat expenses by more than \$3,000.00 (Table 20). The total wheat salaries and wages for the five single unit associations were \$25,909.36, and the projected amount for the salaries and wages paid to wheat under the multiple unit was \$23,889.60. This would reduce this expense item \$2,019.76 for the largest decrease of any of the expenses.

The physical facility expenses and interest expense account for a larger portion being allocated to wheat. These expenses could not be reduced since the same physical assets were assumed. The other expenses for wheat decreased under the multiple operation by \$899.57. The largest decrease was about \$550.00 for the administrative and selling expense. Supplies decreased about \$300.00. The remaining decreases in other expenses were rather small (Table 20).

Storage space could be utilized more economically under the multiple unit operation. This situation would exist because wheat could be shifted from station to station, and the producers would have more of a choice in delivery. The handling costs per bushel of wheat would be 3.49 cents for the five single units as compared to 3.31 cents for the multiple association. The cost per dollar of wheat sold would be 2.01 cents for the five single units as compared to 1.91 cents for the multiple association. This reduction

TABLE 20

OPERATING EXPENSES OF THE WHEAT AND SIDELINE DEPARTMENTS FOR THE
FIVE SINGLE UNIT ASSOCIATIONS AND THE PROPOSED MULTIPLE UNIT ASSOCIATION,
FROM 1946 THROUGH 1948 (Continued)

	FIVE SINGLE UNIT ASSOCIATIONS				
	Total Expense (Dollars)	Wheat Expense (Dollars)	Percentage of Expense (Percent)	Sideline Expense (Dollars)	Percentage of Expense (Percent)
Salaries and Wages	36,441.25	25,909.36	71.10	10,531.89	28.90
Depreciation	9,397.24	6,697.39	71.27	2,699.85	28.73
Insurance and Bonds	5,186.88	3,868.74	74.59	1,318.14	25.41
Taxes	3,415.39	2,355.59	68.97	1,059.80	31.03
Interest	13,774.32	10,171.81	73.85	3,602.51	26.15
Utilities	2,129.12	1,772.91	83.27	356.21	16.73
Telephone and Telegraph	690.51	585.90	84.85	104.61	15.15
Repairs	4,100.83	2,925.75	71.35	1,175.08	28.65
Supplies	2,473.50	1,980.20	80.06	493.30	19.94
Advertising	841.95	671.90	79.80	170.05	20.20
Truck Expense	833.14	-0-	-0-	833.14	100.00
Administrative and Selling Expense	5,506.69	3,426.14	62.22	2,080.55	37.78
TOTALS	84,790.82	60,365.71	71.19	24,425.11	28.81

Source: Annual Audits of the Associations, from 1946 through 1948.

TABLE 20

OPERATING EXPENSES OF THE WHEAT AND SIDELINE DEPARTMENTS FOR THE
FIVE SINGLE UNIT ASSOCIATIONS AND THE PROPOSED MULTIPLE UNIT ASSOCIATION,
FROM 1946 THROUGH 1948

	PROPOSED MULTIPLE UNIT ASSOCIATION*				
	Total Expense (Dollars)	Wheat Expense (Dollars)	Percentage of Expense (Percent)	Sideline Expense (Dollars)	Percentage of Expense (Percent)
Salaries and Wages	33,600.00	23,889.60	71.10	9,710.40	28.90
Depreciation	9,397.24	6,697.41	71.27	2,699.83	28.73
Insurance and Bonds	5,186.88	3,868.89	74.59	1,317.99	25.41
Taxes	3,298.75	2,275.15	68.97	1,023.60	31.03
Interest	13,774.32	10,172.34	73.85	3,601.98	26.15
Utilities	2,129.12	1,772.92	83.27	356.20	16.73
Telephone and Telegraph	610.41	517.93	84.85	92.48	15.15
Repairs	4,100.83	2,925.94	71.35	1,174.89	28.65
Supplies	2,102.48	1,683.25	80.06	419.23	19.94
Advertising	715.66	571.10	79.80	144.56	20.20
Truck Expense	833.14	-0-	-0-	833.14	100.00
Administrative and Selling Expense	4,648.20	2,892.11	62.22	1,756.09	37.78
TOTALS	80,397.03	57,266.64	71.23	23,130.39	28.77

*Some of the expense items did not change; however the slight variations are due to a change in the rounding procedure.

Source: Annual Audits of the Associations, from 1946 through 1948.

in handling costs would indirectly reduce some of the other minor wheat expenses.

Sideline Expenses and Unit Costs. The sideline expenses of the multiple unit are \$23,130.39 (Table 20). This is a reduction of 5.3 percent or \$1,294.72 from the sideline expenses of the single unit cooperatives. The largest reduction is in salaries and wages. This reduction is about \$800.00. The physical facility expenses and interest expense did not change as the volume of business was the same. The remaining expenses which had the largest share allocated to sidelines are included in the group designated as other expenses. The other expenses for sidelines were \$436.33 less for the multiple unit than for the five single unit cooperatives.

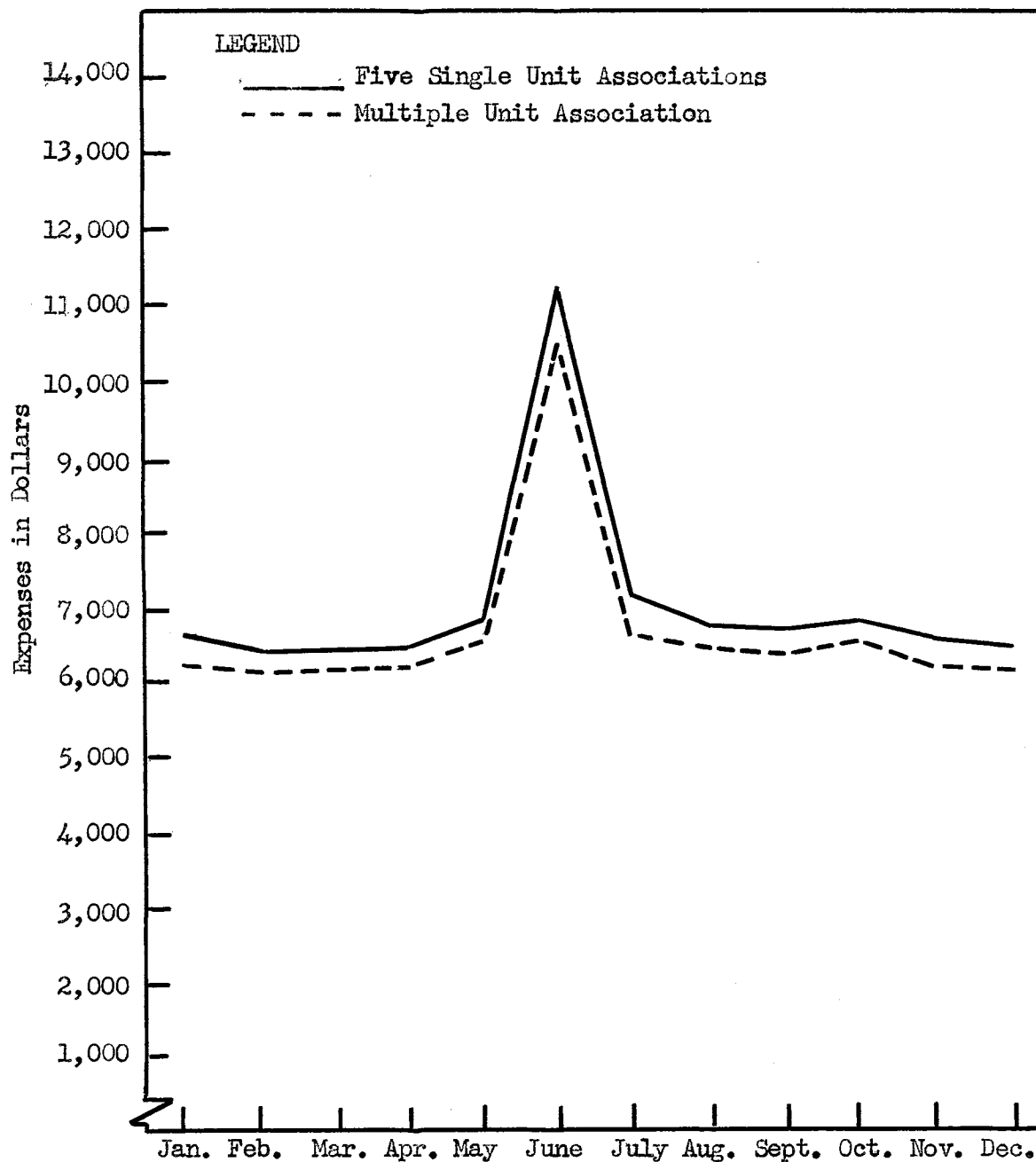
The unit costs per dollar of sideline sales were 10.20 cents for the five single unit cooperatives. This amount decreased to 9.66 cents per dollar of sideline sales for the multiple organization. The volume of business was the same, but the decrease in expenses accounted for the reduced selling cost.

A greater savings could possibly be made in the sideline department from a multiple unit headquarters than could be made in the wheat department. Sometimes a single unit cooperative will let minor costs get too large. A multiple headquarters would have a better chance to control these costs because the proper time could be given to the sideline business. If necessary, one man could be assigned to double check all the sideline operations.

Comparison of the Seasonal Expenses

The seasonal expenses of the five single unit associations and the multiple unit association followed about the same pattern (Figure 4).

Figure 4. Average Seasonal Variation for the Five Single Unit Associations and the Proposed Multiple Unit Association, From 1946 Through 1948



Source: Tables 27 and 28.

The expenses occurring each month for the multiple unit were proportionately lower than the monthly expenses for the five single unit cooperatives. Operating as a multiple unit cooperative would tend to lessen the large peaks which appear in each separate unit's seasonal pattern. This would be true because every unit under the multiple would indirectly affect the other unit. The individual seasonal patterns of the cooperatives vary considerably more than the total monthly expenses of the five cooperatives.

The combining of the five single units into a multiple unit causes the monthly expenses to vary less before and after harvest. The sideline expenses do not have as much effect on the seasonal pattern as when the cooperatives are operating individually.

Both the multiple unit and the total of the five single units' monthly expenses increased slightly from February to May. The increase was about \$500.00 for the multiple unit and about \$600.00 for the single units (Figure 4). The monthly expenses increased about \$4,000.00 in June. This of course was due to harvest labor and other variable expenses. In considering the seasonal pattern, it is well to keep in mind that the multiple unit's monthly expenses are proportionately lower for each month. After harvest the expenses decreased for the single units from \$7,000.00 in July to about \$6,700.00 in September. They increased to about \$6,900.00 in October, and then declined to \$6,400.00 in December. The multiple unit decreased from \$6,700.00 in July to \$6,400.00 in September. The expenses increased to \$6,500.00 in October, and then declined to \$6,100.00 in December. The increase in October was due to fall planting and treating of seed wheat.

Sidelines have a greater influence on the seasonal pattern than wheat,

except for the harvest month of June. The combining of the five single unit cooperatives into the multiple unit operation has a tendency to lessen the seasonal peaks. When the departments of more than one cooperative are integrated, each department's functions affect one another. This factor tends to lessen peak expenses.

Comparison of the Fixed and Variable Expenses

The fixed costs for the five single unit cooperatives were \$57,571.33, and the variable costs were \$27,219.49 (Table 21). These costs decreased to \$54,012.94 and \$26,384.09, respectively, when the expenses were combined for the operation of the multiple unit association. The fixed costs were reduced by 6.2 percent, and the variable costs were reduced by 4.1 percent.

The decrease in fixed and variable costs was more affected by the decrease in manager's salary and other salaries and wages. The manager's salary, as listed in the multiple schedule of expenses, includes besides the manager a bookkeeper and two additional key employees. All of these are considered to be 100 percent fixed. Other salaries and wages decreased about \$2,000.00, and they were 50 percent fixed.

Even though more of the total salaries and wages are considered as fixed for the multiple unit, they have more effect on the total amount of fixed expenses. This is true because of the reorganization of the single units into a multiple unit, and not because of a change in the volume of business done by the organization.

The only expenses to show a change in the physical facility group were the taxes. The fixed amount of the taxes decreased about \$70.00 because of the change in labor affecting the payroll taxes (Table 21). The payroll taxes were 60 percent fixed. The fixed and variable portions

TABLE 21

FIXED AND VARIABLE EXPENSES FOR THE FIVE SINGLE UNIT ASSOCIATIONS
AND THE PROPOSED MULTIPLE UNIT ASSOCIATION
FROM 1946 THROUGH 1948

	Vari-		FIVE SINGLE UNITS			MULTIPLE UNIT		
	Fixed	able	Total	Fixed	Variable	Total	Fixed	Variable
	PERCENT		DOLLARS					
Salaries and Wages			36,441.25	24,767.46	11,673.79	33,600.00	22,700.00	10,900.00
Manager's Salary	100	0	13,093.67	13,093.67	-0-	11,800.00	11,800.00	-0-
Other Salaries and Wages	50	50	23,347.58	11,673.79	11,673.79	21,800.00	10,900.00	10,900.00
Depreciation	100	0	9,397.24	9,397.24	-0-	9,397.24	9,397.24	-0-
Insurance and Bonds	75	25	5,186.88	3,890.16	1,296.72	5,186.88	3,890.16	1,296.72
Interest			13,774.32	9,370.01	4,404.31	13,774.32	9,370.01	4,404.31
Facility	100	0	5,764.20	5,764.20	-0-	5,764.20	5,764.20	-0-
Operating	50	50	7,211.62	3,605.81	3,605.81	7,211.62	3,605.81	3,605.81
Commodity	0	100	798.50	-0-	798.50	798.50	-0-	798.50
Taxes			3,415.39	2,876.00	539.39	3,298.75	2,806.02	492.73
Pay Roll	60	40	449.50	269.70	179.80	332.86	199.72	133.14
Advalorem	100	0	2,184.55	2,184.55	-0-	2,184.55	2,184.55	-0-
Corporation License	100	0	344.10	344.10	-0-	344.10	344.10	-0-
Sales Tax	0	100	312.30	-0-	312.30	312.30	-0-	312.30
Truck License	100	0	77.65	77.65	-0-	77.65	77.65	-0-
Other Taxes	0	100	47.29	-0-	47.29	47.29	-0-	47.29
Utilities	20	80	2,129.12	425.82	1,703.30	2,129.12	425.82	1,703.30
Telephone and Telegraph	25	75	690.51	172.63	517.88	610.41	152.60	457.81
Repairs	30	70	4,100.83	1,230.25	2,870.58	4,100.83	1,230.25	2,870.58
Supplies	25	75	2,473.50	618.38	1,855.12	2,102.48	525.62	1,576.86
Advertising	50	50	841.95	420.98	420.97	715.66	357.83	357.83
Truck Expense	25	75	833.14	208.29	624.85	833.14	208.29	624.85
Administrative and Selling Expense			5,506.69	4,194.11	1,312.58	4,648.20	2,949.10	1,699.10
TOTALS			84,790.82	57,571.33	27,219.49	80,397.03	54,012.94	26,384.09

Source: Annual Audits of the Associations, from 1946 through 1948.

of the interest expense remained unchanged.

The fixed expense for administrative and selling decreased about \$1,000.00. This was the result of a decrease in auditing and legal expense, directors' fees, dues and subscriptions, and travel and meetings. The degree of fixity for these expenses did not change, but the reorganization affected the total amounts to be expended for them.

Theoretically, if the multiple unit were to be put into operation, the volume of business done by the organization would have the greatest effect on variable costs. Since the volume of business is to remain constant in the operation of the proposed multiple unit grain association, fixed costs are more affected than are variable costs.

FUTURE DEVELOPMENTS OF THE MULTIPLE UNIT ASSOCIATION

In proposing the cost structure for a multiple unit organization, it was assumed that the physical structure and the volume of business would remain unchanged. However, if such an organization were formed, various changes would probably occur in the future. Changes in the internal structure quite frequently precede external expansion. The wheat facilities appear to be adequate for handling the probable volume of the new association. Initial expansion would tend to be directed toward the expansion of present sidelines and the addition of other sideline goods and services.

Although the association is now served by two service stations, the addition of bulk handling facilities at other stations would serve to facilitate the delivery of petroleum products to farmer patrons and lower the cost of operation. A retail pump might be installed at each of the stations handling petroleum products in order to more adequately serve the patrons. In addition a greater selection of farm supplies and household goods would probably be offered in line with the desires of the members.

The volume of feed business of the new association might justify the addition of a feed mill. It is probable that the mill would be located at Drummond because of its central location and for ease of management. In addition, if the volume of produce appears to be adequate for efficient operations, the necessary facilities could be constructed. One produce station should adequately serve the needs of the members, and the suggested location would be at Drummond. The major products handled would be cream, eggs, and poultry.

With further expansion and growth of the association, a substantial

increase in the volume of business should result. The probable increase in the volume of business must be adequate to justify the expenditures for additional facilities so the costs of operation will not become excessive.

SUMMARY AND CONCLUSIONS

The two principal types of local cooperative grain marketing associations in Oklahoma are single unit associations which operate one or more stations in one locality, and multiple unit associations which operate subsidiary stations in more than one locality while maintaining an administrative headquarters in only one place. This study has been based on an analysis of the cost structures of five single unit cooperatives, and the costs of operation have been compared with the costs of a proposed multiple unit formed from the five single units.

The five single unit cooperatives are located at Bison, Waukomis, Imo, Drummond and Ames. The primary purpose of their organizing was for the marketing of wheat. Since their organization they have provided additional sideline facilities for their members. The sideline business included petroleum products, lumber, flour, coal, feed, fertilizer, hardware, rock, sand, and various minor farm supplies.

Imo sold 24.6 percent of all the wheat sold at the five elevators, while Ames sold 45.3 percent of all the sidelines at the five cooperatives. The largest elevator capacity was 140,000 bushels at Bison. This was the principal reason for Bison having the largest investment, \$99,433.97. The lowest total investment of \$64,806.54 at Waukomis was a result of old wooden frame elevator structures depreciating to or near their book values of zero.

More money was expended for salaries and wages than any other expense item. The total salaries and wages at Ames were 48.6 percent of the total expenses, Bison had 46.5 percent, Drummond 42.5 percent, Waukomis 39.6 percent, and Imo 36.6 percent. The associations having more sidelines usually have higher operating costs, while the cooperatives handling and selling

larger volumes of wheat usually have lower costs. Waukonis was probably the most inefficient in controlling minor costs, while the Drummond cooperative more closely supervised these costs listed in the other expense groups.

The allocation of expenses was made on the basis of two departments, wheat and sidelines. The unit costs for wheat were an indication of the operating efficiency of the department. The handling costs per bushel of wheat at Imo, Bison, Drummond and Ames ranged from 3.05 cents per bushel to 3.39 cents. The unit costs at Waukonis were 4.59 cents. The total wheat expenses at Waukonis were too high due to inefficient labor costs and a failure to control other expenses. The costs per dollar of sideline sales were higher at Bison due to the addition of a service station. The Ames cooperative more than doubled any of the other cooperatives in sideline sales, and their volume of business tended to keep their sideline costs lower than at Bison.

The success of the business operations of the five cooperatives was measured by the amount of the net earnings incurred at the end of each fiscal period. Each of the five associations realized a profit in the wheat department. Imo earned more and Waukonis had a lower net earning than any of the other organizations. Bison and Drummond were the only associations that lost money in the sideline departments. The total net earnings resulting from the wheat and sideline departments were \$14,700.80 at Bison, \$10,942.12 at Waukonis, \$27,180.09 at Imo, \$19,737.03 at Drummond and \$16,851.94 at Ames. Usually the cooperatives selling the most wheat have the highest net returns.

The expenses of a cooperative fluctuate during the year as does any business concern. Labor affects the seasonal curve more than any other

expense item. The seasonal peak of a wheat cooperative is reached in June, as a result of wheat harvest. The sideline business of the cooperatives tends to cause more fluctuation in expenses for each month. The more sideline business the greater will be the expenses, and the expenses will vary more from month to month.

The fixed costs accounted for 66.6 percent of the total expenses at Bison, 65.3 percent at Waukonis, 71.5 percent at Imo, 71.8 percent at Drummond and 66.6 percent at Ames. The associations that had more wheat facilities had the largest percentage of fixed costs.

The costs of operating the five single unit cooperatives were compared with the costs under a proposed multiple unit organization. The multiple unit was formed on the basis of the cost data of the five single units, and for the same period of time.

To arrive at the degree of efficiency for the multiple unit grain association, certain assumptions were made. It was necessary in organizing the multiple unit to assume that the volume of business of the five local units did not change. The physical facilities were assumed as remaining the same since the volume of business was held constant.

A reorganization of the management for the multiple unit would decrease the salaries and wage expenses by \$2,841.25. The saving in labor costs would reduce the payroll taxes. The decrease would be \$116.64 or 3.4 percent of the total taxes paid. Telephone and telegraph expenses, supplies, advertising, and administrative selling expenses were reduced by the formation of the new unit. The administrative and selling expenses were reduced more than any expense item in the other expense group. They were reduced 15.6 percent or a reduction from \$5,506.69 to \$4,648.20. The

reduction in total expenses was \$4,393.79 or a decrease of 5.2 percent when the operations were combined for the multiple unit.

The basis for allocating the expenses to the wheat and sideline department was the same for the multiple unit as was used for the five single unit cooperatives. The formation of the multiple unit would reduce the wheat expenses by more than \$3,000.00. The handling costs per bushel of wheat would be 3.49 cents for the five single units as compared to 3.31 cents for the multiple association. The sideline expenses would be reduced \$1,294.72. The unit costs per dollar of sideline sales were 10.20 cents for the five single unit cooperatives. This amount decreased to 9.66 cents per dollar of sideline sales for the multiple organization. The volume of business was the same, but the decrease in expenses accounted for the reduced selling cost.

The seasonal expenses of the two types of organization followed about the same pattern. The expenses occurring each month for the multiple unit were proportionately lower than the monthly expenses for the five single unit cooperatives. The combining of the five associations into a multiple unit tended to cause the sideline expenses to have less effect on the seasonal curve than when the cooperatives were operating individually.

The combining of the cooperatives reduced the fixed costs by 6.2 percent, and the variable costs were reduced by 4.1 percent. The items characterized by a higher degree of fixity were the ones that decreased more in total amounts. A change in the volume of business would increase the variable expense items, while the fixed costs would probably remain the same providing the investments were unchanged.

The new organization would have alternatives in expansion. It would be possible to create new services for the members in the development of the organization for future years. Additional facilities that might have possibilities for sidelines are a feed mill, bulk gasoline sales service, and a produce station. If the new unit were to become a reality, the probable increase in the volume of business would necessitate a closer supervision over minor operational costs.

APPENDIX TABLES

TABLE 22

AVERAGE SEASONAL VARIATION OF THE OPERATING EXPENSES FOR
THE FARMERS COOPERATIVE ASSOCIATION OF ELSON, OKLAHOMA,
FROM 1946 THROUGH 1948 (Continued)

	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>
	D O L L A R S						
Salaries and Wages	588.69	590.69	588.48	455.36	568.65	1,066.09	755.72
Depreciation	121.81	121.81	121.80	107.02	107.02	107.68	120.76
Insurance and Bonds	78.53	78.53	78.57	68.15	68.15	63.15	78.53
Interest	263.36	263.36	263.36	263.36	263.36	263.36	263.36
Taxes	61.13	61.11	61.11	51.00	51.00	51.00	61.13
Utilities	34.48	32.00	32.80	31.09	24.76	61.60	60.06
Telephone and Telegraph	10.72	13.44	6.48	6.78	7.26	22.89	12.80
Repairs	5.42	1.71	27.50	57.46	63.16	82.85	86.46
Supplies	6.48	15.39	20.19	16.99	40.77	42.19	7.36
Advertising	5.00	12.74	13.54	4.40	7.47	7.00	19.94
Truck Expense*	48.37	8.94	6.35	25.77	25.77	11.81	13.61
Administrative and Selling Expense	141.96	114.25	156.53	93.80	102.53	105.49	97.29
TOTALS	1,365.95	1,313.97	1,376.71	1,181.18	1,329.90	1,890.11	1,577.02
*Truck operated only in 1948							

Source: Expense Ledgers of the Association, from 1946 through 1948.

TABLE 22

AVERAGE SEASONAL VARIATION OF THE OPERATING EXPENSES FOR
THE FARMERS COOPERATIVE ASSOCIATION OF ELSON, OKLAHOMA,
FROM 1946 THROUGH 1948

	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>	<u>Total</u>
	D O L L A R S					
Salaries and Wages	837.19	736.09	713.69	598.29	592.02	8,095.96
Depreciation	121.29	121.72	121.72	121.72	121.80	1,416.15
Insurance and Bonds	78.53	78.53	78.54	78.54	78.54	911.29
Interest	263.36	263.36	263.36	263.36	263.35	3,160.31
Taxes	61.13	61.13	61.13	61.13	61.13	703.13
Utilities	32.40	30.09	25.80	22.06	12.34	399.48
Telephone and Telegraph	12.97	10.68	9.32	10.09	12.03	135.46
Repairs	16.73	26.63	38.60	102.49	26.98	535.99
Supplies	13.83	14.39	33.97	8.54	16.99	237.09
Advertising	7.74	8.33	13.22	6.67	52.25	158.30
Truck Expense*	12.03	16.21	9.19	9.29	8.28	195.62
Administrative and Selling Expense	134.56	185.82	104.29	100.41	123.83	1,460.76
TOTALS	1,591.76	1,552.98	1,477.83	1,382.59	1,369.54	17,409.54
*Truck operated only in 1948						

Source: Expense Ledgers of the Association, from 1946 through 1948.

TABLE 23

AVERAGE SEASONAL VARIATION OF THE OPERATING EXPENSES FOR
THE WAUKOMIS CO-OPERATIVE SUPPLY COMPANY OF WAUKOMIS, OKLAHOMA,
FROM 1946 THROUGH 1948 (Continued)

	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>
	D O L L A R S						
Salaries and Wages	553.10	516.04	481.10	566.26	727.71	1,370.14	877.64
Depreciation	196.54	196.96	196.96	197.01	197.43	217.54	219.45
Insurance and Bonds	126.80	126.80	126.80	126.80	126.80	126.80	126.80
Interest	179.25	179.25	179.26	179.26	179.26	179.26	179.26
Taxes	65.98	65.98	65.98	65.98	65.98	65.99	65.99
Utilities	27.96	19.53	21.28	20.20	20.01	64.02	30.21
Telephone and Telegraph	16.94	12.75	12.05	13.97	12.22	13.93	14.73
Repairs	64.68	56.10	75.10	143.94	90.26	465.93	113.85
Supplies	94.50	50.75	47.57	76.82	106.44	88.72	77.14
Advertising	19.82	40.08	18.20	14.95	15.53	17.87	46.14
Truck Expense	3.69	19.64	10.96	30.61	1.71	-0-	39.62
Administrative and Selling Expense	118.85	122.05	135.87	135.25	163.32	119.26	126.41
TOTALS	1,468.11	1,405.93	1,371.13	1,571.05	1,706.67	2,729.46	1,917.24

Source: Expense Ledgers of the Association, from 1946 through 1948.

TABLE 23

AVERAGE SEASONAL VARIATION OF THE OPERATING EXPENSES FOR
THE WAUKOMIS CO-OPERATIVE SUPPLY COMPANY OF WAUKOMIS, OKLAHOMA,
FROM 1946 THROUGH 1948

	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>	<u>Total</u>
	D O L L A R S					
Salaries and Wages	578.53	566.24	602.72	638.84	574.95	8,053.27
Depreciation	219.45	219.45	219.45	219.67	219.87	2,519.78
Insurance and Bonds	126.79	126.79	126.79	126.79	126.78	1,521.54
Interest	179.26	179.26	179.26	179.25	179.25	2,151.08
Taxes	65.99	65.98	65.98	65.98	65.97	791.78
Utilities	30.42	30.72	34.23	30.08	30.15	358.81
Telephone and Telegraph	13.15	13.94	13.19	10.76	10.68	158.31
Repairs	386.94	126.00	86.51	70.29	90.22	1,769.82
Supplies	111.39	56.22	149.47	49.03	36.07	944.12
Advertising	17.82	25.97	34.57	41.48	22.03	314.46
Truck Expense	10.82	9.77	31.38	8.35	66.35	232.90
Administrative and Selling Expense	116.42	119.77	106.55	96.95	147.33	1,508.03
TOTALS	1,856.98	1,540.11	1,650.10	1,537.47	1,569.65	20,323.90

Source: Expense Ledgers of the Association, from 1946 through 1948.

TABLE 24

AVERAGE SEASONAL VARIATION OF THE OPERATING EXPENSES FOR
 THE FARMERS COOPERATIVE ELEVATOR COMPANY OF IMO, OKLAHOMA,
 FROM 1946 THROUGH 1948 (Continued)

	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>
	D O L L A R S						
Salaries and Wages	410.80	383.01	531.34	402.02	408.46	1,201.37	424.26
Depreciation	167.17	169.37	169.37	172.34	156.44	156.44	156.61
Insurance and Bonds	99.87	99.87	99.88	99.84	99.88	99.88	99.88
Interest	244.33	244.33	244.33	244.33	244.34	244.34	244.34
Taxes	37.35	37.35	37.35	37.37	37.35	37.35	37.35
Utilities	37.74	35.03	38.18	34.98	34.07	51.26	38.33
Telephone and Telegraph	13.36	9.13	9.88	8.09	9.84	8.66	23.19
Repairs	5.69	48.25	59.14	320.37	93.17	164.72	90.45
Supplies	56.43	37.89	47.66	16.15	71.54	46.57	71.88
Advertising	8.15	7.66	14.76	25.12	8.32	8.05	8.19
Truck Expense	-0-	-0-	-0-	-0-	-0-	-0-	-0-
Administrative and Selling Expense	99.97	72.83	119.33	96.07	92.81	89.37	78.58
TOTALS	1,180.87	1,144.73	1,371.23	1,456.69	1,256.23	2,108.02	1,273.07

Source: Expense Ledgers of the Association, from 1946 through 1948.

TABLE 24

AVERAGE SEASONAL VARIATION OF THE OPERATING EXPENSES FOR
THE FARMERS COOPERATIVE ELEVATOR COMPANY OF IMO, OKLAHOMA,
FROM 1946 THROUGH 1948

	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>	<u>Total</u>
	D O L L A R S					
Salaries and Wages	369.78	371.40	381.01	408.58	459.13	5,751.16
Depreciation	160.63	160.63	160.91	161.83	161.83	1,953.57
Insurance and Bonds	99.88	99.88	99.88	99.88	99.87	1,198.49
Interest	244.34	244.33	244.33	244.33	244.33	2,932.00
Taxes	37.35	37.35	37.35	37.35	37.35	448.22
Utilities	37.95	39.16	33.87	34.76	38.50	453.83
Telephone and Telegraph	11.94	9.06	17.45	9.63	16.25	146.48
Repairs	21.79	11.71	4.25	23.91	18.74	862.19
Supplies	24.16	60.62	92.04	32.88	103.43	661.25
Advertising	36.96	7.67	13.49	7.94	8.25	154.56
Truck Expense	-0-	-0-	-0-	-0-	-0-	-0-
Administrative and Selling Expense	74.81	73.52	74.22	182.28	84.81	1,138.60
TOTALS	1,119.58	1,115.33	1,158.79	1,243.36	1,272.45	15,700.35

Source: Expense Ledgers of the Association, from 1946 through 1948.

TABLE 25

AVERAGE SEASONAL VARIATION OF THE OPERATING EXPENSES FOR
THE DRUMMOND COOPERATIVE ELEVATOR COMPANY OF DRUMMOND, OKLAHOMA,
FROM 1946 THROUGH 1948 (Continued)

	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>
	D O L L A R S						
Salaries and Wages	350.35	314.18	316.28	341.65	313.93	935.80	333.55
Depreciation	97.80	98.74	101.13	101.14	75.62	75.68	76.67
Insurance and Bonds	33.82	33.82	33.82	33.80	33.82	33.82	33.82
Interest	229.11	229.11	229.11	229.11	229.12	229.12	229.12
Taxes	46.77	46.77	46.77	46.77	46.77	46.77	46.77
Utilities	35.69	36.22	37.88	30.26	31.05	49.79	41.24
Telephone and Telegraph	8.77	9.45	9.46	10.14	7.37	6.22	5.57
Repairs	8.97	14.53	15.80	20.66	56.73	29.63	35.52
Supplies	23.06	14.66	20.96	21.35	28.87	27.29	36.63
Advertising	8.33	20.00	10.89	1.42	16.67	-0-	14.36
Truck Expense*					3.33		3.41
Administrative and Selling Expense	29.11	32.68	30.81	57.53	177.65	36.67	30.69
TOTALS	871.78	850.16	852.91	893.83	1,020.93	1,470.79	887.35

*Truck operated only in 1946

Source: Expense Ledgers of the Association, from 1946 through 1948.

TABLE 25

AVERAGE SEASONAL VARIATION OF THE OPERATING EXPENSES FOR
THE DRUMMOND COOPERATIVE ELEVATOR COMPANY OF DRUMMOND, OKLAHOMA
FROM 1946 THROUGH 1948

	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>	<u>Total</u>
	D O L L A R S					
Salaries and Wages	308.68	451.04	539.94	336.15	299.02	4,840.57
Depreciation	76.69	93.33	94.82	94.93	97.63	1,084.18
Insurance and Bonds	33.82	33.82	33.82	33.82	33.82	405.82
Interest	229.12	229.12	229.12	229.12	229.11	2,749.39
Taxes	46.77	46.78	46.78	46.78	46.78	561.28
Utilities	31.24	25.08	24.72	27.48	30.30	400.95
Telephone and Telegraph	5.82	5.17	4.52	6.33	7.68	86.50
Repairs	24.88	25.14	35.44	.83	9.71	277.84
Supplies	30.32	8.96	2.17	19.78	23.25	257.30
Advertising	-0-	21.67	3.33	8.33	6.67	111.67
Truck Expense*			5.00			11.74
Administrative and Selling Expense	26.82	41.36	59.12	42.03	40.12	604.59
TOTALS	814.16	981.47	1,078.78	845.58	824.09	11,391.83
*Truck operated only in 1946						

Source: Expense Ledgers of the Association, from 1946 through 1948.

TABLE 26

AVERAGE SEASONAL VARIATION OF THE OPERATING EXPENSES FOR
THE FARMERS ELEVATOR COMPANY OF AMES, OKLAHOMA,
FROM 1946 THROUGH 1948 (Continued)

	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>
	D O L L A R S						
Salaries and Wages	746.72	746.72	642.04	658.71	669.18	1,821.75	694.71
Depreciation	210.95	211.01	170.54	170.83	206.06	206.21	206.28
Insurance and Bonds	95.82	95.79	95.81	95.81	95.81	95.81	95.81
Interest	231.80	231.80	231.80	231.80	231.80	231.80	231.79
Taxes	75.91	75.93	75.91	75.91	75.91	75.91	75.91
Utilities	40.10	32.04	31.03	31.48	41.09	62.03	46.53
Telephone and Telegraph	17.93	5.41	19.90	9.93	10.77	3.23	30.61
Repairs	12.30	-0-	33.33	66.67	159.06	50.00	-0-
Supplies	58.33	33.33	-0-	3.45	41.67	199.13	-0-
Advertising	7.07	9.22	20.00	6.67	13.33	-0-	-0-
Truck Expense	32.73	33.33	25.23	-0-	50.59	173.67	33.33
Administrative and Selling Expense	213.82	196.56	120.41	19.96	39.86	27.48	65.35
TOTALS	1,743.48	1,671.14	1,466.00	1,371.22	1,635.13	2,947.02	1,480.32

Source: Expense Ledgers of the Association, from 1946 through 1948.

TABLE 26

AVERAGE SEASONAL VARIATION OF THE OPERATING EXPENSES FOR
THE FARMERS ELEVATOR COMPANY OF AGES, OKLAHOMA,
FROM 1946 THROUGH 1948

	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>	<u>Total</u>
	D O L L A R S					
Salaries and Wages	764.51	701.81	845.01	662.40	746.73	9,700.29
Depreciation	206.35	207.42	208.27	209.79	209.85	2,423.56
Insurance and Bonds	95.81	95.82	95.82	95.82	95.81	1,149.74
Interest	231.79	231.79	231.79	231.79	231.79	2,781.54
Taxes	75.91	75.92	75.92	75.92	75.92	910.98
Utilities	48.68	46.65	42.80	45.53	48.09	516.05
Telephone and Telegraph	16.03	8.48	21.58	11.53	8.36	163.76
Repairs	16.67	78.33	3.33	226.96	8.34	654.99
Supplies	1.92	1.29	8.42	11.49	14.71	373.74
Advertising	-0-	33.33	6.67	6.67	-0-	102.96
Truck	-0-	44.00	-0-	-0-	-0-	392.88
Administrative and Selling Expense	11.90	36.33	21.20	23.21	18.63	794.71
TOTALS	1,469.57	1,561.17	1,560.81	1,601.11	1,458.23	19,965.20

Source: Expense Ledgers of the Association, from 1946 through 1948.

TABLE 27

AVERAGE SEASONAL VARIATION OF THE OPERATING EXPENSES FOR
THE FIVE SINGLE UNIT ASSOCIATIONS,
FROM 1946 THROUGH 1948 (Continued)

	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>
	D O L L A R S						
Salaries and Wages	2,649.70	2,550.65	2,559.25	2,424.00	2,687.95	6,395.15	3,085.90
Depreciation	794.25	797.90	759.79	748.35	742.55	763.55	779.75
Insurance and Bonds	434.80	434.80	434.85	424.39	424.45	424.45	434.80
Interest	1,147.86	1,147.86	1,147.86	1,147.86	1,147.86	1,147.86	1,147.86
Taxes	287.15	287.15	287.15	277.05	277.05	277.05	287.15
Utilities	175.95	154.80	161.15	148.01	150.95	288.70	216.36
Telephone and Telegraph	67.75	50.20	57.80	48.95	47.50	54.95	86.90
Repairs	97.00	120.55	210.85	609.05	462.35	793.09	326.25
Supplies	238.80	152.05	136.40	134.80	289.30	403.90	193.05
Advertising	48.35	89.70	77.40	52.55	61.30	32.90	88.60
Truck Expense	84.80	61.91	42.55	56.40	81.40	185.51	89.95
Administrative and Selling Expense	603.70	538.40	562.95	402.60	576.15	378.25	398.30
TOTALS	6,630.11	6,385.97	6,438.00	6,474.01	6,948.81	11,145.36	7,134.87

Source: Expense Ledgers of the Associations, from 1946 through 1948.

TABLE 27

AVERAGE SEASONAL VARIATION OF THE OPERATING EXPENSES FOR
THE FIVE SINGLE UNIT ASSOCIATIONS,
FROM 1946 THROUGH 1948

	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>	<u>Total</u>
	D O L L A R S					
Salaries and Wages	2,858.70	2,826.60	3,087.40	2,644.30	2,671.65	36,441.25
Depreciation	784.40	802.55	805.15	807.95	811.05	9,397.24
Insurance and Bonds	434.80	434.80	434.80	434.80	435.14	5,186.88
Interest	1,147.86	1,147.86	1,147.86	1,147.86	1,147.86	13,774.32
Taxes	287.15	287.15	287.15	287.10	287.09	3,415.39
Utilities	180.70	171.70	161.40	159.90	159.50	2,129.12
Telephone and Telegraph	59.95	47.35	66.10	48.35	54.71	690.51
Repairs	466.95	267.80	168.10	424.45	154.39	4,100.83
Supplies	181.60	141.50	286.10	121.75	194.25	2,473.50
Advertising	62.50	96.95	71.25	71.10	89.35	841.95
Truck Expense	22.85	70.00	45.55	17.66	74.56	833.14
Administrative and Selling Expense	364.50	456.80	365.30	444.90	414.84	5,506.69
TOTALS	6,851.96	6,751.06	6,926.16	6,610.12	6,494.39	84,790.82

Source: Expense Ledgers of the Associations, from 1946 through 1948.

TABLE 28

AVERAGE SEASONAL VARIATION OF THE OPERATING EXPENSES FOR
THE PROPOSED MULTIPLE UNIT ASSOCIATION,
FROM 1946 THROUGH 1948 (Continued)

	<u>January</u>	<u>February</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>
	D O L L A R S						
Salaries and Wages	2,443.06	2,352.00	2,359.73	2,235.07	2,478.34	5,896.46	2,845.25
Depreciation	794.25	797.90	759.79	748.35	742.55	763.55	779.75
Insurance and Bonds	434.80	434.80	434.85	424.39	424.45	424.45	434.80
Interest	1,147.86	1,147.86	1,147.86	1,147.86	1,147.86	1,147.86	1,147.86
Taxes	277.35	277.35	277.35	267.58	267.58	267.58	277.35
Utilities	175.95	154.80	161.15	148.01	150.95	288.70	216.36
Telephone and Telegraph	59.89	44.38	51.10	43.27	41.99	48.58	76.82
Repairs	97.00	120.55	210.85	609.05	462.35	793.09	326.25
Supplies	202.97	129.24	115.93	114.59	245.91	343.31	164.10
Advertising	41.10	76.25	65.79	44.66	52.11	27.97	75.31
Truck Expense	84.80	61.91	42.55	56.40	81.40	185.51	89.95
Administrative and Selling Expense	509.58	454.45	475.19	339.83	486.34	319.28	336.20
TOTALS	6,268.61	6,051.49	6,102.14	6,179.06	6,581.83	10,506.34	6,770.00

Source: Expense Ledgers of the Association, from 1946 through 1948.

TABLE 28

AVERAGE SEASONAL VARIATION OF THE OPERATING EXPENSES FOR
THE PROPOSED MULTIPLE UNIT ASSOCIATION,
FROM 1946 THROUGH 1948

	<u>August</u>	<u>September</u>	<u>October</u>	<u>November</u>	<u>December</u>	<u>Total</u>
	D O L L A R S					
Salaries and Wages	2,635.92	2,606.35	2,846.59	2,438.02	2,463.21	33,600.00
Depreciation	784.40	802.55	805.15	807.95	811.05	9,397.24
Insurance and Bonds	434.80	434.80	434.80	434.80	435.14	5,186.88
Interest	1,147.86	1,147.86	1,147.86	1,147.86	1,147.86	13,774.32
Taxes	277.35	277.35	277.35	277.28	277.28	3,298.75
Utilities	180.70	171.70	161.40	159.90	159.50	2,129.12
Telephone and Telegraph	53.00	41.86	58.43	42.74	48.35	610.41
Repairs	466.95	267.80	168.10	424.45	154.39	4,100.83
Supplies	154.36	120.28	243.19	103.48	165.12	2,102.48
Advertising	53.12	82.41	60.56	60.44	75.94	715.66
Truck Expense	22.85	70.00	45.55	17.66	74.56	833.14
Administrative and Selling Expense	307.66	385.57	308.37	375.55	350.18	4,648.20
TOTALS	6,518.97	6,408.53	6,557.35	6,290.13	6,162.58	80,397.03

Source: Expense Ledgers of the Association, from 1946 through 1948.

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STRATHM

THESES TITLE: A COST ANALYSIS OF FIVE COOPERATIVE ELEVATOR
ASSOCIATIONS IN NORTH CENTRAL OKLAHOMA

NAME OF AUTHOR: RAYMOND E. PAGE

THESES ADVISER: HOWARD S. WHITNEY

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