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Mississippi cooperative gins

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Mississippi Cooperative Gins

MISSISSIPPI STATE COLLEGE
AGRICULTURAL EXPERIMENT STATION
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STATE COLLEGE

MISSISSIPPI

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MISSISSIPPI COOPERATIVE GINS

By B. K. DOYLE and R. W. SHAW

Introduction

Cotton gins comprise the largest group of cooperative enterprises in Mississippi. At the time this study began there were approximately 225 farmer cooperatives in the state, with 82 of these being cotton gins. This development might be expected since cotton is the leading farm enterprise and ginning, as the first step beyond production of cotton, is easily integrated into the farm operations of a group of producers. Also, the investment required in establishing and operating a modern gin is far too great for the average producer to undertake, except for the large plantations.

The cooperative cotton gin movement in Mississippi was motivated largely by the dissatisfaction of cotton producers with services and charges of custom ginners. Many producers felt that the rates charged for ginning cotton were out of line with the costs involved for providing such services. Another reason for the gin development was the belief of many farmers that they were suffering substantial losses as a direct result of damage to their cotton during the ginning process. This damage and loss, they believed, resulted primarily from poor ginning equipment and negligent management. A final important factor to be considered was the practice of mechanical harvesting of cotton and the necessity for additional equipment to do a good job of ginning. These factors stimulated groups of producers to band themselves together in order to finance the new changes in ginning needed to meet this process and receive the desired services.

In an effort to bring about the desired changes in ginning practices and costs, the cotton producers and individuals within the state, with the aid of both government and private financial agencies,

began to organize and operate cooperative cotton gins.

The Problem

This study is an effort to appraise the organization and operation of cooperative gins, to determine their financial status, and to ascertain the cost of performing the ginning function by these plants. The cost phase is being utilized as a part of the Southern Regional Cotton Marketing Project in the determination of the overall cost of marketing. The entire study will be included also in a nation-wide project on cooperative cotton gins, being conducted by the Cooperative Research and Service Division, Farm Credit Administration, United States Department of Agriculture.

One of the objectives of this report is to make recommendations that will result in improvements in the organization and operation of cooperative gins. These recommendations are based upon practices dealing with capital structure, dividend payments, management policies, and membership relations. It is hoped that the results of the cost section of this study will enable gin operators, both cooperative and others, to appraise their operations in light of the recommendations made here and make adjustments leading to relatively lower cost for ginning.

Scope and Method

Records were obtained from 42 of the 82 cooperative gins in the state. This represented 52 percent of those in the Delta and 47 percent for the Upland. It is felt that this sample is representative of the organization of all cooperatives and make

The Cotton and Oilseed Section, Cooperative Research and Service Division, Farm Credit Administration, United States Department of Agriculture, cooperated in the collection of data for this study.

possible the computation of accurate cost data for ginning. Gins included in the study were located in both Upland and Delta areas of the state so that differences in type-of-farming areas and operating procedures are taken into account.

The survey method was used in obtaining the desired information. The

schedule was prepared by the Cooperative Research and Service Division, Farm Credit Administration. Certain changes were introduced to make the questions applicable to the situations existing in Mississippi. Cost and financial data were supplied to the enumerators from audited balance sheets and operating statements.

Organization And Operation Of Cooperative Gins

All of the cooperative gins studied were capital stock associations. This type of organization differs from the organization of non-stock associations only in that the former issues capital stock to show evidence of investment of capital. Non-stock associations issues certificates of equity, certificates of indebtedness, or book credits.

Cooperative gins are started by a group of farmers organizing and purchasing capital stock equal to amounts necessary for down payments on, or outright purchases of gins. These stock issues were mainly preferred stock. The number of shares and value of common stock was held to a small percentage of the total. In most cases, stock was bought only by producers of cotton and in amounts that were in direct relation to the cotton acreage or some other measure. Using such as basis tended to make capital outlay in direct relation to the amount of service that would be demanded by the patron or member in the future. After the association began operation, additional capital was obtained by requiring the purchase of capital stock as new producers were given membership. Capital was also obtained by issuing capital stock in lieu of payment of patronage refunds. This stock, which was issued to both member and non-member patrons, was usually preferred stock. In no case was common stock issued to non-member patrons. In those instances where no preferred stock was issued, non-member patrons were usually given book credits as evidence of

ownership. In several associations, which issued both common and preferred stock, book credits, usually called capital contributions, were used to keep down payment of stock dividends. The latter method applied to both member and non-member patrons.

Even though Mississippi law gives each share of capital stock voting power, the associations usually follow the "one man, one vote" principle when choosing officers and other members of the board of directors, and in the operation of the associations. In a few cases, voting was done by stock when a decision could not be reached by the "one-member, one vote" method, particularly in the decision of major importance such as expansion or contraction of services.

The board of directors has the responsibility of hiring association managers and other personnel. It also outlines operating policies such as gin charges and other fiscal matters. The manager in most cases in the Delta is hired as a plant superintendent while some member of the board assumes responsibility of day-to-day business decisions. In the Upland area, the board is the policy group and a manager is hired to make the day-to-day business decisions. This may be accounted for by the year-round operation of these associations, since they carry on both ginning and purchasing activities.

In Mississippi the difference between a member and a patron is small, since the agricultural association law gives non-

member patrons rights equal to member patrons in the distribution of earnings of the association. Non-member patrons have no voting rights in selecting officers or in expansion or contraction of services and other business decisions.

Thirty-four of the 42 cooperative gins included in this study, were located in the 8 major cotton-producing counties of the Delta—Sunflower, Coahoma, Tallahatchie, Bolivar, Leflore, Quitman, Washington, and Humphreys. The remaining 8 were located in the Upland counties of Newton, Neshoba, Madison, Scott, Simpson, and Union.

Date of Organization and Renovation

Forty-four percent of those gins located in the Delta and seven of the eight gins located in the Upland began operation during the 5-year period, 1936 to 1940 (table 1). The oldest gin in this study was located in the Delta and began operation in 1912. The oldest association in the Upland was organized during the period 1913-1931.

Ninety-seven percent of the cooperative gins in the Delta have been completely rebuilt or overhauled within the past 15 years. In the Upland, seven of the eight gins studied have been completely renovated during this period. Almost 50 percent of the gins in the Delta and 25 per-

cent of the gins in the Upland have been renovated within the past 5 years. All of the gins undergo routine annual maintenance which consist of such repairs as the sharpening of saws, replacement of broken saws, mending of broken belts, and other adjustments and repairs. It was observed that the management of the associations took a great deal of pride in maintaining their machinery in the best possible condition.

Capital Structure

Twenty-two gins in the Delta had both common and preferred stock, 6 had only common stock, and the remaining 6 had only preferred stock. In the Delta, par value of common stock was usually much lower than par value of preferred stock. Only 22 percent of the gins that issued common stock authorized a par value greater than \$10, while 59 percent of the gins that issued preferred stock authorized a par value of over \$10 (table 2).

None of the associations in the Upland area issued common stock with a par value of more than \$10. Fifty percent of the associations in this area issued preferred stock with a par value of more than \$10.

Only one of the gins in the Delta authorized payment of 6 percent dividend on common stock. Six gins in this area

Table 1. Number and percent of cooperative gins beginning operation during indicated periods, and the date of renovation of gin plants, Mississippi, 1948-49 season.

Year	Delta				Upland			
	Began operations		Rebuilt or completely overhauled		Began operations		Rebuilt or completely overhauled	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
1911-1915	1	3	--	--	--	--	--	--
1916-1920	--	--	--	--	--	--	--	--
1921-1925	--	--	--	--	--	--	--	--
1926-1930	1	3	1	3	--	--	--	--
1931-1935	4	12	--	--	1	12	1	12
1936-1940	15	44	7	21	7	88	5	63
1941-1945	11	32	12	35	--	--	--	--
1946-1948	2	6	14	41	--	--	2	25
Total	34	100	34	100	8	100	8	100

authorized payment of 8 percent dividend on common stock. With only one exception common stock was issued by those gins paying this high a dividend rate, and in this case both common and preferred stock were issued. Also common stock in this association was a greater proportion of the total stock issued than in the case of the other gins in the study. Twenty-one associations in this area paid no dividends on common stock. One gin in each area issued common stock with no par value. None of the associations in the Upland paid interest on common stock issued by their associations. In the majority of cases, common stock was only used as a requirement of membership rather than a means of raising capital; therefore, the associations did not feel that it was necessary to pay dividends on this type of stock.

In the majority of the cases the original capital used to establish the association was obtained through the sale of preferred stock. Approximately 76 percent of the associations which issued preferred stock in the Delta authorized the payment of 8 percent dividend on their preferred stock, and 24 percent of the associations within this area authorized 6 percent dividend on this type of stock (table 3). Seven of the eight associations in the Upland paid

6 percent dividend on their preferred stock, and the remaining one paid 8 percent.

The payment of a dividend on stock, in those instances where service is furnished non-members who do not contribute their proper share of the investment, serves as a means by which the non-member pays the member for the use of his capital investment. It also serves this purpose in those cases where members received services out of proportion to their capital investment. When the non-members are required to contribute a certain amount of capital in the form of capital contributions¹, or are issued capital stock in lieu of patronage refunds, the payment of stock dividends appear unnecessary other than as a means of raising the original capital or for additional capital for expansion.

None of the associations included in study had provisions for the retirement of stock. This is one of the more obvious weaknesses of the associations' capital structure. It is entirely possible for the non-participating members to become

¹Capital contributions—a sum of money withheld from patronage refund for capital purposes. Book credits are given to the individual patron as evidence of ownership. These credits have first claim on all assets in event of liquidation.

Table 2. Number of cooperative gins issuing common and preferred stock of indicated par value, Mississippi, 1948-49 season.

Par value (dollars)	Number of gins issuing common stock		Number of gins issuing preferred stock	
	Delta	Upland	Delta	Upland
1.00 ..	3	1	--	--
5.00 ..	1	1	--	1
10.00 ..	17	5	11	3
20.00 ..	1	--	--	--
25.00 ..	--	--	7	4
50.00 ..	1	--	2	--
100.00 ..	4	--	7	--
No common ..	6	--	6	--
No preferred ..	--	--	--	--
No par ..	1	1	1	--
Total ..	34	8	34	8

Table 3. Number and percentage of cooperative gins authorizing indicated dividends for common and preferred stock, Mississippi, 1948.

Maximum dividend	Common stock				Preferred stock			
	Delta		Upland		Delta		Upland	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Six percent	1	3	--	--	7	24	7	88
Eight percent	6	21	--	--	21	76	1	12
No dividend	21	76	8	100	--	--	--	--
Total	28	100	8	100	28	100	8	100

strong enough to divorce management from the association, and to divert emphasis from service to the members to profit for the associations, thereby insuring continued payment of dividends to themselves. In the absence of a definite stock rotation plan, the member who withdraws from the association has no guarantee as to when the investment that he has in the association will be forthcoming. It is possible, in the event the association is faced with a period of economic instability, that the non-participating members may not receive either their investment or dividend on this investment for a number of years.

From the member's point of view, the absence of a definite stock rotation plan may burden him with needless dividend expense. This results from the failure of stock held by the non-participating mem-

ber to revert back to the association at the time of his withdrawal. A five-or-ten-year stock rotation plan would eliminate most of these inequities.

In one association common stock was owned by non-producers and in 5 association preferred stock was owned by non-producers. Several explanations were given, but the one most often expressed was the failure to provide for compulsory retirement of stock in the by-laws of the association. It was quite evident from the interviews that little emphasis was placed upon the retirement of stock.

Requirements to Become Stockholders or Members

The requirements for membership were liberal in all cases. The only capital requirement was the purchase of one share of common stock. No association placed

Table 4. Number and percent of cooperative gins having indicated number of members, Mississippi, 1948.

Number of common stock-holders or members	Delta		Upland	
	Number	Percent	Number	Percent
10-29	15	44	--	--
30-49	10	29	--	--
50-69	6	18	--	--
70-89	--	--	--	--
90-109	--	--	--	--
110-129	--	--	--	--
130-149	1	3	--	--
150-169	1	3	--	--
170-189	--	--	1	12
190-209	--	--	2	25
210-229	--	--	--	--
229 and above	1	3	5	63
Total	34	100	8	100

Table 5. Number and percent of cooperative gins having indicated portions of membership as patrons, Mississippi, 1948-49 season.

Percent patrons of gin were of total ownership	Delta		Upland	
	Number	Percent	Number	Percent
Less than 24	—	—	—	—
25 to 49	2	6	—	—
50 to 74	5	15	1	12
75 to 99	4	12	3	38
100 —	23	67	4	50
Total	34	100	8	100

any limitation on size of business of a producer. All of the associations stated that a 10-bale producer would be accepted as quickly as a 100-bale producer. Without exception, the associations required that the member hold title to the cotton. No association placed any limitations on the race of its members. The majority of associations formed by white producers had few, if any, colored members. This may be partially explained by the limitation mentioned above, i. e., that a member must hold title to his product. The one association included in the study that was formed by Negroes had no white members.

All associations paid a portion of their patronage dividends in cash and, therefore, it was permissible for non-members to pay for the share of common stock required for membership with patronage refunds. Membership was granted at the close of the fiscal period. This method was used widely and made it relatively

easy for the individual patron to meet the membership requirement. Only two gins included in the study had systems whereby all patrons were in the process of becoming members of the association. In these two cases the stock was issued in token of membership without the approval of the patron. It was assumed by the management that those who patronized the gin knew that they would be expected to accept the responsibilities of membership, if they were to receive the ginning service of the association.

To become a member in 24 of the associations it was necessary to obtain the approval of the board of directors. In the remaining associations, although approval by the board was not required, the members of the board were informed of the request for membership by the secretary of the association.

It should be pointed out as a desirable practice, that the requirements governing acceptance of new members should be

Table 6. Number and percent of cooperative gins having indicated portions of patrons attending annual meetings, Mississippi, 1948-49 season.

Percent attending meetings	Delta		Upland	
	Number	Percent	Number	Percent
Less than 24	3	9	2	25
25 to 49	2	6	4	50
50 to 74	5	15	1	13
75 to 99	12	35	1	12
100 and over ¹	10	29	—	—
No annual meeting	2	6	—	—
Total	34	100	8	100

¹Additional attendance due to non-member patrons attending meetings.

specifically stated in an association's by-laws. Then no exception should be allowed to the specified requirements.

Only in approximately one-fourth of the associations did the minutes of the board meetings show, by name and date, when the new members were accepted. In the other case the only record was the issuance of stock.

Members

Slightly over 90 percent of the gins in the Delta had less than 70 members or common stockholders. None of the gins in the Upland had less than 170 members (table 4).

There appears to be a very high degree of correlation between location and size of membership. The gins located in the Delta have consistently small membership, while the gins located in the Upland have consistently a very large membership. This was due to differences in size of farm, system of farming, and services performed by the association in the two areas.

Patronage

A little over two-thirds of the total number of gins in the Delta had 100 percent patronage by their total membership during the 1948-49 season. Only 2 gins included in this area had less than one-half of their total membership as patrons (table 5).

Four of the eight gins in the Upland had all members patronizing the association. None of the associations in this area had less than 50 percent of its members using the service offered.

Attendance at Annual Meetings

Approximately 64 percent of the gins in the Delta had over three-fourths of total membership at the annual meetings during the 1948-49 season. Only 12 percent of the associations in the Upland had more than 75 percent of their total membership present at their annual meetings (table 6).

Directors

The number of directors comprising the board in the associations varied from 4 to 12. Approximately 44 percent of the gins in the Delta maintained 4 or 5 members on their boards of directors. Approximately 35 percent of the association in this area had boards comprised of 7 members. The remaining 21 percent of the associations had boards of 8 to 12 members. Fifty percent of the gins located in the Upland had boards of 7 members and the remaining associations had boards of 9 members (table 7). All except one of the associations in the Delta elected directors each year, and they could be re-elected by members. Sixty-three percent of the associations in the Upland did not specify how often elections were to be held. The

Table 7. Number and percent of cooperative gins having indicated number of directors, Mississippi, 1948.

Number of directors	Delta		Upland	
	Number	Percent	Number	Percent
4	1	3	--	--
5	14	41	--	--
6	--	--	--	--
7	12	35	4	50
8	2	6	--	--
9	3	9	4	50
10	1	3	--	--
12	1	3	--	--
Total	34	100	8	100

Table 8. Number and percent of cooperative gins electing directors at indicated frequencies, Mississippi, 1948.

Frequency of election of directors	Delta		Upland	
	Number	Percent	Number	Percent
Each year	33	97	3	37
Staggered ¹	1	3	--	--
No definite period	--	--	5	63
Total	34	100	8	100

¹A part of the directors are elected for varying time periods so that the Board may always have experienced directors.

remaining 37 percent within this area elected directors each year (table 8).

Approximately 80 percent of the gins in the Delta and 50 percent within the Upland area held from 1 to 5 formal directors' meeting during the year of 1948 (table 9). The remaining associations included within this study held from 6 to 20 formal directors' meetings during this period.

These regular meetings were supplemented with informal conferences held throughout the year. All directors and managers were free to call the entire board at any time. From the discussion at the time of interview, it was quite evident that a very close working relationship existed among the directors of most of the gins. This was due, at least in part, to the length of service that many had given (table 10).

Managers

Over 50 percent of the gin managers employed by the associations in the Delta had less than 5 years experience as managers of cotton gins, and almost 50 per-

cent had been with the association less than 5 years (table 11). Seventy-five percent of the managers employed by the associations in the Upland had less than 10 years experience, and approximately 65 percent of these had less than 5 years previous experience.

Over 25 percent of the associations in the Delta paid a managerial salary between \$1,000 and \$2,000. Only 1 association in this area paid over \$4,000 per year, and 4 of the associates paid less than \$400 per year. Two of the eight associations in the Upland paid their managers less than \$1,000 per year, and the remaining six did not disclose the salary paid (table 12).

In several cases the president or another officer was assigned the duty of managing the gin with little or no remuneration. The position of manager of a cooperative gin, as in other business concerns, is one of vital importance. This fact should be made clear to the associations and an effort should be made to impress upon the members of the association that adequate

Table 9. Number and percent of cooperative gins having indicated numbers of directors' meetings, Mississippi, 1948-49 season.

Number of meetings	Delta		Upland	
	Number	Percent	Number	Percent
1-5	28	82	4	50
6-10	3	9	3	38
11-15	2	6	1	12
16-20	1	3	--	--
Total	34	100	8	100

Table 11. Number of managers of cooperative gins having indicated length of experience at present plant and previous experience as gin managers, Mississippi, 1948-49 season.

Length of experience, years	Managers' experience at present gin				Managers having previous experience			
	Delta		Upland		Delta		Upland	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0-5	22	65	2	25	14	41	5	64
6-10	8	23	4	50	4	12	1	12
11-15	3	9	2	25	2	6	--	--
16-20	1	3	--	--	--	--	1	12
20 and over	--	--	--	--	14	41	1	12
Total	34	100	8	100	34	100	8	100

funds spent to obtain the services of a competent person to fill this position would be one of the best investment that the association could make.

Auditing and Accountants

A majority of the associations retained the services of a full-time bookkeeper and in addition obtained the services of a reputable auditing firm. Several associations hired the auditing firm to perform

all of the association's bookkeeping. In these instances only a skeleton set of records was maintained at the gin plant. The auditing firms served all of the associations in an advisory capacity and were available to the associations at all important meetings of the board of directors or, if requested, at annual meetings. It was evident that the associations made use of the best auditing service available.

Marketing Practices Of Cooperative Gins

The gins included in this study received the majority of their income from the charges for ginning, sale of bagging and ties, purchase and sale of cottonseed and other purchasing activities. The other purchasing activities were confined pri-

marily to those gins located in the Upland area.

The methods followed in levying charges and practices followed in the purchase and sale of cottonseed and of farm supplies are presented in the following discussion.

Table 12. Number and percent of cooperative gins paying indicated salaries to gin managers, Mississippi, 1948-49 season.

Salary (dollars)	Delta		Upland	
	Number	Percent ¹	Number	Percent ¹
0-499	4	17	--	--
500-999	2	8	2	100
1000-1499	6	25	--	--
1500-1999	5	21	--	--
2500-2999	4	17	--	--
3000-3499	--	--	--	--
3500-3999	2	8	--	--
4000 & above	1	4	--	--
Total reporting	24	100	2	100
No data	10	--	6	--
Total	34	--	8	--

¹Based on the number actually reporting the salary.

Table 10. Number and percent of cooperative gins having major officers with indicated length of service, Mississippi, 1948-49 season.

Length of service years	Delta						Upland					
	President		Vice President		Secretary		President		Vice President		Secretary	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1-4	11	32	14	42	14	42	2	25	4	50	3	38
5-9	7	21	8	23	11	32	5	62	3	38	2	25
10-14	16	47	11	32	8	23	1	13	1	12	3	37
15-19	-	-	1	3	-	-	-	-	-	-	-	-
20-24	-	-	-	-	-	-	-	-	-	-	-	-
25 & above	-	-	-	-	1	3	-	-	-	-	-	-
Total	34	100	34	100	34	100	8	100	8	100	8	100

Ginning Charges

The charges made for ginning varied from 25 to 75 cents per hundred pounds of seed cotton in the Delta, and from 25 to 55 cents per hundred in the Upland, for the two years studied (table 14). This variation in range of charges between the 2 areas may be explained by the fact that none of the gins in the Upland offered rates covering snapped or mechanically-harvested cotton.

Approximately 90 percent of the gins located in the Delta made only one flat charge in the 1947-48 season regardless of the method of harvest (table 13). Only 4 of the gins included in this study for this season made additional charges for cotton harvested by methods other than hand-picked. Three of these 4 gins made an additional charge for snapped cotton and one made an extra charge for mechanically-harvested cotton. The proportion of the gins making only one flat ginning charge remained approximately the same in the 1948-49 season, except that the number of gins that made an additional charge for mechanically-harvested cotton increased to three. According to information gathered at the time of interview with the gin managers, this change was due primarily to the fact that cotton harvested by mechanical pickers has a tendency to "rope" and become quite difficult to gin. Many of the ginners expressed the belief that in time this technological problem would be solved and thereby eliminate the differential in the gin charge.

No ginning charge differential due to method of harvest was found in the Upland because all of the cotton grown in this area was harvested by hand.

Bagging and Ties

Charges made for bagging and ties varied from \$2.50 to \$4.00 per bale in the Delta, and from \$2.50 to \$3.25 in the Upland for the season of 1947-48 (table 15). For the 1948-49 season, while the range

Table 13. Number of Cooperative gins making indicated variations in ginning charges on basis of method of harvesting, Mississippi, 1947-48, 1948-49 seasons.

Item	1947				1948			
	Delta		Upland		Delta		Upland	
One charge only	29	8	27	8	27	4	3	8
Extra charge for snapped	3	--	4	--	3	--	--	--
Extra charge for machine harvested.....	1	--	3	--	3	--	--	--
Total	33	8	34	8	34	--	--	8

remained approximately the same, 50 percent of the gins in the Delta charged \$3.25 or more.

The tendency to increase the average charge was also evident in the Upland area.

Purchase of Seed

All of the associations included in this study purchased the cottonseed from the patrons.

Only 8 of the associations had mechanical seed scales. All of these associations were located within the Delta. The other 34 associations in both areas used a dockage formula to determine the weight of the cottonseed contained in each bale of cotton. The seed cotton was weighed prior to ginning. After ginning, the bale of lint was weighed and subtracted from the weight of the seed cotton. An ad-

ditional 30 to 50 pounds was deducted as an allowance for loss in weight due to trash embodied in the seed cotton. This dockage figure was increased throughout the ginning season as the cotton became dirtier due to weather conditions.

The majority of the associations, both in the Delta and the Upland, based the day-to-day price paid for seed on an average price quoted by the oil mill to which they sold the seed. The majority of the gins did not operate on a fixed spread. Instead they depended upon the premiums paid by the mills for grade and moisture content and the gain in weight of the seed, for their margins on their seed operations. Three, or about 10 percent of the associations, followed a price set by the community in their seed-purchasing operations. This frequently necessitates heavy

Table 14. Number of Cooperative gins making indicated charges for ginning, Mississippi, 1947-48, 1948-49 seasons.

Dollars per 100 lbs. of seed cotton	Delta						Upland					
	Hand picked		Snapped		Machine harvested		Hand picked		Snapped		Machine harvested	
	1947	1948	1947	1948	1947	1948	1947	1948	1947	1948	1947	1948
	Number of gins											
.25	2	2	2	2	--	--	2	2	--	--	--	--
.30	1	1	1	--	--	--	--	--	--	--	--	--
.35	1	1	1	1	--	--	2	1	--	--	--	--
.40	6	6	5	--	--	--	4	4	--	--	--	--
.45	8	8	6	4	1	1	--	--	--	--	--	--
.50	15	15	13	22	4	7	--	1	--	--	--	--
.55	--	--	--	--	--	--	--	--	--	--	--	--
.60	--	--	--	1	--	2	--	--	--	--	--	--
.65	--	--	1	1	1	1	--	--	--	--	--	--
.70	--	--	--	--	--	--	--	--	--	--	--	--
.75	--	--	2	2	--	1	--	--	--	--	--	--
Total	33	34	31	33	6	12	8	8	--	--	--	--

dockage in order for the gin to break even on its seed operations.

Sale of Seed

In the Delta, during the 1948-49 crop season, 18 percent of the associations used commercial oil mills entirely as an outlet for their seed, 21 percent of the associations used cooperative oil mills entirely and 29 percent used both cooperative and commercial oil mills. Only 9 percent of the associations sold to manufacturing organizations. The remaining 23 percent sold to terminal oil mills (table 16).

In the Upland, for this period, only one of the eight associations sold to a cooperative oil mill. The remaining seven sold exclusively to commercial oil mills. This may be attributed to the lack of cooperative oil mills in the Upland area.

Those gins within both areas that sold to cooperative oil mills received 80 percent of the sales price upon delivery and the remaining 20 percent at the close of the fiscal year. In instances where the mill's fiscal year did not coincide with the gin's, the gin held the oil mill refund and distributed it the following year to the members who owned the seed.

Sixty-five percent of the associations in the Delta accepted the prevailing price for seed (table 17). Twenty-seven percent negotiated for a price either before purchase of lots of seed or after buying large quantities of seed, and only 8 percent op-

erated on a fixed spread of 3 to 5 dollars per ton.

In the Upland for this same period, 50 percent of the associations sold at the prevailing price, and 37 percent negotiated price before purchase of seed. Only one association within this area operated on a fixed spread.

In those cases where price was negotiated, the cooperative management was acting on a speculative basis. It should be emphasized that this is very dangerous business and the cooperative association should be discouraged from entering into such practices.

Other Purchasing Activities

The 8 Upland gins included in this study maintained active purchasing associations and in most instances the gin-

Table 15 Number of cooperative gins making indicated charges for bagging and ties, Mississippi, 1947-48, 1948-49 seasons.

Charges, dollars per bale	Delta		Upland ¹	
	1947	1948	1947	1948
	Number of gins			
2.50	10	2	2	--
2.75	8	5	2	1
3.00	10	10	2	4
3.25	1	2	1	2
3.50	3	10	--	--
3.75	--	3	--	--
4.00	1	2	--	--
Total	33	34	7	7

¹One gin included in the Upland area made no separate charge for bagging and ties.

Table 16. Number and percent of cooperative gins having indicated sales outlets for cotton seed, Mississippi, 1948-49 season.

Sales outlets ¹	Delta		Upland	
	Number	Percent	Number	Percent
Cooperative oil mills	7	21	1	12
Commercial oil mills	6	18	7	87
Terminal oil mills	8	23	--	--
Manufacturing organizations	3	9	--	--
Cooperative and commercial oil mills	10	29	--	--
Total ..	34	100	8	100

¹Manufacturing organizations refer to such concerns as Swift and Company and wholesale grocery firms.

Table 17. Number and percent of Cooperative gins using indicated methods of negotiating price of seed at time of sale, Mississippi, 1948-49 season.

Method of negotiating price	Delta		Upland	
	Number	Percent	Number	Percent
Prevailing price	22	65	4	50
Negotiate price after collection of seed	5	15	3	37
Negotiate price prior to collection of seed	4	12	..	..
Fixed spread	3	8	1	13
Total	34	100	8	100

ing operation had become a less important activity as far as scope and operation was concerned.

This shift in importance is easily explained when one considers the importance of volume in the operation of a cotton gin. In all cases, the gins with the active purchasing departments were located in the Upland, an area of relatively few large cotton producers and a very low volume per gin stand. This was the major factor in the development of purchasing associations which have enabled the cooperative gins of this section to reduce the charge for ginning. Purchasing activities have increased in this area in per-

formance of services to farmers in the last few years. The 3 major products handled by these associations were cottonseed meal, cottonseed hull, and fertilizer. Two of the associations operated feed mills in addition to their other operations and one association had a large fertilizer mixing plant.

Later discussion will show that these Upland associations have been very successful in the development of cooperative farm supply agencies. This type of operation offers definite possibilities for lowering the cost of ginning operations in the Delta area and opportunity for increased services to members.

Financial Status Of Mississippi Cooperative Gins

Capital Investment

Advance in technology of harvesting and ginning cotton increased the amount of capital required for the installation and operation of a cotton gin. At the present time the capital requirements are extremely large in contrast to gin investments of a decade ago. This is quite evident from the fact that the average gin in the Delta included in this study, reported total assets of \$64,000 at the close of the 1948-49 crop season, an increase of about \$7,000 over the 1947-48 season (table 18 and 19),

The average total assets controlled by the gins located in the Delta ranged from \$43,000 for the average 3-stand gin to \$109,000 for the average gin with 6

stands or more, during the 1948-49 season, and from \$35,000 to \$93,000 for these gins during the preceding season. This relationship existed throughout the entire breakdown of assets with the exception of current assets. Here the range narrowed with the 3-stand gins holding almost one-half as many current assets as the gins with 6 or more stands,

At the close of the 1948-49 season, the average gin in the Upland controlled total assets amounting to \$93,000, an increase of \$19,000 over the 1947-48 season. In the Upland, the total assets ranged from \$50,000 for the gins with 4 stands or less to \$165,000 for the gins with 5 stands and over, during the 1948-49 season, and from \$47,000 to \$119,000 during the pre-

Table 18. 1947-48 balance sheet, cooperative gins, Mississippi

	DELTA					UPLAND			
	All gins	3 stands	4 stands	5 stands	6 stands or more	All gins	4 stands or less	5 stands or more	
	32	3	20	6		8	5	3	
	\$	\$	\$	\$	\$	\$	\$	\$	
	Average per gin								
Current assets									
Cash	10,741.95	9,784.66	9,305.29	14,249.92	13,381.21	10,448.59	9,489.94	12,046.35	
Accounts receivable patrons	638.66	445.88	503.15	1,123.10	734.03	3,051.71	3,183.36	2,832.28	
Accounts receivable other	8,456.38	3,170.17	9,138.39	6,022.93	12,661.18	3,050.48	3,504.61	2,293.59	
Notes receivable	52.97	.....	29.27	193.78	.....	1,776.57	300.00	4,237.53
Other assets	41.19	.....	64.81	10.51	.....	99.37	158.98	.....
Inventory	2,528.95	897.24	1,905.60	4,828.06	3,420.83	20,307.60	7,683.13	41,348.40	
Total current assets	22,460.10	14,297.95	20,946.51	26,427.30	30,197.25	38,734.32	24,320.02	62,758.15	
Fixed assets:									
Cost of fixed assets	44,426.93	32,461.46	36,677.59	49,695.39	84,241.85	51,322.46	33,004.93	81,850.25	
Res. for depreciation	12,281.70	12,843.18	9,185.82	12,746.60	26,641.79	21,954.77	14,014.86	35,187.59	
Total fixed assets (book value)	32,145.23	19,618.28	27,491.77	36,948.79	57,600.06	29,367.69	18,990.07	46,662.66	
Other assets:									
Prepaid expense	418.09	156.15	475.02	366.75	406.89	466.96	469.85	462.15	
Organization expense	56.18	29.69	49.68	93.53	52.50	46.65	1.50	121.91	
Stock in other organizations	2,236.48	665.00	2,300.29	895.53	5,107.43	2,895.67	3,386.29	2,077.95	
Investments, gov't bonds, etc.	.....	.....	.....	.....	.....	2,500.01	.....	6,666.60
Total other assets	2,710.75	850.84	2,824.99	1,355.81	5,566.82	5,909.30	3,857.64	9,328.61	
Total assets	57,316.08	34,767.07	51,263.27	64,731.90	93,364.13	74,011.31	47,167.73	118,749.42	

Table 19. 1948-49 balance sheet, cooperative gins, Mississippi.

	DELTA					UPLAND		
	All gins	3 stands	4 stands	5 stands	6 stands or more	All gins	4 stands or less	5 stands or more
	34	3	20	6	4	8	5	3
	\$	\$	\$	\$	Average per gin	\$	\$	\$
ASSETS								
Current assets:								
Cash	12,232.58	12,352.99	6,633.29	26,169.25	19,202.12	24,154.49	10,502.91	46,906.65
Accounts receivable patrons	1,144.23	127.66	585.05	2,916.33	2,298.38	5,183.28	2,365.89	9,878.84
Accounts receivable other	11,582.63	4,042.59	12,707.04	10,905.04	14,516.52	6,106.07	6,290.03	5,799.42
Notes receivable	47.87	.....	.....	21.28	375.00	7,598.98	8,805.57	5,387.93
Inventory	1,447.64	500.44	1,342.90	1,331.79	3,092.22	16,271.86	.....	43,391.21
Total current assets	26,454.95	17,023.68	21,268.28	41,343.69	39,484.24	59,314.68	27,964.40	111,564.05
Fixed assets:								
Cost of fixed assets	48,778.59	35,946.86	40,319.05	55,471.37	93,865.31	52,198.52	33,643.64	83,122.50
Res. for depreciation	15,037.31	11,563.79	11,781.90	17,314.54	31,371.08	25,228.44	16,709.72	39,425.91
Total fixed assets (book value)	33,741.28	24,383.07	28,537.15	38,156.83	62,494.23	26,970.08	16,933.92	43,696.59
Other assets:								
Prepaid expense	758.65	887.54	779.16	459.28	976.25	645.69	726.06	511.72
Organization expense	56.76	100.79	48.87	57.59	51.26	41.96	.....	111.90
Stock in other organizations	3,435.21	1,233.16	3,237.33	3,633.29	6,329.34	4,093.57	4,974.56	2,625.20
Investments, gov't bonds, etc. ....	.....	.....	.....	.....	.....	2,500.00	.....	6,666.61
Total other assets	4,250.62	2,221.49	4,065.36	4,149.96	7,356.85	7,281.22	5,700.62	9,915.43
Total assets	64,446.85	43,628.24	53,870.79	83,650.48	109,335.32	93,565.98	50,598.94	165,176.07

ceding season. A large proportion of these assets represented investment in equipment and inventories connected with the purchase and sales activities of the gins located within this area. With the large reduction in cotton acreage in the Upland area of this state, prior to World War II, it seems only logical for the gins located in this area to shift to other business activities. At the present time, the volume per gin-stand within this area is too low for efficient operation and the gins remain active more as a service to the patrons of the associations than as a business activity.

Current Assets

Current assets, include cash, accounts and notes receivable, both of patrons and others, and inventories. This item amounted to approximately 40 percent of the total assets held by the associations in the Delta, and approximately 60 percent in the Upland, during both seasons included in this study.

The cash accounts of the various gins were comprised principally of patronage and stock dividends that were received from oil mills too late to be distributed during the current accounting period. Also, patronage and stock dividends had not been paid in full during the current fiscal year.

Accounts receivable, which were made up of advance to patrons, showed an increase in both areas in the season 1948-49 over 1947-48. Although they were not of dangerous proportion, the trend is highly undesirable and should be watched closely by the management of the associations.

Gins in the Upland showed a substantial increase in notes receivable. This may be explained partially by the fact that all of these associations maintained active purchasing associations in conjunction with the gin. This also explains the substantial variations in the inventories held by the gins within the two areas.

Fixed Assets

From 50 to 55 percent of the total assets held by the gins in the Delta at the close of the 1947-48 and 1948-49 seasons were in fixed assets, consisting of land, buildings, machinery, and equipment. Fixed assets accounted for almost 30 percent of the total assets held by the gins in the Upland.

The fact that fixed assets constituted such a large part of the total assets held by the associations located in the Delta is easily explained when one considers that almost three-fourths of these gins were built or completely overhauled within the past ten years and almost one-half were renovated during the high cost war-time period. A large part of the increase investment in fixed assets has been the installation of cleaner extractors, driers and lint flue cleaners.

Other Assets

Other assets, consisting of prepaid expenses, stock in other organizations, and investments, comprised the remainder of the assets held by the gins. In all cases, this account was relatively small.

Liabilities

The item for total liabilities represents the entire indebtedness of the associations. Gins in the Delta had total liabilities averaging approximately \$25,000 during each of the seasons 1947-48 and 1948-49. At the end of the 1948-49 crop season, this item varied from an average of \$18,000 for the 3-stand gins to \$44,000 for the gins with 5 stands. The range in the Delta during the 1947-48 season was from an average of \$14,000 for 3-stand gins to an average of \$35,000 for 5-stand gins.

Average liabilities for all gins in the Upland were \$33,000 at the end of the 1948-49 season, an increase of \$18,000 over the previous season. During the 1948-49 season the average total liabilities for the smaller gins in the Upland were \$29,-

000. This compared to an average of \$40,000 for the gins with 5 stands or more and represented an increase over the previous season, when the average total liabilities for both groups were approximately \$25,000. Here, again, it should be noted that the gins in the Upland are primarily purchasing associations with the ginning operations constituting a minor portion of the total business operations.

Current Liabilities

Current liabilities, consisting of accounts payable, notes payable, and accrued expenses accounted for approximately three-fourths of the total liabilities of all gins in the Delta. Gins in the Delta held average current liabilities totaling \$19,000 at the end of the 1948-49 crop season. These ranged from \$13,000 for the 3-stand gins to \$34,000 for the gins with 5 stands. It is interesting to note that within this area the smaller and the larger gins held relatively low current liabilities. Current liabilities of the 3-stand and 5-stand gins within the Delta increased between 1947-48 and 1948-49, while an almost equal proportionate decrease occurred in this account for the 4- and 6-stand gins. Although total current liabilities were slightly less, or \$17,000 for all gins in this area during 1947-48, the same relationship among the groups of gins existed.

At the close of the 1948-49 crop season, the average gin within the Upland area held current liabilities totaling \$29,000. This was approximately 80 percent of the total liabilities. The average ranged from \$26,000 for the gins with 4 stands or less to \$33,000 for those gins with 5 stands or more within this area. This represented an increase over the 1947-48 season of approximately 20 percent for the small gins and of almost 50 percent for the large gins.

Accounts payable, the major portion of the total current liabilities accounts, were

patronage refunds that had not been distributed to the members. Although the associations had approximately a 1 to 1 relationship between current assets and current liabilities, the situation was not as bad as it may appear since the owners of the associations were the holders of the major portion of the current liabilities.

Long-Term Liabilities

Long-term liabilities, consisting of accounts such as mortgages payable and notes payable constituted the remaining one-fourth of the total liabilities of the gins in the Delta. The average size of this account for these gins was almost \$7,000 at the close of the 1948-49 season, and slightly over \$7,000 for the previous season. In no case did the long-term liabilities constitute more than 30 percent of the total liabilities during the 1948-49 season, or more than 35 percent during the 1947-48 season. This shows a favorable trend in view of the fact that approximately 75 percent of the association gins were built new or completely renovated since 1941. The relatively sound position occupied by the associations at the present time may be attributed to the fact that for the past few years the gin operators have been experiencing a period of prosperity. The price of cottonseed, the major of source of savings to the associations, has been on a continuous incline for the past few years. The peak in the price of seed was in the latter part of the 1947-48 harvest season, but because of increased volume in 1948-49, the total savings that year were larger than in the previous year.

At the close of the 1948-49 season the average Upland gin had long-term liabilities amounting to about \$4,000, a decrease of approximately \$1,000 from the 1947-48 season. These figures ranged from an average of about \$3,000 for the small gins to \$6,000 for the large gins, for the 1948-49 season, and varied from an average of about \$3,000 to slightly over \$7,000 dur-

ing the previous season. All of this was held in the form of mortgages payable.

Members' Equity

Membership equity is represented by the ratio between total assets and the net worth accounts of the patrons, reserves, and capital stock. The relationship between patron's equity and total assets is a good indication of the interest and support given to the associations by those who use them.

At the close of the 1947-48 crop season, in approximately 35 percent of the associations in the Delta, patron's equities were equal to less than 40 percent of their total assets. In approximately 15 percent of the associations equities equaled less than 55 percent, and in another 35 percent less than 70 percent. The remaining 15 percent had equities equal to over 70 percent of the total assets controlled by the associations (table 20).

In the same year the patrons in one of the eight associations located in the Upland had equities equal to less than 40 percent of their total assets. The patrons of 3 of the associations had equities equal to less than 55 percent of the total assets.

Patrons of 2 of the associations had equities of from 55 to 70 percent, while patrons of 2 of the associations had equities of more than 70 percent.

This picture changed considerably by the close of the following season, when only 15 percent of the Delta associations remained in the group with less than 40.0 percent, or a decrease of 18 percent from the 1947-48 season. Twenty-seven percent of the associations fell within the 40 to 55 percent bracket, an increase of 12 percent over the preceding year. The same proportion of associations in both years was found in the group that had equities equal to 55 to 70 percent of their total assets. In 27 percent of the associations, at the end of the season, patrons had equities equal to over 70 percent of their total assets, an increase of 12 percent over the preceding year.

In the Upland, only two associations shifted position. In one association, the members' equity fell to less than 40 percent, and one of the associations moved up to 70 percent and over. In the main, the percentage of total patrons' equities increased in the latter period. This movement was due primarily to the fact that

Table 20. Number of cooperative gins of indicated size having indicated equities in total assets, Mississippi, 1947-48 and 1948-49 seasons.

Size of gin	Percentage of patron's equity							
	0-39.9		40.0-54.9		55.0-69.9		70.0-over	
	1947	1948	1947	1948	1947	1948	1947	1948
Delta								
No of Stands:	Number of gins							
3	1	2	--	--	2	1	--	1
4	6	1	5	7	6	6	3	6
5	4	2	--	2	1	2	1	--
6 or over	--	--	--	--	2	2	2	2
Total	11	5	5	9	11	11	6	9
Upland								
No of Stands:								
4 or less	1	2	2	2	1	1	1	--
5 or more	--	--	--	--	1	--	1	2
Total	1	2	3	3	2	1	2	2

a very large cotton crop was harvested during the 1948-49 season, weather conditions were excellent, and prices of seed remained relatively high. The primary

factors were the substantial increase in volume per gin stand with lower ginning cost per bale resulting and the increase in volume of cottonseed handled.

Income And Cost Of Operation

Sources of Income

Associations located in the Delta obtain the major portion of their income from ginning operations, including revenue from sale of bagging and ties and the purchase and sale of seed. Associations located in the Upland have purchasing activities, in addition to the above sources, that are operated in conjunction with the gins.

Gross Revenue From Gins

Revenue from gins accounted for 69 percent of the average total gross income of all gins in the Delta during the 1948-49 season. The average income from this source for all gins was approximately \$36,000, and varied from about \$26,000 for the average 3-stand gin to about \$63,000 for the gins with 6 or more stands. This was an average increase for these two groups of approximately 100 percent over the previous season (tables 21 and 22). This increase may be explained by the fact that the volume per gin within the area increased in approximately the same proportion, and that charges for ginning were also increased. It may be noted however, that the average revenue from gins for all groups in the Delta made up only about 53 percent of average total gross revenue during the 1947-48 season, reflecting the extremely high income from seed during 1947-48 as compared to the following season.

In 1948-49 the average total gross revenue from gins for all groups in the Upland was about \$16,000, or about 65 percent of the total. In the previous season revenue from gins, averaging about \$8,

000, accounted for about 60 percent of the total.

There was only a slightly higher average gross revenue for the group of large gins than for the small gins for the 1948-49 season. The relationship between the two seasons was approximately the same as that which existed within the Delta.

Gross Revenue From Seed

In the 1948-49 season the average total revenue from seed for all gins in the Delta was about \$16,000, while in the Upland, it was slightly under \$9,000. In the previous season income from this source averaged about \$18,000 in the Delta and about \$6,000 in the Upland.

The revenue obtained from this source, by the several associations, presented a decidedly different picture than did the revenue from the ginning operations. Even with the unusually large increase in volume per gin from 1947-48 to 1948-49, the average revenue from cottonseed increased 50 percent in the Upland and decreased about 10 percent in the Delta. In the latter area the decrease in revenue from this source was approximately 20 percent. This decrease in income may be explained by the fact that during the 1947-48 season, when the volume of cottonseed available was quite low, the price of cottonseed was extremely high. In the following season, with a much larger volume, the price of cottonseed declined steadily and, at the close of the season, the average price was approximately 50 percent below the average received by the associations the previous season. Consequently, a decline in revenue from this

Table 21. Average revenue from various operations, cooperative gins, State of Mississippi, 1947-48 season.

Size of gin	No. of gins	Av. gross revenue from gin ¹		Av. gross revenue from seed ²		Av. total gross revenue		Av. total expenses ³		Av. net revenue from gin and seed		Av. net purchases ⁴ revenue from		Av. total net revenue	
		Per gin	Per bale	Per gin	Per bale	Per gin	Per bale	Per gin	Per bale	Per gin	Per bale	Per gin	Per bale	Per gin	Per bale
3 stands	3	1628	11602.78	7.13	9990.61	6.13	21593.39	13.26	8400.43	5.16	13192.96	8.10	13192.96	8.10	8.10
4 stands	20	2666	19089.30	7.16	14619.48	5.48	33708.78	12.64	14774.24	5.54	18934.54	7.10	18934.54	7.82	7.82
5 stands	6	2749	21042.91	7.66	17953.70	6.53	38996.61	14.19	17627.08	6.41	21369.53	7.78	21369.51	7.78	7.78
6 stands	4	4781	32866.52	6.87	38449.52	8.04	71316.04	14.91	27625.37	5.78	43690.67	9.13	43690.67	9.13	9.13
Average all	33	2843	20433.93	7.19	17693.38	6.22	38127.31	13.41	16271.21	5.72	21856.10	7.69	21856.10	7.69	7.69
Delta gins															
Upland															
4 stands															
or less															
5 stands	5	1612	9117.42	5.66	7253.12	4.50	16370.54	10.16	14094.25	8.75	2276.29	1.41	9906.65	6.15	12182.94
or more															
Average all	3	1637	7688.38	4.70	4169.85	2.55	11858.23	7.25	12185.94	7.45	-327.71	-20	27559.06	16.84	27231.35
Upland gins	8	1621	8581.54	5.29	6096.89	3.76	14678.43	9.05	13378.63	8.25	1299.80	.80	16526.30	10.20	17826.10

¹Includes returns from ginning plus the difference in the sales and purchases of bagging and ties.

²Difference in the sales and purchases of seed adjusted for gains or losses in weight of seed and transportation of seed.

³Includes both operating and non-operating expenses.

⁴Net Purchase Revenue is the net gains from purchasing activities in conjunction with gins in Upland area.

source was experienced by all gins in the Delta except those in the 5-stand group. This resulted when several of the gin managers in the other size group withheld seed in hopes of a raise in price during the latter part of the harvest season. This is an outstanding example of the danger involved when a cooperative, or any other organization of this type, attempts to speculate with the products of the members.

Net Revenue From Gins

Net revenue from the gins, consisting of the combined net revenue from both ginning operations and seed operations, averaged approximately \$26,000 for gins in the Delta for the 1948-49 season, with the variation from slightly over \$17,000 for the 3-stand gins to approximately \$48,000 for the gins with 6 stands or more. During the previous season the average was approximately \$22,000, and the variation from slightly over \$13,000 for gins with 3 stands to approximately \$44,000 for gins with 6 stands or more.

In the Upland, during the 1948-49 season, the average net revenue from this source for all gins was approximately \$7,000, compared with slightly over \$1,000 in the previous season. This sharp increase in revenue may be explained by the fact that the volume per gin-stand increased by approximately 100 percent for the low-volume groups. This enabled the gins within these groups to utilize their resources much more efficiently.

Net Revenue From Purchasing Activities

The operation of purchasing agencies was confined entirely to the Upland. This was due primarily to the fact that the shift away from cotton production before and during World War II had reduced the supply of cotton so much that efficient operation of gins alone was difficult. The gins within this area had to enter other fields or close down completely. This resulted in many associations turning to

purchasing activities. The income from this source in the 1948-49 season averaged about \$10,000 for the gins with 4 stands or less, and over \$40,000 for the gins with 5 or more stands (table 21). This represented over three-fourths of the total income of these associations. In previous seasons, income from purchasing operations of the small gins accounted for about 80 percent of the total. For the larger group a proportion of the income from this source was used to compensate for losses incurred from the ginning operation and, as a result, income from purchasing activities actually exceeded the total net revenue.

Cost Items of Ginning

The expense incurred for labor, fuel, depreciation, repairs, and insurance made up approximately 85 percent of the total cost of ginning for gins in the Delta during the 1947-48 and 1948-49 seasons. The remaining items of cost were taxes, interest, bank charges audit fees, handling, and other miscellaneous expenses.

Labor, the major item of cost, accounted for 37 percent of the cost per bale of ginning in the Delta during both the 1947-48 and the 1948-49 seasons. Fuel costs per bale increased from 12 to 16 percent of the total.

This was also true of repairs which showed an increase from 10 percent of the total cost per bale during the 1947-48 season to 12 percent during the following season. Because of increased volume for the 1948-49 season depreciation dropped from 15 to 12 percent and insurance from 10 to 8 percent over the 1947-48 season (tables 23-24).

The same general relationship between these five cost items existed in the Upland. They made up approximately 75 percent of the total cost of ginning in this area in 1948-49 and 73 percent in 1947-48. A major difference in these items between areas was that the cost of de-

Table 22. Average revenue from various operations, cooperative gins, State of Mississippi, 1948-49 season.

Size of gin	No. of gins	Av. total bales		Av. gross revenue from gin 1		Av. gross revenue from seed 2		Av. total gross revenue		Av. total expenses 3		Av. net revenue from gin and seed		Av. net revenue from purchases 4		Av. total net revenue		
		Per gin	Per bale	Per gin	Per bale	Per gin	Per bale	Per gin	Per bale	Per gin	Per bale	Per gin	Per bale	Per gin	Per bale	Per gin	Per bale	
Dollars																		
3 stands	4	3005	25822.86	8.59	8246.58	2.75	34069.44	11.34	16593.47	5.52	17475.97	5.82	17475.97	5.82	17475.97	5.82	17475.97	
4 stands	20	3992	31099.79	7.79	12562.11	3.15	43661.90	10.90	21973.86	5.50	21688.04	5.44	21688.04	5.44	21688.04	5.44	21688.04	
5 stands	6	4909	39009.39	7.95	21089.10	4.29	60098.40	12.24	29035.65	5.91	31062.84	6.33	31062.84	6.33	31062.84	6.33	31062.84	
6 stands	4	6848	63061.62	9.21	31596.19	4.61	94657.81	13.82	46232.16	6.75	48425.65	7.07	48425.65	7.07	48425.65	7.07	48425.65	
Average all	34	4374	35635.00	8.15	15798.47	3.61	51433.47	11.76	25440.99	5.82	25992.48	5.94	25992.48	5.94	25992.48	5.94	25992.48	
Upland																		
4 stands																		
5 stands	5	2613	15559.44	5.95	8589.15	3.29	24148.59	9.24	18827.86	7.20	5320.73	2.04	10140.21	3.88	15460.94	5.92	15460.94	
or more	3	3008	16104.88	5.35	8622.00	2.87	24726.88	8.22	15678.49	5.21	9048.39	3.01	40808.37	13.56	49856.76	16.57	49856.76	
Average all	8	2761	15763.98	5.71	8601.47	3.11	24365.45	8.82	17646.84	6.39	6718.61	2.43	21640.77	7.84	28359.38	10.27	28359.38	
Upland gins																		

¹Includes returns from ginning plus the difference in the sales and purchases of bagging and ties.

²Difference in the sales and purchases of seed adjusted for gains or losses in weight of seed and transportation of seed.

³Includes both operating and non-operating expenses.

⁴Net Purchase Revenue is the net gains from purchasing activities in conjunction with gins in Upland area.

preciation per bale was higher and accounted for a larger proportion of total costs in the Upland than in the Delta because of the lower volume of cotton ginned.

When the cost of hauling was added to the five major cost items already enumerated, the proportion of total expenses would have been increased to about 85 percent of the total cost of ginning in the Upland. This cost in the case of the small gins was made up of expenses in transporting cottonseed. These gins did not have enough seed volume to pay the oil mills to which they sold to finance the hauling expenses as did the larger gins where the volume of seed was large. In other words, the small gins in the Upland were at a disadvantage when selling their seed due to small volume.

It is in this group of cost items that the greatest economies of operation may be affected. Every effort should be made to utilize the labor force and the fuel supply fully and efficiently and take the necessary precautions to prevent damage to gin machinery. Good management and adequately trained labor have become more and more important with the increase in gin investment, the increase of mechanical harvesting, and the high premium now placed on the grade factor in cotton quality.

Relation of Volume to Cost of Ginning

Volume was one of the major factors in determining the cost per bale of operating a cotton gin. The average cost per bale for gins in the Delta in 1948-49 varied from \$5.20, for those gins with a volume ranging from 950 to 1,049 bales per gin stand, to \$6.82, for those gins with a volume of less than 850 bales per gin stand. One group of gins in this area had a volume of over 1,050 bales per gin stand with a cost per bale of \$5.68, an average of 48 cents higher than the group ginning from 950 to 1,050 bales per stand. This means that during the 1948-49 sea-

son, the additional volume was ginned at increasing costs per bale and that the optimum volume for this season fell between 950 and 1,050 bales per gin stand. The average cost for all gins in the Delta during this period was \$5.82 per bale (table 24).

During the previous season, the cost per bale for gins within the Delta ranged from \$5.21 for the gins with the volume of 750 bales and over per stand to \$7.41, for those gins with a volume of less than 500 bales per stand (table 23). During the season, no gin in this area reached a volume large enough to determine accurately the optimum volume.

The range in total cost between volume groups was considerably greater in 1947-48 than 1948-49. Also, the volume per gin stand was only 65 percent as great. But the average cost per bale for all gins in the Delta was \$5.72 in 1947-48 compared to \$5.82 for the season for 1948-49, or 10 cents per bale lower in the former season. This lower cost per bale was due largely to a considerable lower price for fuel, labor, and repairs. These three cost items combined made up approximately 65 percent of the total cost of ginning a bale of cotton in 1948-49, compared with approximately 59 percent of the total cost in the previous season.

The average fuel cost for gins in the Delta increased from 66 cents per bale in 1947-48 to 92 cents in 1948-49. This is an increase of 26 cents per bale. This marked increase was due to the higher prices for fuel and to the extremely wet harvest season in 1948 compared to a rather ideal harvest season in 1947. This necessitated the use of driers for a large part of the ginning season which resulted in the consumption of a greater amount of fuel. Gin managers estimated, at the time of interview, that the fuel consumed in the operation of driers cost 25 to 30 cents per bale. The second factor that may be associated with an increase in the consump-

Table 23. Effect of volume on cost of ginning cotton, cooperative gins, Mississippi, 1947-47 season.

Gins grouped by volume per gin stand	No. of gins	Av. total bales per gin	Av. bales per gin stand	Fuel	Labor	Repairs	Hauling	Interest and bank charges	Insurance	Taxes	Depreciation	Other expenses	Total expenses	Gross revenue gin	Net revenue gin	Net revenue purchasing	Total net revenue	
																		Average dollars per bale
Delta																		
300-499 bales	5	1733	413	.71	2.54	.90	.23	.14	.56	.14	1.22	.97	7.41	13.41	6.00	-----	6.00	
450-599 bales	12	2535	516	.69	2.28	.44	.12	.16	.54	.17	1.03	.53	5.96	13.17	7.21	-----	7.21	
600-749 bales	7	2777	670	.74	1.88	.62	.07	.08	.61	.11	.92	.51	5.54	14.20	8.66	-----	8.66	
750 bales																		
& over	9	3923	861	.59	1.93	.52	.24	.19	.53	.13	.54	.54	5.21	13.18	7.97	-----	7.97	
Total Delta	33	2843	626	.66	2.09	.55	.16	.15	.55	.14	.84	.58	5.72	13.41	7.69	-----	7.69	
Upland																		
399 bales																		
or less	5	1389	248	.71	3.25	.66	1.24	.23	.66	.91	1.95	.82	10.43	7.76	-2.67	18.36	15.69	
400 bales																		
& over	3	2008	502	.35	2.03	.62	.09	.07	.36	.25	1.25	.72	5.74	10.54	4.80	.78	5.58	
Total Upland	8	1621	324	.54	2.69	.64	.71	.16	.52	.60	1.62	.77	8.25	9.05	.80	10.20	11.00	

tion of fuel was a rather marked increase in mechanically-harvested cotton. Cotton harvested by this method has a tendency to "rope" and become imbedded in the gin saws, resulting in many stoppages to free the saw teeth. This decreases the number of bales that may be processed in a given period of time, resulting in less efficient use of fuel and also increasing the total cost per bale of ginning.

The average cost per bale for labor for gins in the Delta for the 1948-49 season was \$2.18 as compared to \$2.09 during the previous season, an average increase of 9 cents per bale. This increase may be attributed to a reduced number of bales ginned per hour due to adverse weather conditions during the harvest season, which resulted in a higher proportion of wet and immature cotton; to the use of double shifts of labor; and to an increase in the price level of labor. The second shift of labor employed was not utilized as efficiently as the regular crew because of lower ginning volume per hour during the night and early morning.

A third major cost item, repairs, increased from an average of 55 cents per bale, for all gins in the Delta during the 1947-48 crop season to an average of 71 cents per bale for the 1948-49 crop season. This constituted an increase of 16 cents per bale. This increase may be attributed to increased breakdowns resulting from ginning wet-harvested and mechanically-harvested cotton, and to the increased availability of building materials and other supplies that were badly needed to repair buildings and equipment that had been allowed to deteriorate during the war and immediate post-war period.

The average cost in 1947-48 for ginning in the Upland was \$10.43 per bale for gins with a volume of less than 400 bales per gin stand. In comparison, gins with a volume of 400 bales and over had an average cost of \$5.74, or a difference of \$4.69 (table 23). In 1948-49, comparable cost

figures were \$7.73 and \$5.15, respectively (table 24). During the 1947-48 season, the average total cost for all gins in the Upland was \$8.25. It was \$6.39 in the 1948-49 season. This is an over-all decrease of \$1.86 per bale. The rather high cost in the 1947-48 season may be explained by the fact that 5 of the 8 gins included within this area had a volume of less than 400 bales per stand, three gins out of these five had less than 300 bales per stand. This exceptionally low volume resulted in the gin operating only part of the time, although it was necessary to stand ready to operate all season. When this is considered, it is rather obvious that total cost per bale would be extremely high.

The decided decline in the major cost items per bale in the Upland in the 1948-49 season, for those gins in the low volume group, may be explained by the fact that the volume per gin stand increased over 1947-48 by approximately 100 percent. During 1948-49, the gins in the larger volume group enjoyed a volume considerably higher than they did in the previous season, and therefore, were able to utilize their labor, fuel, and other resources more efficiently.

A general over-all statement may be constructed in summarizing the volume-cost relationship. The average volume per gin stand was a large determinate of the cost of ginning per bale during each season. Until the optimum volume per gin stand was reached, all costs per bale showed a tendency to decrease with increasing volume. Because of the nature of fixed costs, depreciation and insurance showed decreases after the optimum volume in terms of total cost had been reached. The weather conditions and general price relationships, as well as volume per gin stand, are the major determinates when comparing two or more seasons.

Allocation of Net Revenue

The total net savings of the associations were allocated to capital stock dividends, and to the patrons.

Table 25 Allocation of net revenue prior to patron's refund, cooperative gins, Mississippi, 1947-48

Size of gin	Dividend on stock			Available for patron's refund		Total net revenue	
	No. of gins	Average per gin, dollars	Percent	Average per gin, dollars	Percent	Average per gin, dollars	Percent
Delta							
3 stands	3	1,088.77	8.3	12,104.19	91.7	13,192.96	100.0
4 stands	20	1,271.03	6.7	17,663.51	93.3	18,934.54	100.0
5 stands	6	1,563.92	7.3	19,805.59	92.7	21,369.51	100.0
6 stands and over	4	2,740.31	6.3	40,950.36	93.7	43,690.67	100.0
Total or average	33	1,485.86	6.8	20,370.24	93.2	21,856.10	100.0
Upland							
4 stands or less	5	516.30	4.2	11,666.64	95.8	12,182.94	100.0
5 stands or over	3	978.26	3.6	26,253.09	96.4	27,231.35	100.0
Total or average	8	689.54	3.9	17,136.56	96.1	17,826.10	100.0

At the close of the 1948-49 season, the average total net revenue for all associations in the Delta was approximately \$26,000. Approximately 7 percent of this figure was allocated to capital stock dividends, and the remaining 93 percent was made available for patronage refunds. During the previous season, the average total net revenue of \$22,000 was allocated in approximately the same proportion (tables 25 and 26).

The average total net revenue for gins in the Upland for the season 1948-49 was slightly over \$28,000. Of this total, approximately 2 percent was allocated to capital stock dividends, and 98 percent was made available for patronage refunds. During the previous season, when the average total net revenue was \$18,000,

the allocation to capital stock was approximately 4 percent. This figure tended to vary indirectly with the net savings of the associations, due to the fact that the amount of stock outstanding remained relatively stable.

Allocation of Patronage Refunds

That amount of the total net revenue of the association that was made available for patronage refunds was allocated to patrons in the form of cash payments, reserves, book credits, capital stock, and credits for money owed the association by the patrons.

At the close of the 1948-49 season, the average total savings made available for patronage refunds was slightly over \$24,000 for the Delta. Approximately 73 per-

Table 26. Allocation of net revenue prior to patron's refund, cooperative gins, Mississippi, 1948-49.

Size of gin	Capital stock dividend			Available for patron's refund		Total net revenue	
	No. of gins	Average per gin, dollars	Percent	Average per gin, dollars	Percent	Average per gin, dollars	Percent
Delta							
3 stands	4	1,017.02	5.8	16,548.95	94.2	17,475.97	100.0
4 stands	20	1,373.42	6.3	20,314.62	93.7	21,688.04	100.0
5 stands	6	2,039.56	6.6	29,023.28	93.4	31,062.84	100.0
6 stands or more	4	3,675.39	7.6	44,750.26	92.4	48,425.65	100.0
Total or average	34	1,719.87	6.6	24,272.61	93.4	25,992.48	100.0
Upland							
4 stands or less	5	534.52	3.5	14,926.42	96.5	15,460.94	100.0
5 stands or more	3	352.34	.7	49,504.42	99.3	49,856.76	100.0
Total or average	8	466.21	1.6	27,893.17	98.4	28,359.38	100.0

cent of this total was paid patrons of the associations in the form of cash, and slightly over 3 percent was allocated to the patrons' accounts and held by the associations in the form of reserves. Approximately 10 percent was carried on the books of the associations as book credits or capital contributions. An additional 10 percent of the refund was paid in the form of stock, and the remaining 4 percent was applied to receivable accounts against the patrons (tables 27 and 28).

During the 1947-48 season for the Delta the total patrons' refund available for allocation was slightly over \$20,000 per gin. Approximately 70 percent was paid to the patrons in cash, almost 5 percent was allocated to reserves, and slightly over 5 percent was carried on the association's books as capital contributions. Approximately 15 percent of the total refund was paid in the form of stock and the remaining 5 percent was credited to the receivable accounts held by the association against the patron.

At the close of the 1948-49 season, the average total refund for all gins in the Upland was approximately \$28,000. Only 41 percent was paid to the patrons in cash. Slightly over 6 percent was allocated as reserve, and almost 51 percent of the total refund was allocated as cap-

ital contributions. The remaining 2 percent of the total net refund was paid in stock.

During 1947-48, the average patronage refund available in the Upland area was slightly over \$17,000. The proportional distribution of this refund to the various accounts was approximately the same as that for 1948-49. The major difference in allocation between seasons was that reserves, as a percentage of the total refund, were decreased by approximately 3 percent and stock issued, as a portion of total patronage refund, increased by 2 percent. During 1947-48 the proportion of total refund that was allocated in cash was slightly over 42 percent, or one percent larger than that during the 1948-49 season.

The capital contribution method of capital accumulation gives rise to gross inequities within the association unless those patrons who own the capital that is carried as capital contributions, or as book credits, patronize the association each year in the same proportion as those that have capital invested. Another evil that is associated with this type of capital formation is that in the absence of a revolving plan, those persons who own capital in the form of capital contributions may conceivably never be repaid.

Summary And Conclusions

Organization and Operation

All of the 42 gins included in this study, 34 in the Delta and 8 in the Upland, were organized by cotton producers as capital stock associations. Preferred stock was the major class of stock at the time of organization and continued to be the major type issued after beginning operation. In most cases dividends of 6 to 8 percent have been paid on this class of stock.

Most gins have issued only small quantities of common stock and have used this type of stock mainly as a membership requirement and not to raise capital. These shares have had considerably lower par value than preferred stock. Few associations pay stock dividends on common stock.

One of the shortcomings of the organization and operation of cooperative gins has been the failure to make provision for

the retirement of stock owned by non-participating members. This raises problems of control of the associations' affairs as well as for the non-participating members who might have difficulty in obtaining money for this evidence of ownership, particularly during depression periods in the ginning industry.

The associations generally follow the 'one man, one vote' principal, although in frequent instances, members vote each share of capital stock owned by them.

The requirement for membership set up by the cooperative gins was very liberal. Members had to buy one share of capital stock, usually common, and be cotton producers. No discrimination as to size of farm operation or race was evident, although producers had to be able to show title to their cotton.

Delta cooperative gins usually had small numbers of members. Over 70 percent had less than 30 members. Upland associations had large memberships, in all cases over 170 members. In both areas, approximately 80 percent of the associations had three-fourths or more of their members as patrons.

The Delta associations had a larger proportions of their members at annual meetings than did the Upland cooperative gins. Greater emphasis should be placed by the management of the associations in both areas on attendance at these meetings.

The board of directors assumed the function of policy-making as far as business management was concerned. The board or some of its members made more of the day-to-day business decisions in the Delta than in the Upland area. Those who hired full-time managers in the Delta usually hired men with experience in the field of gin operation. The highly seasonal type of operation in the Delta and the smaller membership was the primary cause of this type of management.

Most of these associations gin cotton for or sell farm supplies to non-member producers. These producers were treated the same as members in payment of patronage dividends and were issued preferred stock or given book credit to show contribution to the capital of the association. They were given no voting rights.

Marketing Practices

All cooperative gins made a flat ginning charges for all hand-picked cotton. In the Delta, gins were beginning to make additional charges for ginning snapped or mechanically-harvested cotton. During the 1948-49 season, gin charges ranged from 25 to 75 cents per hundred weight of seed cotton in the Delta and from 25 cents to 55 cents in the Upland.

A separate charge was levied for bagging and ties by all of the associations in the Delta, and by all except one in the Upland. The average charges made for bagging and ties varied from \$3.00 to \$3.50 in both the Delta and Upland. There was a tendency to increase the charges over the two-year period.

All of the associations in this study purchased the cottonseed from the patrons as the cotton was ginned. Only 8 of the associations had mechanical seed scales. The remaining 34 associations used a dockage formula to derive the weight of the seed. The majority of the associations based their purchase price of seed on oil mill quotations, and sold on the basis of grade and moisture content. The majority of the associations used cooperative and commercial oil mills as outlets for their seed. Approximately 60 percent of the associations negotiated price either before or after obtaining the seed. This is a speculative venture and should be discouraged. The remaining 10 percent of the associations operated on a fixed spread of 3 to 5 dollars per ton of seed.

Only 8 of the associations, all located in the Upland, operated active purchasing associations. This expansion in services resulted from the drastic reduction in volume per gin stand received by the gins in this area. This reduction was primarily a result of the shift from cotton production during World War II to a more diversified system of farming. The 3 major products handled by these associations were cottonseed meal, cottonseed hull, and fertilizer. Two of the associations also operated feed mills. The successful operation of the purchasing associations has enabled the gins located in this area to continue their operations without increasing the charge for ginning.

Financial Status

Capital investment necessary for the operation of cooperative gins has become greater with the advent of new cleaning and drying equipment, and the necessity of installing this equipment during the high-cost period. High costs have also been incurred in the renovation of various gin buildings. By the end of the 1948-49 season the average Delta gin had total assets of over \$64,000. The average Upland association had total assets of over \$93,000, most of which was accounted for by their purchasing agencies rather than by gin operation.

Most of the associations were making rapid strides toward the retirement of their liabilities at the end of the 1948-49 season. Sixty percent of the associations in the Delta had members equities to 55 percent or more of the total assets. At the end of this same season, 38 percent of the associations in the Upland had member equities of 55 percent or more of their total assets. All gin associations should make every effort to retire as much of their indebtedness as possible during the present high price period. These debts, incurred at peak prices, will be hard to

pay during depression periods in agriculture.

Source of Income and Cost of Operation

The associations located in the Delta obtain the major portion of their income from ginning operations, including the revenue from sale of bagging and ties, ginning charges, and the purchase and sale of seed. Associations located within the Upland obtain a large part of their income from the operation of purchasing associations, in addition to the above sources.

Revenue from the ginning operation alone accounted for almost 70 percent of the total gross income in the Delta, and about 65 percent in the Upland, during the 1948-49 season. Revenue from the purchase and sale of cottonseed, the second major source of revenue, amounted to approximately 30 percent of the total gross revenue in the Delta and slightly over 35 percent of the total gross revenue in the Upland. Even with an increase of approximately 60 percent in volume in 1948-49, the revenue from this source fell in the Delta and rose only slightly in the Upland. This was due primarily to a fall in the price received for cottonseed during the 1948-49 season and to speculative operations in negotiating price by the associations.

The average net revenue from the gin, consisting of the combined revenue from both ginning and seed operations amounted to approximately \$26,000 in the Delta and approximately \$7,000 in the Upland in 1947-48.

The net revenue from purchasing activities, which were confined entirely to the Upland, constituted over three-fourths of the total net income to these associations.

Labor, fuel, depreciation, repairs, and insurance were the major cost items incurred in the operation of the gins. These five items constituted approximately 85

percent of the total cost of ginning in the Delta and almost 75 percent of total cost in the Upland. Labor and fuel accounted for the greater part of the total cost. Every effort should be made to utilize the labor force and the fuel supply fully. Good management has become more and more important with the increase in gin investment.

There was evidence of an indirect relationship between volume per gin stand and cost per bale of ginning. As volume increased, cost per bale declined in both areas until the optimum was reached at a volume range between 950 to 1,049 bales in the Delta during the 1948-49 season. In neither season did volume in the Upland reach a point where optimum volume in terms of minimum cost of ginning could be determined. It was evident that weather conditions and general price

relationships as well as volume per gin stand were the major cost determinates when comparing two or more seasons.

The total net savings of the associations were allocated to capital stock dividend and to the patrons. In the Delta at the close of the 1948-49 season, approximately 7 percent of the total net saving was allocated to stock dividend. In the Upland, only slightly less than 2 percent of the total net saving was allocated to this account. The remainder in both areas was allocated to the patrons in the form of cash payments, reserves, capital contributions, stock issuance, and applied to receivables. Approximately 73 percent of the total patron's refund was paid in cash by the associations located in the Delta and about 41 percent by those in the Upland, at the close of the 1948-49 season.