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- *Business and Financial Analysis*
- *of Local Cooperative Associations*
- *of Texas, Season 1949-50*

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DIGEST

Agriculture is one of the few industries in which the business units are predominantly small. Farmers organize marketing agencies to gain some of the advantages of large-scale business. The main interest of farmers in their marketing agencies is that of sellers of commodities and buyers of farm supplies and equipment. Such concern is essentially that of patronage. The cooperative type of agency fits the needs of farmers since it is organized and operated according to the patronage principle.

The financial status of the 577 local associations was very satisfactory at the end of the season 1949-50, as shown in the consolidated balance sheet. The current ratio (current assets divided by current liabilities) was 2.8 to 1. On an average, the associations had \$1.42 in cash for each dollar of current liabilities. For every dollar of assets, members had an equity of 73 cents clear of all indebtedness.

Average sales during 1949-50 were \$357,020 per association and \$1,420 per patron. Service charges accounted for 56 percent of total gross margins. The trading margin and service income were 17.3 percent of sales. Expense deductions were 11.8 percent and net margins 5.8 percent of sales. Net margins were equivalent to 26.4 percent return on the cost of depreciable fixed assets.

Sixty-five percent of all local associations were engaged in the supply business. For the 180 associations with supply sales of 5.1 percent or more of total sales, the average sales per association were \$143,060. The supply functioning of local cooperatives was the main enterprise qualifying as a merchandising business. While the supply business accounted for 13.5 percent of all sales, the opening and closing inventories of the supply business represented 82.6 and 79.9 percent of total inventories.

The payroll of the 577 locals in 1949-50 was: managers' salaries, \$1,690,544; office workers' salaries, \$897,056; and laborers' wages, \$6,909,279, or a total payroll of \$9,496,879. The average payroll per association was \$16,460. These locals gave an equivalent year-round employment of 556 managers, 692 office workers and 2,764 laborers, or a total of 4,012 employees.

The average investment in buildings, machinery and equipment was \$16,017 per laborer.

Average cost of fixed assets ranged from a low of \$10,913 for the period 1913-19 to a high of \$35,765 for 1945-49. The cash paid-in by members at the time of organization to cover the cost of fixed assets ranged from a low of 12.2 percent for 1930-34 to a high of 47.2 percent for 1945-49. Average costs of fixed assets as of 1949-50 ranged from a low of \$63,300 for associations organized during 1945-49 to a high to \$133,270 for those organized during 1920-24. The total depreciation reserve ranged from a low of 12.6 percent for 1945-49 to a high of 39.1 percent for 1925-29. The average for all associations was 28.7 percent.

One hundred and twenty-three one-function gin associations were chosen for special analysis. One hundred and five of these associations started with second-hand plants and 18 with new plants. The average original cost of the second-hand plants was \$23,360 and the average of the new plants, \$55,480. The average costs of fixed assets as of 1949-50 of the 105 associations was \$56,270 and of the 18 associations, \$78,200. A full depreciation reserve for the 105 associations would cover 60 and 52 percent of replacement costs of \$94,600 and \$107,300 per battery; a full depreciation reserve of the 18 associations would cover 83 and 73 percent of replacement costs.

Many cooperative gin associations in Texas will be confronted with serious financing problems when steps are taken to install new machinery and equipment. This stems from the fact that generally the depreciation reserves will fall far short in covering costs of replacements.

Thirty-four local associations, or 5.9 percent of all local cooperatives, made no charge-off for depreciation. This is contrary to good business practice.

Business and Financial Analysis of Local Cooperative Associations of Texas, Season 1949-50

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FARMERS ORGANIZE AND CONTINUE TO PATRONIZE cooperatives for the specific purpose of increasing their farm income. Agriculture is one of the very few industries in which the business units are predominantly small. The farmer as a business man is generally beset by numerous problems in selling his products and in buying farm supplies and equipment because of his small-scale operations. It has been said that the unorganized farmer sells his products at wholesale and buys his production supplies at retail.

Ever since agriculture became commercialized, farmers have been aware of the need for organization, more especially during periods of falling and low prices. This is a recognition of the principle that the farmer can strengthen his position by extending his economic activities into the market place beyond the fences of his own farm. Experience is demonstrating that effective action in the market place is dependent on joint activity of a large group of producers and not upon isolated activity of an individual.

Invariably the first attempts of farmers at organization took the form of the stock corporation with the profits of the business accruing to the stockholder according to the number of shares owned. The measures of success of the business were high returns and high capitalization of the stock. The more successful a farmer stock corporation proved, the more certain its stock began to drift into the hands of retired farmers and local business men. Many of these organizations rapidly lost all semblance of being farmer marketing agencies. Almost universally the farmer stock corporations failed, whether they were farmer gins in the South or farmer elevators or creameries in the Middle West.

Farmers do not organize marketing agencies for the purpose of investing surplus funds profitably; they are organized for the purpose of strengthening their bargaining position as sellers of farm commodities and as buyers of farm supplies and equipment. An awakening realization of the farmer's peculiar interest in the patronage aspect of the marketing agency led to a slow but sure acceptance of the cooperative form of organization. In the cooperative, the emphasis is on the member as a patron of the business and not as an investor in its assets. The possibilities of

the cooperative business organization were fully established by such pioneers in the movement as the California Fruit Growers Exchange, the Society gins of Texas and the cooperative creameries, cheese factories, elevators and livestock shipping associations of the Middle West.

The success of the cooperative and the failure of the stock corporation in implementing farmers' efforts at joint action in itself neither approves nor disapproves the one type of organization as against the other. The significant issue is that farmers are interested as patrons in assuming marketing responsibilities from the standpoint of buyers and sellers. The cooperative type of business firm is ideally fitted to promote, protect and further a business built around the patronage principle.

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INTEGRATION OF FARM BUSINESS

Farmers are offered opportunities of moving from their isolated, individual positions to a relatively large-scale operation through the integration of their farm businesses in the cooperative association. In the local association, members integrate their farm businesses horizontally primarily to assure an economic volume of business, enough cotton, for instance, to operate a gin efficiently and at low costs. For the past 50 years, the Texas ginning business has been operating consistently at a break-even volume. Significantly the Texas cooperative gins the past 35 years have been operating with a volume more than twice that of the break-even.

Local associations may federate into regional organizations. Business integration in such instances may be both horizontal and vertical. A cooperative gin cannot operate an oil mill on its small volume of cotton seed. Twenty or more cooperative gins may join forces with sufficient cotton seed to operate an oil mill successfully. This is another instance of horizontal integration but covering more territory and including more patrons than is the case with the local association. Through vertical integration in the regional association, farmers are enabled to assume marketing responsibilities reaching beyond the local market into central and consuming markets. The Texsun-Citrus Exchange is a case in point. With its sales representatives in the leading central markets, fresh fruit and processed products, economically speaking, are carried close to the consumer both as to time and place.

Forty percent of the farmers and ranchmen of Texas have memberships in local marketing, processing and supply associations. Forty-six percent of them patronize local cooperatives, 32 percent as member-patrons and 14 percent as non-member-patrons. The large membership, extensive patronage and large volume of business transacted indicate a significance of local cooperatives which warrants a detailed analysis of this type of marketing agency.

FIELD SCHEDULES AND AUDITS

This report is based on information gained from field schedules and audits. Field schedules were obtained from 552 locals and audits from 378 locals, or 96 and 66 percent, respectively, of the 577 active local associations during the season 1949-50. The purposes for which the audits were collected could be realized only after considerable editing in two areas: 1. a multiplicity of terms applying to like items had to be reduced to standard terminology; and 2. misplaced items had to be moved to the proper categories in the audit.

The business functions of all local associations became known through the field schedules. Field schedules were sorted into two groups: as-

sociations with audits available, and associations with audits not available. The total number of associations of a given function was divided by the total number of associations of that function with audits. The resulting quotient was used as a multiplier applied to all the audit data cards. In this manner the transition was made from the sample associations with audits to the entire number of associations.

The consolidated balance sheet for the 577 local cooperatives as of the close of the business year 1949-50 is shown in Table 1.

A satisfactory balance sheet reflects profitable business operations and competent financial management. The consolidated balance sheet of the 577 local associations at the end of the 1949-50 season reveals a highly satisfactory financial status. A current ratio, current assets divided by current liabilities, of 2 to 1 is considered adequate. The current ratio of the locals was 2.8 to 1. For every dollar of current liabilities these associations had \$1.42 in cash. But all the cash was not available for purposes of meeting short term indebtedness, as is indicated in the discussion on the distribution of net margins. Each dollar of current liabilities was covered by \$6.55 in members' and patrons' equities; each dollar of long term indebtedness was supported by \$5.22 in equities; and each dollar of total indebtedness was matched by \$2.73 in members' and patrons' equities. Members owned 73 cents clear of indebtedness of each dollar of assets.

As a means of picturing the consolidated balance sheet in terms of averages for the 577 associations, a short form is given in Table 2.

Table 1. Consolidated balance sheet, 577 local associations, close of business year, 1949-50

ASSETS			
Current			
Cash		\$10,068,631	
Accounts receivable		5,222,468	
Inventories		3,732,497	
Miscellaneous		981,331	
Total current			\$20,004,927
Fixed			
Land		1,044,668	
Buildings and machinery cost	\$44,270,692		
Depreciation reserve	12,687,357	31,583,335	
Total fixed			32,628,003
Other			
Receivables		278,447	
Deposits		68,737	
Prepaid		3,724	
Miscellaneous		219,480	
Investments		10,639,120	
Total other			11,209,508
Total assets			\$63,842,438
LIABILITIES			
Current			
Payables	\$ 5,800,715		
Notes and loans	1,096,491		
Reserves	203,907		
Total current			\$ 7,101,113
Long term			
Mortgages		8,955,405	
Other			
All deferred credits		1,037,281	
Total liabilities			\$17,093,799
Members' and patrons' equities			
Capital stock, certificates, etc.	42,949,777		
Reserves	3,798,862		
Total members' and patrons' equities			46,748,639
Total liabilities and members' and patrons' equities			\$63,842,438

Table 2. Consolidated balance sheet, averages per association, close of business year, 1949-50

ASSETS			
Current		\$34,670	
Fixed assets, net		56,548	
Other assets		19,427	
Total assets			\$110,645
LIABILITIES			
Current	\$12,307		
Long term indebtedness	15,520		
Deferred credits	1,798		
Total liabilities		\$29,625	
Members' equities		81,020	
Total liabilities and equities			\$110,645

Assets averaged \$441 per member; net fixed assets averaged \$225. On an average, each member owed \$118 in indebtedness and had an equity of \$323.

OPERATING STATEMENT

The main divisions of the operating statement are the revenue and the expense sections. The revenue section has two principal classes of items: service income collected on such operations as ginning, cotton seed sterilization, hauling and handling, storage, cleaning, inspecting and weighing; and the trading income derived from sales, cost of purchases and opening and closing inventories. The consolidated operating statement of the 577 local associations for the business year 1949-50 is given in Table 3.

The average sales per association were \$357,220 and the average per patron was \$1,420. The average net margin per association was \$20,730 and the average per member was \$83. As a source of gross margins, services performed by the local cooperatives were more important than trading since service charges accounted for 56 percent of the total. The margin on trading was 7.7 percent of sales; the trading margin and service income were 17.3 percent of sales. Expense deductions were 11.8 percent of sales. Net operating margins were 5.5 of sales and net margins, 5.8 percent.

Net operating margins were equivalent to a return of 24.9 percent on the cost of fixed assets and net margins to a return of 26.4 percent. The total net margin of the 577 associations was equal to 70 percent of the total indebtedness.

Table 3. Consolidated operating statement, 577 local cooperatives of Texas, season 1949-50

Service revenue			\$19,860,712
Trading revenue			
Sales		\$206,002,956	
Cost of sales			
Opening inventories	\$ 2,111,559		
Purchases	190,304,217		
Closing inventories	2,246,718	190,169,058	
Gross trading margin			15,833,898
Gross operating margin			35,694,610
Expense deductions			24,396,907
Net operating margin			11,297,703
Non-operating revenue		1,180,770	
Non-operating expense		516,397	
Net non-operating margin			664,373
Net margins			\$11,962,076

Table 4. Service revenues 577 local cooperatives of Texas, season 1949-50

Ginning business			
Gin tolls	\$15,265,922		
Other	826,979		\$16,092,901
Elevator business			1,707,450
Supply business			103,684
Locker plant operations			764,107
Rice marketing			1,155,331
Animal and animal products marketing			37,239
Total			\$19,860,712

SERVICE REVENUES

Service revenues according to type of business are shown in Table 4. The service revenue of the ginning business was by far the most important, accounting for 81 percent of the total; the elevator business was next in order with 9 percent, followed by rice marketing with 6 percent.

TRADING OPERATIONS OF THE GINNING BUSINESS

Trading operations of the ginning business for the season 1949-50 are given in Table 5.

Sales of lint cotton represented 55.8 percent of total sales and margins on cotton sales accounted for 7.7 percent of the trading margins. Sales of bagging and ties were a mere 5.7 percent of total sales but margins constituted 26.0 percent of the total trading margins. Sales of cotton seed amounted to 29.3 percent of total sales and margins soared to 65.0 percent of the total trading margins. Sales of bagging and ties and cotton seed represented 35.0 percent of total sales and their trading margins were 91.0 percent of the total trading margins. Trading margins in terms of sales, were 24.3 percent for bagging and ties; 11.9 percent for cotton seed; 0.7 percent for lint cotton; 0.3 percent for remnants and 0.8 percent for cotton planting seed. The trading margin on all sales was 5.4 percent.

The ginning business is predominantly service rather than trading. This is attested to by the fact that service revenues in 1949-50 were 75 percent of gross margins. Even the trading account indicates that ginning is not a merchandising business. Turnovers during days, weeks and months of the active ginning season undoubtedly were much lower and more realistic than those indicated in the audit at the end of the fiscal year when the ginning business was inactive.

VOLUME OF GINNING

During the 1949-50 season, the 318 active cooperative gins in Texas had a total volume of 1,651,846 bales, or an average of 5,194 bales. This

Table 5. Trading operations of cooperative gins of Texas, season 1949-50

Item	Sales	Opening inventory	Cost of purchases	Closing inventory	Trading margin
Bagging & ties	\$ 5,872,184	\$ 8,270	\$ 4,449,550	\$ 14,997	\$1,429,361
Cotton seed	29,985,301	58,143	26,412,724	55,129	3,569,563
Lint cotton	57,107,970	17,120	56,683,317	13,807	421,340
Remnants	1,721,744	1,372	1,718,280	2,373	4,465
Planting seed	7,662,976	32,691	7,607,820	41,120	63,585
Total	\$102,350,175	\$117,596	\$96,871,691	\$127,426	\$5,488,314

Table 6. Average revenue per bale, 1949-50

Item	Per bale	Percent of total
Service revenue		
Gin tolls	\$9.24	70.7
Other	.50	3.8
Gross margins		
Bagging and ties	.87	6.7
Cotton seed	2.16	16.5
Cotton marketing	.26	2.0
Cotton planting seed	.04	0.3
Total	\$13.07	100.0

volume reflected the exceptionally high volume of cotton production that season. Mainly as a convenience or service, these gins purchased 436,809 bales of regular cotton from their members and an additional 22,957 bales of remnants. The cotton purchased was 27.8 percent of total ginnings. The gross margin per bale on the regular cotton purchased was 96 cents, and on all purchases was 93 cents. The gross margin on all cotton purchased from members was 25.8 cents per bale ginned.

The total farm value of the cotton ginned by the cooperatives, but not purchased, was \$155,853,000. The grower received an average of \$129.96 per bale for the lint; after deductions of \$9.24 for gin tolls and \$3.55 for bagging and ties, returns to the member were \$117.17 a bale. The cooperative gins purchased a total of 615,323 tons of cotton seed from their patrons, or an average of 745 pounds per bale. Growers were paid an average of \$18.15 per bale for their cotton seed. Thus, of a total return of \$135.32 a bale, the lint yielded 86.6 percent and the cotton seed 13.4 percent.

Table 6 shows the average service revenues and gross margins on trading per bale.

The average gin income of \$13.07 a bale for 1949-50 was 220 percent of the average gin income of \$5.95 a bale during the period 1931-38. Gin tolls accounted for 70.7 percent of the gin income of 1949-50 and trading margins on cotton seed for 16.5 percent.

TRADING OPERATIONS OF ELEVATOR BUSINESS

Trading operations of the cooperative elevator business are shown in Table 7.

Service revenue of the cooperative elevators accounted for 54.6 percent of the gross margins. The trading margin for all grains was 5.1 percent of sales; for wheat, 4.9 percent; for grain sorghum, 6.4 percent, and for feed grains, 7.5 percent of sales.

Turnover, as reflected by the closing inventory, was very high, being 115 for all grains, and

Table 7. Trading revenue of grain business of cooperative elevators of Texas, season 1949-50

Item	Sales	Opening inventory	Cost of purchases	Closing inventory	Trading margins
Wheat	\$24,732,641	\$ 78,565	\$23,632,844	\$184,736	\$1,205,968
Grain sorghum	2,432,666	44,641	2,263,434	30,141	154,732
Feed grains	758,440	17,607	711,696	27,951	57,088
Total	\$27,923,440	\$140,813	\$26,607,974	\$242,828	\$1,417,788

ranged from a low of 27 for the feed grains to high of 134 for wheat. Wheat sales accounted for 88.6 percent of all sales. Grain sales per association for the 95 cooperatives operating elevators were \$293,900. The average gross margin was \$32,900.

TRADING OPERATIONS OF SUPPLY ASSOCIATIONS

Table 8 gives the trading operations of the supply business of local cooperatives.

The supply business was the most popular type of activity from the standpoint of the number of associations engaged, a total of 375. Sixty-seven supply associations qualified as single-function. The most popular combination was that of supply and ginning, a total of 225 associations. Average sales of supplies were \$74,240. But 18 associations had supply sales of 5 percent or less of total sales. Eliminating the sales of the 18 associations, the average sales of the remaining 180 associations were \$143,060.

Service income of the supply business was mere 3.0 percent of gross margins. The sale of fuel oils was the most important item, accounting for 33.1 percent of all sales; the sale of feed was second in importance with 28.3 percent of total sales. With these two items, the sales of auto accessories, seed, fertilizers, appliances and hardware, represented 89.2 percent of total sales.

The trading margin on sales of all supplies was 11.9 percent. Trading margins ranged from a low of 3.1 percent on miscellaneous supplies to a high of 27.2 percent on grease and lubricating oil. Turnovers for the various items in the supply business were computed in terms of averages of the opening and closing inventories. The turnover of all supplies was 15.7. Thus, on an average, all supplies were completely turned every 23.6 days. Turnovers ranged from a low of 4.4 for automobile accessories to a high of 51.7 for miscellaneous supplies. Fuel oils had a gross margin of 15.7 percent, ranking fifth from the highest and a turnover of 42.7, ranking third from the highest. The stock of fuel oils, on an average, was completely turned every 8.5 days.

The supply functioning of local cooperatives was the main enterprise qualifying as a merchant

Table 8. Trading revenue on supply business of local cooperatives of Texas, season 1949-50

Item	Sales	Opening inventory	Cost of purchases	Closing inventory	Trading margins
Auto accessories	\$ 1,798,801	\$ 406,250	\$ 1,470,806	\$ 414,460	\$ 336,205
Fuel oils	9,208,120	241,254	7,709,545	190,351	1,447,870
Grease & oil	906,362	293,559	630,250	263,623	246,789
Feed	7,867,578	302,153	7,135,855	222,201	631,772
Seed	1,899,266	30,651	1,817,822	54,510	105,300
Salt & minerals	66,645	5,380	61,140	6,939	7,000
Fertilizers	2,150,675	45,160	2,163,747	149,842	91,614
Insecticides	347,362	12,349	312,062	9,115	32,600
Appli. & hardware	1,913,234	366,135	1,718,676	408,135	236,523
Farm machinery	637,488	23,260	554,348	44,977	104,000
Coal & wood	68,233	4,759	53,036	2,643	13,000
Miscellaneous	976,431	13,607	957,228	24,189	28,700
Total	\$27,840,195	\$1,744,517	\$24,584,515	\$1,790,985	\$3,302,000

Table 9. Trading operations of other types of business, season 1949-50

Item	Sales	Opening inventory	Cost of purchases	Closing inventory	Trading margins
Rice	\$30,516,438	\$	\$30,269,415	\$	\$ 247,023
Animal products	4,812,185	25,924	4,585,702	12,494	213,053
Fruits & vegetables	11,256,241	34,379	6,219,162	32,268	5,034,968
Locker plants	642,103	43,029	537,256	35,269	97,087
Miscellaneous	661,872	5,301	628,504	5,448	33,515
Total	\$47,888,839	\$108,633	\$42,240,039	\$85,479	\$5,625,646

supplying business. Supply sales accounted for 13.5 percent of all sales of the 577 locals. The opening inventory of the supply business, however, represented 82.6 percent of all opening inventories, and the closing inventory represented 79.9 percent of all closing inventories. For every \$1,000 of sales, the supply business had an opening inventory of \$62.66 and a closing inventory of \$64.33; for every \$1,000 of sales for all business other than supply, the opening inventory was \$2.06 and the closing inventory \$2.56.

TRADING OPERATIONS OF OTHER TYPES OF BUSINESS

Trading operations of local cooperatives performing other types of business than those discussed previously are shown in Table 9.

Service income constituted 82.4 percent of gross margins for rice marketing, 14.9 percent for animals and animal products and 88.7 percent for the locker plants. The main services of the locker plants are slaughtering, curing and smoking, cutting and packaging and locker storage.

Trading margins of sales ranged from a low of 0.8 percent for rice to a high of 44.7 percent for fruits and vegetables. The exceptionally high trading margins for fruits and vegetables are required because of high packing charges of the fresh product and the high canning and juicing cost of processed citrus products.

DISTRIBUTION OF NET MARGINS

As shown in Table 9, the total net margins of the 577 local associations for the 1949-50 season was \$11,962,000. Table 10 shows how these net margins were distributed, as given in the audits.

Cash dividends on stock and cash patronage refunds constituted 83.6 percent of the \$4,760,470 of net margins distributed by the auditors. Patronage refunds accounted for 88.8 cents and

Table 10. Distribution of net margins of 577 local cooperatives of Texas, season 1949-50

Total net margins		\$11,962,076
Distribution		
Cash dividends on stock	\$ 445,622	
Cash patronage refunds	3,536,089	
Reserves	469,432	
Gains in equity	266,732	
Miscellaneous	38,622	
Federal income tax	3,969	
Total distribution		4,760,466
Undistributed margins		\$ 7,201,610

stock dividends for 11.2 cents of each dollar returned to members in cash.

Of the total net margin, 60.2 percent was left undistributed and carried to the equity account as such. It is not inferred, however, that this assignment was final. It means, mainly, that the auditors in most cases were not given the responsibility of prorating nets to the patrons either as cash refunds or as equivalents of stock or members' certificates covering cash retirement of indebtedness. A large percentage of these funds were used within a few months following the completion of the audits to make cash refunds or to retire debts. In either event, on an average, cash on hand was more than ample for total distribution. If such total distribution had been made, the current ratio of 2.8 to 1 would have been lowered to 1.8 to 1.

In a considerable number of audits, the auditor made distribution not only in the total but also to the individual member or patron. Proper distribution of net margins in a cooperative is most important in effecting full compliance with regulations governing federal income tax exemptions. Proper distribution of nets is essential in assuring equitable treatment of all patrons. Thus, an increasing use of auditors in making complete distribution of net revenues of cooperatives is desirable.

EMPLOYMENT OFFERED BY LOCAL ASSOCIATIONS

Cooperatives usually are viewed from the standpoint of contributions to their members and patrons. Too little attention has been given to what the cooperative means to the local economy. In many of the small agricultural communities of Texas, the farmers' cooperative is among the most important business firms. Cooperatives offer employment to managers, office workers and laborers. Their payrolls turn loose purchasing power of much significance to all types of business in the community. Cooperatives help support local and state institutions through the payment of taxes.

In the state-wide study of Texas agricultural cooperatives, special emphasis was given to the payroll and employment. For instance, the salaries and the months of employment of the managers and office workers of the cooperative gins were obtained. The typical gin crew was listed together with daily wages of each member of the crew. The total days of employment were de-

Table 11. Payroll of local cooperatives of Texas, season 1949-50

Number		Total salaries and wages			
Func-tions	Assns.	Managers	Office workers	Laborers	All employees
1	221	\$ 607,601	\$340,035	\$2,032,937	\$2,980,573
2	202	621,810	299,581	2,566,643	3,488,034
3	130	384,111	196,239	1,859,220	2,439,570
4	24	77,022	61,201	450,479	588,702
Total	577	\$1,690,544	\$897,056	\$6,909,279	\$9,496,879

Table 12. Average annual salaries and wages of employees of Texas local cooperatives, season 1949-50

Number		Average annual salaries and wages			
Func-tions	Assns.	Managers	Office workers	Laborers	All employees
1	221	\$2,954	\$1,239	\$2,342	\$2,211
2	202	3,139	1,235	2,513	2,386
3	130	2,989	1,396	2,741	2,575
4	24	3,209	1,764	2,295	2,309
Total	577	\$3,039	\$1,296	\$2,500	\$2,367

terminated by dividing total wages for the season by the total daily wages of the gin crew.

Total salaries and wages paid by the 577 locals for the 1949-50 season are shown in Table 11. Managers received 17.8 percent of the total payroll, office workers, 9.4 percent and laborers, 72.8 percent. For each dollar of operating expense incurred by the local cooperatives during 1949-50, the payroll absorbed 38.9 cents; managers received 6.9 cents, office workers, 3.7 cents and laborers, 28.3 cents.

Average salaries and wages for equivalent year-round employment are shown in Table 12. The average monthly salaries of managers and office workers were \$253 and \$108, respectively; the average monthly wage of laborers was \$208 and the average monthly stipend of all employees was \$197. The average monthly employment for the various types of employees is listed in Table 13. In terms of man-year equivalents, the 577 local cooperatives employed 556 managers, 692 office workers and 2,764 laborers, or a total of 4,012 employees. Managers represented 13.9 percent of total employment; office workers, 17.2 percent; and laborers, 68.9 percent. For each manager, on an average, 1.2 office workers and 5.0 laborers were employed.

In an era of advancing mechanization the relationship between investment and employment is important. The 577 local cooperative associations in 1949-50 had a total investment of \$44,270,700 in buildings, machinery and equipment. On the basis of the 4,012 man-year equivalent of em-

Table 13. Employment offered by local cooperatives of Texas, season 1949-50, averages per association

Number		Work force of local cooperatives expressed in man-month equivalents				Full man-year equivalents
Func-tions	Assns.	Managers	Office workers	Laborers	All employees	
1	221	11.2	14.9	47.1	73.2	6.1
2	202	11.8	14.4	60.7	86.9	7.2
3	130	11.9	13.0	62.6	87.5	7.3
4	24	12.0	17.4	98.2	127.6	10.6
Total	577	11.6	14.4	57.5	83.5	7.0

Table 15. Fixed assets of 577 local marketing, processing and supply associations

Period organized	Number of assns.	First fixed assets				Present fixed assets			
		Average cost	Cash paid-in		Cost		Depreciation		
			Average	Percent of cost	Average	Percent of first cost	Average reserve	Percent of cost	
1913-19	8	\$10,913	\$ 5,094	46.7	\$121,144	1110	\$35,993	29.7	
1920-24	19	27,164	6,600	24.3	133,272	491	42,772	32.1	
1925-29	64	25,627	7,379	28.8	82,435	322	32,209	39.1	
1930-34	84	19,623	2,393	12.2	101,003	515	36,313	36.0	
1935-39	162	21,869	3,510	16.5	68,434	313	22,523	32.9	
1940-44	110	25,889	6,159	23.8	69,944	270	16,235	23.2	
1945-49	130	35,765	16,866	47.2	63,301	177	8,003	12.6	
Total	577	\$25,879	\$ 7,443	28.8	\$ 76,726	296	\$21,988	28.7	

Table 14. Taxes paid by 577 local cooperatives of Texas business year 1949-50

Kind of tax	Amount
School	\$114,202
City	111,631
County	62,526
State	52,352
Water-drainage	8,215
Other	98,680
Federal income	38,262
Total	\$485,908

ployment, the investment per employee was \$11,035; on the basis of the 2,764 man-year equivalent of laborers employed, the average investment per laborer was \$16,017.

TAXES PAID

Total taxes paid by local cooperatives in 1949-50 are shown in Table 14. The average tax per association was \$842. Of this total, \$198 were local school tax and \$194 were city tax. The portion of the tax going to the county and the state was \$199. The more important items in "other taxes" were social security and gasoline tax.

INVESTMENTS IN FIXED ASSETS

The financing of the cost of the required fixed assets constitutes one of the most serious problems facing a group of farmers in organizing a cooperative. As the percentage of cash paid-in at the time of organization increases, the problem of financing decreases. The percentage of cash paid-in is governed, in some measure, by the cost of the fixed assets, the number of members and the general financial status of the members.

Information was collected on date of organization of each association, the original investment in fixed assets and the amount of cash paid-in at the time of organization. The present investments in fixed assets and the depreciation reserves were obtained from the audits. Table 15 was completed from these data.

The range in average original investment was from a low of \$10,910 for the period 1913-19 to a high of \$35,770 for the period 1945-49. Four main factors account for differences in original investment: 1. the type of business entered, which governs the kind of buildings, machinery and equipment required; 2. the degree of mechanization; for instance, to the relatively simple gin plant of the earlier periods have been added expensive cleaning and drying equipment to the gins of the later periods; 3. the prevalence of sec-

Table 16. Size of plant, secondhand or new plants, and type of power of one-function cooperative gins

Period organized	Number of assns.	Number of batteries		Plant at time of organization		Type of power		
		Single	Double	Second-hand	New	Steam	Internal combustion	Electric
1925-29	19	15	4	15	4	2	7	10
1930-34	16	12	4	12	4	4	7	5
1935-39	54	50	4	51	3	6	40	8
1940-44	22	20	2	21	1		13	9
1945-49	12	12		6	6		9	3
Total	123	109	14	105	18	12	76	35

secondhand or new plants and machinery in the original facilities; for instance, during 1930-39, 90 percent of the original cooperative gins were secondhand and during the period 1945-49, 50 percent were secondhand; and 4. the general price level, which for 1913-49 ranged from a low of 107 for the period 1930-34 to a high of 201 for the period 1945-49, according to the BLS Wholesale Index.

The highest percentage of cash paid-in occurred during the period 1945-49 when 47.2 percent of the original investment was covered by cash, and the lowest was during 1930-34 when but 12.2 percent was covered by cash. For each \$100 invested in original fixed assets in 1945-49, \$30.51 were invested in 1913-19 and \$54.87 in 1930-34. For each \$100.00 subscribed in cash in 1945-49, \$30.30 were subscribed in 1913-19 and \$14.19 in 1930-34.

The depreciation reserve is significant in that it provides the funds for making replacements of plants, machinery and equipment. The extent to which the reserve covers the cost of the replacements is most significant financially. In general, the depreciation reserve reflects the number of years current fixed assets have been in use. The depreciation reserve of the 577 locals at the close of the season 1949-50 was 28.7 percent of current investments in depreciable fixed assets. It appears that these fixed assets, on an average, had been in use a little under 5 years. The average depreciation reserve of cooperatives organized during 1945-49 was 12.6 percent of depreciable fixed asset costs. This indicates a use of about 2 years. The average age of the cooperatives in this group was 2.9 as of the end of 1949-50. However, original investments of the period had increased by 177 percent as of the end of the period. Much of the added investment appears to have been made toward the close of the period.

INVESTMENTS AND DEPRECIATION RESERVES OF ONE-FUNCTION GIN ASSOCIATIONS

One-function gin associations offer a simplicity of investments in buildings and machinery

that facilitates an analysis of investments and depreciation reserves. A selection was made of 123 one-function gins for this purpose. Table 16 was compiled to gain a clearer view of these gins.

One hundred and nine of the gin plants, or 88.6 percent of the total, were single battery. Secondhand plants were purchased initially by 105 associations, or 85.4 percent of the total. The cost of secondhand plants is usually considerably less than that of new plants and their financing is less burdensome. But the secondhand plants require earlier replacement than new plants. If the usual rates of depreciation is charged, the secondhand plants yield a lower depreciation reserve to be applied against replacement than new plants.

INCREASES IN PRESENT OVER ORIGINAL INVESTMENTS

The gin plants were sorted on the percentage increase of present investments in buildings, machinery and equipment over original investments. Groupings were made for increases of 100-199 percent, 200-299 percent, 300-399 percent and 400 percent, or more. Averages of investments and depreciation reserves for the associations, based on these groupings, are reported in Table 17.

Current investments in fixed assets increased consistently with increases in present investments over original investments; original investments decreased consistently with increases in present investments over original investments. Proceeding from the highest percentage increase group to the lowest, relative current and original investment were: present investment, \$100, \$70, \$56 and \$47; original investment, \$100, \$122, \$133 and \$213.

If the gin associations charge off depreciation at consistent rates from year to year, the total depreciation reserve divided by the reserve for the current year would give the number of years the present plant and equipment have been in use. Thus, the gin plants of the 123 associa-

Table 17. Original and present costs of fixed assets of 123 one-function cooperative gin associations grouped according to increase in present costs over original costs, averages per association

Number of assns.	Fixed assets			Depreciation			
	First cost per assn.	Present cost		Average reserve		Percentages present costs	
		Average per assn.	Percent of first	Total per assn.	Current year	Total reserve	Current year
49	\$37,962	\$ 49,898	131	\$16,427	\$3,352	32.9	6.7
32	23,720	59,764	252	21,827	3,565	36.5	6.0
23	21,762	74,520	342	20,271	4,848	27.2	6.5
19	17,859	106,959	599	24,780	6,714	23.2	6.3
Average	\$28,060	\$ 65,883	235	\$19,733	\$4,206	30.0	6.4

Table 18. Original and present costs of fixed assets of one-function cooperative gin associations grouped according to second hand or new plants at time of organization, averages per association

Period organized	Number		Fixed assets			Depreciation				
	Assns.	Batteries	First cost per assn.	Present cost		Average reserve		Percentages present cost		
				Average per assn.	Percent of first	Total per assn.	Current year	Total reserve	Current year	
Original plant secondhand										
1925-29	15	19	\$19,579	\$56,867	290	\$22,478	\$3,697	39.5	6.5	
1930-34	12	16	22,573	46,982	208	14,267	3,043	30.4	6.5	
1935-39	51	55	21,816	58,610	269	18,191	3,473	31.0	5.9	
1940-44	21	25	23,243	55,459	239	11,538	3,655	20.8	6.6	
1945-49	6	6	34,860	42,298	121	5,520	4,694	13.1	11.1	
Total or av.	105	119	\$22,885	\$56,269	246	\$16,617	\$3,609	29.5	6.4	
Original plant new										
1925-29	4	4	\$39,550	\$75,746	192	\$29,506	\$3,298	39.0	4.4	
1930-34	4	4	33,102	72,800	220	41,763	4,843	57.4	6.7	
1935-39	3	3	36,191	61,139	169	19,086	3,846	31.2	6.3	
1940-44	1	1	60,000	62,110	104	19,452	5,051	31.3	8.1	
1945-49	6	6	89,910	94,642	105	14,662	6,460	15.5	6.8	
Total or av.	18	18	\$55,480	\$78,198	141	\$24,987	\$4,884	32.0	6.2	

tions have averaged 4.7 years of use. A depreciation rate of 6.4 percent indicates a use life of about 16 years.

ORIGINAL PLANTS, SECONDHAND OR NEW

Gin plants were grouped accordingly to whether the original plants were secondhand or new. Averages of investments and depreciation reserves of such grouping are shown in Table 18. Average costs and depreciation reserves are by number of batteries rather than by number of gin associations.

Costs of new batteries were greater than those of secondhand batteries from a low of 147 percent for 1930-34 to a high of 258 percent for 1940-49. Costs of both secondhand and new plants were sharply higher during 1945-49 than during earlier periods. For the whole period, new plants cost more by 242 percent than secondhand plants; for the period 1913-44, new plants cost more by 172 percent than secondhand plants. For the whole period, the relative investment of associations starting with new plants was greater by 139 percent than that of associations starting with secondhand plants; for the period 1913-44, the investment of association starting with new plants was greater by 129 percent than that of associations starting with secondhand plants.

The relation of the depreciation reserve to replacement costs is significant. Presumably de-

preciation is assessed against fixed assets as the means of charging off the cost of such assets over their normal life. The assumption cannot be made, however, that the full depreciation reserve can always cover the full cost of the replacements. On an average, the full depreciation reserve of present investments in associations with originally secondhand plants would be \$56,300 and for plants originally new, \$78,200. The average cost of new plants during 1945-49 was \$94,600; the highest cost was \$107,300. In terms of these two costs, the depreciation reserve of associations with originally secondhand plants would cover 60 and 52 percent of new replacements; the depreciation reserve of associations with originally new plants would cover 83 and 73 percent of the cost of new replacements. The lowest investment in fixed assets of plants in operation during 1949-50 was \$18,200. The depreciation reserve of this association would cover only 19 and 17 percent of new replacements.

It is evident that a large percentage of the cooperative gin associations of Texas will be confronted with serious financing problems when steps are taken to install new machinery and equipment. Many of these associations will find it necessary to raise far greater funds than those required at the time they were organized. In the face of this situation, the continuing controversy as to how depreciation rates should be established loses significance.

Table 19. Original and present costs of fixed assets of one-function cooperative gin associations grouped according to present costs, averages per association

Period organized	Number		Fixed assets			Depreciation				
	Assns.	Batteries	First cost per assn.	Present cost		Average reserve		Percentages present cost		
				Average per assn.	Percent of first	Total per assn.	Current year	Total reserve	Current year	
Present investment \$49,999 or less per battery										
1925-29	5	5	\$24,599	\$39,682	161	\$15,027	\$2,009	37.9	5.1	
1930-34	9	12	19,972	35,062	175	15,158	1,720	43.2	4.9	
1935-39	21	23	20,126	31,433	156	14,474	1,912	46.0	6.1	
1940-44	9	9	25,889	44,291	171	13,315	2,968	30.1	6.7	
1945-49	5	5	33,832	35,456	105	5,035	4,590	14.2	12.9	
Total or av.	49	54	\$23,011	\$35,519	154	\$13,610	\$2,303	38.3	6.5	
Present investment \$50,000 or more per battery										
1925-29	14	18	\$29,085	\$65,837	226	\$26,110	\$4,076	39.7	6.2	
1930-34	7	8	31,933	77,771	244	26,678	5,929	34.3	7.6	
1935-39	33	37	24,199	72,541	300	19,591	4,286	27.0	5.9	
1940-44	13	13	24,239	80,767	333	14,468	5,362	17.9	6.6	
1945-49	7	7	82,780	92,051	111	13,703	6,282	14.9	6.8	
Total or av.	74	83	\$31,404	\$74,526	237	\$20,389	\$4,735	27.4	6.4	

PRESENT INVESTMENTS

The gin associations were grouped accordingly to whether present investments in fixed assets were \$49,999 or less per battery and \$50,000 or more per battery. Average investments and depreciation reserves for such groupings are reported in Table 19. The present costs of buildings and machinery of the higher cost group were 210 percent greater than those of the lower cost group. Many of the plants in the higher cost group have been modernized. The present cost of plants of the higher cost group was 237 percent greater than the original cost; the present cost of plant of the lower cost group was 154 percent greater than the original cost.

The average use life of the plants of the higher cost group as of the close of 1949-50 had run for 4.3 years, whereas the use life of the lower cost group had run for 5.9 years. In terms of replacement costs of \$94,600 and \$107,300, full depreciation for the lower cost group would cover 38 and 33 percent of replacements and for the higher cost group, 79 and 69 percent.

INCREASES IN COSTS OF PRESENT FIXED ASSETS OVER ORIGINAL COSTS

As a final step in the analysis of costs of fixed assets and depreciation reserves, the gins were grouped by period of organization and each group was sorted according to percentage increases in present costs of fixed assets over original costs. Averages for such groupings are listed in Table 20. Average percentage increases in costs of fixed assets did not vary markedly among the different periods. The lowest increase, 259 percent, occurred for the period 1930-34, and the highest increase, 279 percent, was in the period 1935-39. In the various sub-groups, the lowest increase occurred with three gins organized during 1930-34 with a step-up of average costs from an original of \$23,960 to a present cost of \$32,480, or an increase of 136 percent; the highest increase occurred with 5 gins organized during 1940-44, with average costs increasing from an original cost of

\$17,000 to a present cost of \$110,800, or an increase of 652 percent.

The average cost of original investments ranged from a low of \$22,620 for gins organized during 1935-39 to a high of \$62,390 for gins organized during 1945-49. The average present cost of fixed assets ranged from a low of \$63,090 for gins organized during 1935-39 to a high of \$72,810 for gins organized during 1925-29. In the sub-groups, three gins organized during 1940-44 had the lowest average original cost of \$17,000, and nine gins organized during the same period had the highest average original cost of \$34,000. The gins with the lowest average present cost were three gins organized during 1930-34 with a cost of \$32,480; the gins with the highest present average cost were nine gins organized during 1925-29 with an average cost of \$123,100.

Three gins organized during 1930-34 had the highest percentage of total depreciation reserve with 69.0. One of these plants was fully depreciated. This was the only case of its kind among the 123 gin associations studied. This situation strongly suggests that gin associations should make replacements before complete depreciation occurs. Complete depreciation of the three gins in the highest depreciation group would cover 34 and 30 percent of replacement costs of \$94,600 and \$107,300. The group with the second highest percentage of total depreciation reserve had eight gins organized during 1925-29 with an average reserve of 48.6 percent. Total depreciation in this instance would cover 55 and 49 percent of replacement costs of \$94,600 and \$107,300.

NO DEPRECIATION CHARGE-OFF

Thirty-four local associations, or 5.9 percent of the total, charge-off no depreciation. This is contrary to good business practice. With no depreciation reserve, replacements must be completely financed at the time they are made. The problem of financing the replacements may become as burdensome as was that of financing the original fixed assets.

Table 20. Original and present costs of fixed assets of one-function cooperative gin association, averages per association

Period organized	Number of assns.	Fixed assets			Depreciation			
		First cost per assn.	Present cost		Average reserve		Percentages present cost	
			Average per assn.	Percent of first	Total per assn.	Current year	Total reserve	Current year
1925-29	8	\$33,625	\$ 52,313	156	\$25,404	\$2,685	48.6	5.1
	5	24,940	70,818	284	20,252	3,833	28.6	5.4
	3	24,000	80,521	336	36,678	4,825	45.6	5.9
	3	21,500	123,102	573	43,525	9,437	35.4	7.7
	19	\$27,905	\$ 72,814	261	\$28,690	\$4,391	39.4	6.0
1930-34	3	\$23,955	\$ 32,478	136	\$22,423	\$ 982	69.0	3.0
	7	30,076	72,100	240	31,127	4,306	43.2	6.0
	6	21,584	73,464	340	20,575	5,828	28.0	7.9
	16	\$25,205	\$ 65,182	259	\$24,708	\$4,254	37.9	6.5
1935-39	17	\$27,332	\$ 40,121	147	\$17,081	\$2,413	42.6	6.0
	16	21,731	53,922	248	20,227	3,247	37.5	6.0
	10	21,902	75,338	344	18,027	4,257	23.9	5.7
	11	17,257	100,798	584	23,952	6,094	23.8	6.0
	54	\$22,615	\$ 63,092	279	\$19,588	\$3,751	31.0	5.9
1940-44	9	\$34,000	\$ 47,263	139	\$13,664	\$3,542	28.9	7.5
	4	19,026	47,711	251	13,919	3,208	29.2	6.7
	4	20,000	69,557	348	13,122	4,870	18.9	7.0
	5	17,000	110,829	652	15,354	6,444	13.9	5.8
	22	\$24,914	\$ 65,845	264	\$13,996	\$4,383	21.3	6.7
1945-49	12	\$62,385	\$ 68,470	110	\$10,091	\$5,577	14.7	8.1

A failure to charge off depreciation violates the principle of equitable treatment in a cooperative. Over the past 25 years, more than 70 percent of the original cost of gin plants has been financed with net margins left in the business. Suppose in a given case 5 years were required to complete payments. The patrons of that 5-year period thus paid more than 70 percent of the original cost. Turnover of membership in most local cooperatives of Texas is relatively high. Many of the members during the 5-year period patronized the cooperative less than 5 years. The fewer the years of patronage the lighter the load assumed in paying for the plant. Suppose the machinery was replaced at the end of the fifteenth year. All patrons who began their patronage the sixth year, or later, but ended their patronage by the end of the fifteenth year, escaped in sharing the cost of wearing out of nearly 50 percent of the cost of the plant.

In a cooperative, members share in net margins according to patronage. This principle has been recognized from the earliest day of the cooperative type of business firm. In a cooperative, too, it should be recognized that the burden of financing needed plants and equipment should also follow the patronage principle. This is recognized in the revolving fund plant of financing.

SUMMARY AND CONCLUSIONS

Farm business is typically small-scale. To gain the advantages of large-scale business, farmers have been organizing marketing agencies ever since agriculture became commercialized. The first type of organization usually was the stock corporation.

The farmer stock corporations failed because they did not fit the needs of farmers. Stock corporations are organized by investors with surplus funds. The aim of such investors is to realize profits on their investments. Farmers, as a rule, are not interested in making investments other than in their own farm business. The farmer is interested in selling his products and in buying farm supplies. His concern is that of a patron. An awakening realization that the cooperative business operates according to patronage interests and principles led to a slow but sure adoption of the cooperative form of marketing agency.

In the cooperative, small-scale farm business is integrated into large-scale business both horizontally and vertically. Many farmers join a cooperative gin association with a combined volume of ginning assuring efficient and low cost ginning service. Many local cooperative gin associations have sufficient volume of cotton seed to operate a cooperative oil mill. These are cases of horizontal integration. A group of cooperative gin associations organize a cotton marketing agency for the purpose of merchandising their cotton direct to mill centers or to central market merchants. This is a case of vertical integration.

The consolidated balance sheet of the 577 Texas local associations as of the end of the 1949-50 season revealed a highly satisfactory financial status. The current ratio was 2.8 to 1. For each dollar of current liabilities the associations had \$1.42 in cash. Members owned 73 cents clear of indebtedness of each dollar of assets.

The average sales per association were \$357,020 and the average per patron were \$1,420. As a source of gross margins, services performed by the local cooperatives were more important than trading since service charges accounted for 56 percent of the total. The margin on trading was 7.7 percent of sales. The trading margin and service income were 17.3 percent of sales. Expense deductions were 11.8 percent of sales. Net margins were 5.8 percent of sales. Net margins were equivalent to a return of 26.4 percent on the cost of fixed assets. This indicates a highly satisfactory use of productive resources on the part of the local associations.

The ginning business is predominantly service rather than trading since 75 percent of gross margins in 1949-50 was derived from service charges. Bagging and ties and cotton seed represented 35 percent of total sales of the ginning business and accounted for 91 percent of trading margins.

Service revenue of the cooperative elevators accounted for 54.6 percent of total gross margins. The trading margin for all grains was 5.1 percent of sales; for wheat 4.9 percent; for grain sorghum 6.4 percent and for feed grains 7.5 percent of sales.

The supply business was the most popular type of activity from the standpoint of the number of associations engaged, a total of 375. Sixty-seven supply associations qualified as single-function. The most popular combination of functions was that of supply and ginning, a total of 225 associations. Average sales of supplies were \$74,240. The average sales of the 180 associations whose supply sales accounted for 5.1 percent or more of total sales were \$143,060.

The trading margin on sales of all supplies was 11.9 percent. Trading margins ranged from a low of 3.1 percent on miscellaneous supplies to a high of 27.2 percent on grease and lubricating oil. The turnover of all supplies was 15.7. Thus, on an average, all supplies were completely turned every 23.2 days. The turnover of fuel oils was 42.7, which meant that the stock of fuel oils was turned every 8.5 days.

The supply functioning of local cooperatives was the main enterprise qualifying as a merchandising business. Supply sales accounted for 13.5 percent of all sales of the 577 local associations. The opening inventory of the supply business, however, represented 82.6 percent of all opening inventories; the closing inventory, 79.9

percent of all closing inventories. For every \$1,000 of sales, the supply business had an opening inventory of \$62.66 and a closing inventory of \$64.33; for every \$1,000 of sales for all business other than supply, the opening inventory was \$2.06 and the closing inventory \$2.56.

The audits showed a cash distribution to members of \$3,981,700, of which 88.8 percent was in patronage refunds and 11.2 percent in dividends on stock. Sixty percent of the net margins was not distributed by the auditors. The associations, however, have a period of 90 days in which to make distribution after the close of the business year. Undoubtedly most of this net was distributed within the prescribed time. The associations had sufficient cash to make total distribution either as cash payments to members or as cash payments on indebtedness with \$2,867,000 in cash left over.

The payroll of the 577 locals in 1949-50 was: managers' salaries, \$1,690,544; office workers' salaries, \$897,056; and laborers' wages, \$6,909,279, or a total payroll of \$9,496,879. These associations gave an equivalent year-round employment to 556 managers, 692 office workers and 2,764 laborers, or a total of 4,012 employees. Managers received an average monthly salary of \$253, and office workers of \$108. The average monthly wage of laborers was \$208. The average monthly stipend of all employees was \$197.

The average investment in building, machinery and equipment was \$16,017 per laborer.

The 577 associations paid an average tax of \$842 in 1949-50. The average school tax was \$198 and the average city tax was \$194. The average county and state tax was \$199.

Average original costs of fixed assets ranged from a low of \$10,913 for the period 1913-19 to a high of \$35,765 for 1945-49. The cash paid-in at the time of organization to cover the cost of fixed assets ranged from a low of 12.2 percent for 1930-34 to a high of 47.2 percent for 1945-49. Average present costs of fixed assets ranged from a low of \$63,000 for 1945-49 to a high of \$133,270 for 1920-24. The total depreciation reserve ranged from a low of 12.6 percent for 1945-49 to a high of 39.1 percent for 1925-29. The average for all associations was 28.7 percent.

One hundred and twenty-three one-function gin associations were selected for analysis as to first and present costs of fixed assets and depreciation reserves. Gins were grouped for increases of 100-199 percent, 200-299 percent, 300-399 percent and 400 percent or more of present over original costs. Current investments in fixed assets increased consistently with increases in present costs of original costs from an average of \$49,900 for the lowest increase group to \$106,960 for

the highest. Average original costs decreased consistently with increases in present costs over original costs with an average of \$37,960 for the lowest increase group to \$17,860 for the highest.

One hundred and five associations started with second-hand plants and 18 with new. The average cost of the second-hand plants was \$23,360 and of the new, \$55,480. The average cost of present fixed assets per battery of the 105 associations was \$56,269, an increase of 241 percent over original costs; the average cost of present fixed assets per battery of the 18 associations was \$78,200, an increase of 141 percent over original costs.

The average depreciation of the costs of present fixed assets was 29.5 percent for associations starting with secondhand plants and 32.0 percent for associations starting with new plants. The average cost of new gin plants for the period 1945-49 was \$94,600 and that of the highest cost plant was \$107,300. In terms of these costs of replacement, the full depreciation reserve of the 105 associations would cover 60 and 52 percent of replacements and of the 18 associations, 83 and 73 percent.

Forty nine of the gin associations had present plants which cost less than \$50,000 per battery; 74 associations had present plants which cost more than \$50,000 per battery. The average cost per battery of the former group was \$35,520 and of the latter group \$74,530. It is evident that the latter group has gone much farther in modernizing its plants. From the standpoint of replacement, the full depreciation reserve of the low-cost group would cover 38 and 33 percent of the total and of the high-cost group, 79 and 69 percent of total replacement cost.

Many of the cooperative gin associations of Texas will be confronted with serious financing problems when steps are taken to install new machinery and equipment. Many of these associations will find it necessary to raise far greater funds than those required at the time they were organized.

Thirty-four local associations, or 5.9 percent of all local cooperatives, made no charge-off for depreciation. This is contrary to good business practice. With no depreciation reserve, replacements must be financed at the time replacements are made. A failure to charge-off depreciation violates the principle of equitable treatment of patrons in a cooperative. In a cooperative members share in net margins according to patronage. In a cooperative, too, it should be recognized that the burden of financing needed plants and equipment also should follow the patronage principle. This is recognized in the revolving fund plan of financing.

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