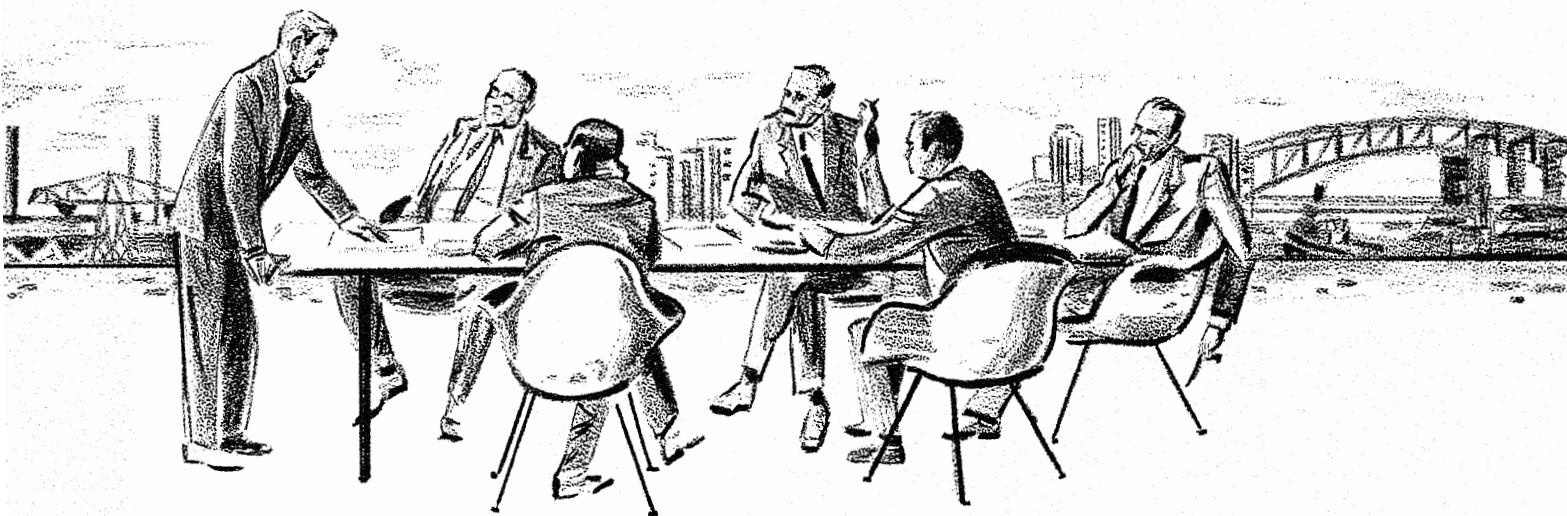


CREDIT PROGRAMS

of Missouri
**FARM
SUPPLY
COOPERATIVES**



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CONTENTS

Introduction	3
Credit in the Farm Cooperative Association	4
Role of Board of Directors in Extending Credit	4
Role of Management in Credit Extension	5
Role of Cooperative Members in Credit Extension	5
Credit Policies	6
Establishment of Policy	6
Publicizing the Policy	6
Enforcement of Policy	8
Changes Deemed Necessary to Promote Credit Policies	8
Credit Extension Practices	9
Selling Approach	9
Application for Credit	9
Responsibility for Extending Credit	10
Factors Influencing the Extension of Credit	10
Limits on Types of Credit Extended by Types of Customers	10
Types of Understandings Formed With Patrons at the Time Credit is Extended	11
Credit Collection Practices	12
Responsibility for Collection of Accounts	12
Types of Collection Notices Used	12
Personal Contacts for Collection of Accounts	12
Securing Accounts by Use of Notes	12
Use of Collection Agencies	12
Deducting Unpaid Accounts From Marketing Proceeds	13
Deducting Unpaid Accounts From Patronage Refunds	14
Use of Law	14
Credit Control Devices	14
Review of Credit Practices by the Board	14
Review of Outstanding Accounts by Manager and Other Employees	14
Use of Interest Charges on Overdue Accounts and Discounts on Cash Purchases	15
Commodities Causing Most Credit Problems	15
Manager's Views of Effects Alternative Policies Would Have	15
Extent of Use of Advance Deposits for Merchandise	16
Traits and Trends Associated With Credit Sales	16
Total Sales Volume	16
Sales to Members	16
Seasonality of Credit Sales	16
Accounts Receivable	17
Relationship Between Year-end Accounts Receivable and Total Sales	18
Relationship Between Credit Sales and Total Sales	18
Experience with Financing Plans	20
Estimating Costs of Credit	22
Bad Debt Expense	22
Interest Expense	22
Bookkeeping, Collection, and Management Time	23
Impact of Credit Costs on Sales and Margins	23
Conclusions and Suggestions	24
Appendix	26

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CREDIT PROGRAMS

of Missouri FARM SUPPLY COOPERATIVES

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Nearly all businesses today are under pressure to allow some customers a period of time to pay for their purchases. This is especially true in agriculture because present-day farming is built on high value farms and equipment necessitating a huge amount of operating expense.

Financing and the extension of credit by merchants, middlemen, retailers and other businesses are very helpful services to farmers. Such creditors held a total of \$6.7 billion in non-real estate debt of U. S. farmers on January 1, 1964, up almost three-fourths of a billion from a \$6 billion figure the same date in 1963.

Cooperatives made credit sales to Missouri producers in 1962 in excess of \$1 billion.

Obviously, credit has become important to the farmer and the provision of credit has become ingrained in the private enterprise system as one of the competitive factors of firms vying for the farmer's business. Without doubt, provision of credit has become one of their important merchandising tools.

This trend has made administration of retail credit one of the important responsibilities of management in farm supply businesses. If properly administered, credit sales increase merchandising volume and volume of profits, particularly in the long-run, since they enable the patrons to enlarge their own volume of business, leading to an increase in their demand for production supplies.

Can Lead to Heavy Losses

However, if not properly administered, retail credit can lead to heavy losses and even bankruptcy. Credit business is often an unfamiliar enterprise for the management of farm supply cooperatives. The extension of credit requires additional operating capital and involves additional expenses in the form of extra bookkeeping, management time, collection, and the inevitable bad debts.

The pertinent question is: With the low margins maintained by farm supply businesses, do merchandising volumes increase enough due to credit sales to offset whatever losses are incurred on the accounts receivable?

This has been a problem that has been plaguing virtually all of the farm supply cooperatives. The implication here is not that sales should be on a cash basis for all farm supply businesses. Rather, the suggestion is that an ideal volume of credit sales exists for each product sold and each farm supply business which maximizes the added net income to the business due to the extension of credit.

Need for Retail Credit Research

Little research has been done in the area of retail credit administration and estimation of credit costs. This study was undertaken to find some guidelines cooperatives can use in planning credit programs. Findings indicate many managers administering a credit program are not really aware of credit costs. Their conception of the ideal volume of credit sales, if they have any, tends to be erroneous.

Good credit administration implies a credit program suited to the needs of individual customers. A uniform credit policy should be established by the board of directors, but it should be flexible.

Good credit administration also involves the determination of the most profitable price differentials between cash and credit sales, keeping in mind the credit policy of competitors in that trade area. Often, the local farm supply business finds itself in a vicious competitive situation even with respect to the extension of retail credit. In such cases it is necessary for the management to take into account the probable behavior of competitors in framing a credit program.

Fifteen farm supply cooperatives within a 75 mile radius of Columbia were included in the sample used to



Fig. 1—Study Area

obtain data for analysis of cost and administration problems related to the extension of credit by cooperatives. (See Figure 1 and Appendix for details on scope and method of the study.)

Credit *in the* Cooperative Association

A local farmer's cooperative is an association incorporated under the state law and operating a business in a small area. It represents the voluntary union of persons for purposes of securing savings in production, buying, or marketing, or in providing other services, based upon equitable principles.

The farmers or members of the association are its true owners. At yearly membership meetings, the board of directors of the association is nominated and elected by the members for purposes of framing policies of the association. The board of directors, in turn, appoints the manager to run the association in an efficient manner and thereby make it a successful business.

Role of Board of Directors in Extending Credit

The board of directors in 14 of the 15 associations reviewed credit practices of the local management at some time during the fiscal year (Table 1). At these meetings, they also reviewed outstanding accounts. This is an extremely important function of the board of directors, since they impart valuable advice to the management on the basis of the review and their findings.

TABLE 1 -- INTERVALS AT WHICH BOARD OF DIRECTORS REVIEWED CREDIT PRACTICES AND OUTSTANDING ACCOUNTS

INTERVAL	NO. OF ASSOCIATIONS	% OF TOTAL
30 days	5	33.3
60 days	4	26.7
90 days	2	13.3
6 months	3	20.0
Irregular	0	0.0
No review	1	6.7
TOTAL	15	100.0

Most of the managers pointed out that the board of directors reviewed accounts receivable only in aggregate figures. Some managers were also quite reluctant to allow individual accounts to be reviewed by the board due to their confidential nature. One manager pointed out that a patron had stopped his business with the association upon having discovered that a board member was discussing his account openly with other members.

Role of Management in Credit Extension

The manager's basic functions in broad terms are: Planning, organizing, directing, and controlling. Managerial planning and directing requires the coordination of all activities and inputs in the business in such a manner that costs may be minimized and returns maximized. Managerial control involves expediting production, sales, and other activities for purposes of efficiency.¹

In the area of credit management, too, these basic functions are of vital importance. The success or failure of any business organization depends to a great degree upon the manager. He is the nerve-center of the business.

The manager of any business that sells on credit needs to ask himself a variety of questions; such as:

Why are credit sales important to the business?

What factors determine the amount of additional revenue that the business may receive due to credit sales?

What factors determine the additional costs that the business will incur due to credit sales?

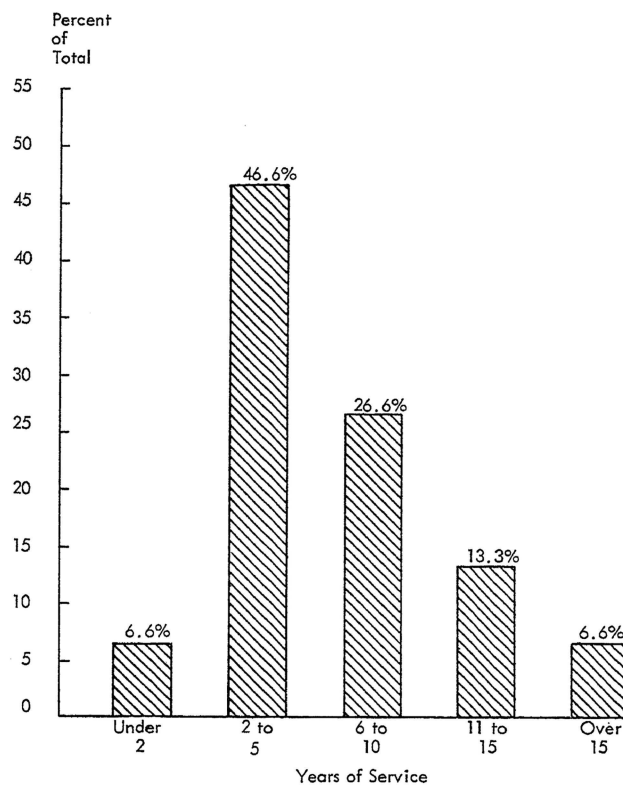
The manager needs to be equipped with a wealth of knowledge pertaining to the business standing and operation of his patrons. This need not be extremely difficult on the local level, since most of the cooperatives operate within a relatively small trade area and generally cater to one community of farmers. For this reason, it is important that credit extension be left almost entirely in the hands of the local manager. Officials of all of the 15 cooperatives studied reported that the actual credit program deviated at the discretion of the manager from the written credit policy.

The success of the credit business no doubt depends upon the experience of the manager in the community. Figure 2 gives a distribution of years in service of the managers of the cooperatives studied.

Role of Cooperative Members in Credit Extension

Only two of the cooperatives in this study discussed the credit problems of their associations at membership meetings, though most managers gave the impression that the accounts receivable item in their ledger was their biggest headache. In the associations where this was being done credit problems were reported to be considerably less. Members of the associations can realize the implications of credit when discussion on the subject are held openly at meetings of this type. The management, in turn, may benefit by receiving the cooperation of its members as well as valuable suggestions. If all the members understand the credit policies of the associations, they might also be able to exert pressure on defaulting patrons to settle their accounts.

Fig. 2 - Distribution of Years in Service of Managers of 15 Farm Supply Associations



¹ Abshier, George S. and Robert D. Dahle, Management for Agricultural Marketing Firms. Cooperative Extension Service, North Carolina State College, Raleigh, North Carolina.

Credit Policies

Establishment of Policy

Any successful business needs to establish a specific credit policy for various groups of customers.

In the centralized type of cooperative the board of directors, along with the general manager, lays down the broad framework of policies and procedures of the association. The manager on the local level, however, is given some latitude to modify these principles in order to make the association an efficient operation. This is especially true in the case of credit policies.

In the independent associations, the local board of directors establishes the general policies of the association based on the recommendations of the manager.

Table 2 illustrates the manner in which credit policies were established in the associations studied. Through annual membership meetings members control the way their organization functions. In this study none of the 15 cooperatives reported credit policies being discussed or acted upon at the membership meeting or being included in the by-laws (Table 2). However, the cooperative members exert influence over their organization in the selection of directors.

TABLE 2 -- HOW CREDIT POLICIES OF THE
15 FARM SUPPLY ASSOCIATIONS
WERE ESTABLISHED

	Number of Coops.	% of Total
By Membership at Annual Meeting	0	0.0
By By-laws	0	0.0
At Meeting of Board of Directors & Manager	12	80.0
By Board of Directors	1	6.7
By Manager	1	6.7
Credit Policy not established	1	6.7
TOTAL	15	100.1

Most troubles which farm supply cooperatives get into are not chargeable to managers alone. It is important for the board of directors to establish a good and sound credit policy, choose a competent manager, delegate definite responsibilities to him and then let him carry out the details of those credit policies and responsibilities in the day-to-day affairs of the cooperative. In this study 12 of the cooperatives reported that the credit policies were established at the meeting of the board of

directors with the manager's recommendations (Table 2).

One cooperative reported that the credit policies were made entirely by the directors. Another cooperative reported that the manager made the credit policy. And one manager indicated that they did not have a specific credit policy.

The credit policies of the 15 organizations, established as indicated in Table 2, are given in Table 3. Boards of directors of three of the organizations had voted to get on a cash basis; that is, to extend no credit. However, the credit sales of these organizations actually were 35 percent of their total sales. At the end of 1963 the accounts receivable on the books of the firms ranged from \$14,000 to \$80,000. Fourteen to 17 percent of these accounts receivable were 30 to 60 days old as indicated in the third column of Table 3. Ten to 53 percent were more than 60 days old.

The next seven in Table 3 had voted to extend credit on a 30 day basis. An audit of the books of these organizations at the end of 1963 indicated from four to 31 percent of their accounts receivable were 30 to 60 days old and seven to 78 percent were over 60 days old.

Most of the associations had available a more formalized agreement with farmers which provided financing of feed in return for which the patron used a specified feed. This was a signed contract between the patron and the cooperative. The cooperatives did discount these sales bills with their feed supplier. However, these contracts counted for a very small part of the credit sales of the cooperatives.

Publicizing the Policy

The success of any program depends not merely upon the merits of the program, but also upon how well it is publicized. This study indicates that one of the main reasons why managers of farm supply associations are plagued with credit problems is because patrons are not properly informed of the exact credit program of the association. The management in many associations made rather half-hearted attempts toward making their credit policies known to patrons.

Table 4 indicates the manner in which credit programs were advertised. Two of the 15 cooperatives in the sample did not deem it necessary to inform patrons about the credit policy; they felt that this would keep their credit sales at an ebb. Five of the cooperatives made their policies known by merely talking to the patrons over the counter, at the time of a credit sale. Though it is necessary to discuss the credit arrangements with a buyer, that

TABLE 3 -- PURPORTED CREDIT POLICY AND THE PERCENT OF YEAR-END ACCOUNTS RECEIVABLE THAT WERE 30 TO 60 DAYS OLD AND THOSE OVER 60 DAYS OLD - 1963

Code No. of Cooperative	Purported Credit Policy	Percent of Accounts Receivable that were	
		30 to 60 days old	over 60 days old
1	Cash	17	10
2	Cash	17	27
3	Cash	14	53
4	30 Days	13	7
5	30 Days	13	32
6	30 Days	31	31
7	30 Days	10	65
8	30 Days	21	64
9	30 Days	4	78
10	30 Days	16	49
11	60 Days	34	14
12	60 Days	3	74
13	60 Days	7	54
14	Terms to suit patron	15	29
15	None	13	41
Average		12	43

TABLE 4 -- METHODS OF ANNOUNCING CREDIT POLICIES TO PATRONS AS RELATED TO YEAR-END ACCOUNTS RECEIVABLE THAT WERE OVER 30 DAYS OLD IN 1963

Code No. of Exchange	% of Accounts Receivable Over 30 Days	Method of Announcing Credit Policy	
		Oral Statement	Other Methods *
1	27	x	3
2	44	x	2
3	67	x	0
4	20		1
5	45	x	1
6	62	x	0
7	75		0
8	85	x	0
9	82		1
10	65		0
11	48	x	3
12	81		1
13	61	x	3
14	44	x	0
15	54	x	0

* By posters, on sales slips, publications, periodic billing, etc.

he might understand what the terms are, only two-thirds of the associations reported doing this.

Credit sales for three of the associations that had fairly comprehensive credit advertising programs averaged 44 percent of their average total sales in 1963 and 39 percent in 1962. Credit sales data were available from six of the remaining 12 associations. The average credit sales in these associations were only 16 percent of their average total sales in 1963 and 33 percent in 1962.

In the three associations with the comprehensive credit advertising programs, the average year-end accounts receivable were only 1.9 percent of the average total sales in 1963 and 1.7 percent of the average total sales in 1962. The other six associations that had credit sales data available had average year-end accounts receivable of about 7.3 percent of the average total sales in 1963 and 9.5 in 1962.

Often managers make only half-hearted attempts at publicizing their credit policies primarily because they are not completely sold on them. This may be overcome by allowing the managers more latitude in framing the credit policies. They have a clearer insight into the credit needs of their customers and thereby the ability to choose policies that are better for the business. It calls for a more realistic and workable policy for the manager and consequently he can stand behind his policy and support it.

Enforcement of Policy

Fourteen of the 15 associations in this study had some form of a written credit policy. The basis for the extension of credit by the association that did not have a written policy depended upon the manager's evaluation of his patrons.

Though the 14 associations had specific written policies, none of them adhered to them completely. The degree of deviation varied from one association to the other. It naturally depended upon the manager's or other key employees' confidence in the written policy.

A policy is highly evaluated and enforced only if the management considers it to be workable. Therefore, in framing the policy, care should be taken to determine the management's attitude toward it and, to modify it accordingly.

Three of the 15 managers totally disliked their written policies. Ten of the remaining managers were either indifferent or gave their half-hearted approval to their written policies. For the greater part, managers disapproved of these credit policies since they were not equipped with mechanisms that would keep accounts receivable at an ebb, especially the overdue accounts. Most managers were aware of what the mechanisms were, but were all limited in bringing them into force, due to the narrow bounds of their written credit policy.

Ten of the 15 managers felt that a thorough system of incentives to the customers could help reduce their accounts receivable considerably. In other words, they

were in favor of granting a combination of cash-volume discounts as well as charging for credit on over-due accounts to the customer.

Only one manager felt that there should be no cash discounts but he thought patrons should be charged for credit on overdue accounts. The basis for his statement was that his margin of operation was extremely low and cash-discounts would no doubt decrease it further.

Table 5 illustrates the nature of incentives being provided to customers for cash sales by the associations. Five associations did not provide any incentives. Only five associations had provisions for cash-discounts, which varied between 1 and 2 percent on the value of the purchase, and only five of the associations charged for credit on over-due accounts. The interest charges varied between 1 and 1 1/2 percent per month.

TABLE 5 -- TYPES OF INCENTIVES FOR PAYING CASH PROVIDED TO PATRONS BY THE FIFTEEN ASSOCIATIONS

Type of Incentive	Number of Associations	% of Total
Gave Cash Discounts Only	0	0.0
Gave Volume Discounts Only	2	13.3
Charged for Credit Only	2	13.3
Gave Cash and Volume Discount	3	20.0
Gave Cash Discount and Charged for Credit	1	6.7
Gave Volume Discount and Charged for Credit	1	6.7
Gave Cash Discount and Volume Discount and Charged for Credit	1	6.7
Offered None	5	33.3
TOTAL	15	100.0

Changes Deemed Necessary to Promote Credit Policies

Most of the managers were of the opinion that, ideally, the cash-customer should be rewarded and that an equitable allocation of costs of credit should be made on patrons who used it. An account that would be settled within 30 days or by the tenth of the following month after purchase was generally regarded to be cash.

Charging for credit and/or providing discounts to the cash-customer would not only bring about a more equitable allocation of costs, but would also help considerably in reducing the accounts receivable with respect to total sales. The average accounts receivable and total sales ratio of associations in this study that either provided discounts for cash or charged for credit were 54 percent smaller in 1963 and 64 percent smaller in 1962 than the averages for the other associations.

Credit Extension Practices

One of the important factors in keeping credit sales and accounts receivable at a minimum is the credit extension practice of the management. To keep accounts receivable at a minimum, the sales personnel have to direct their sales approach in such a manner as to encourage the payment of cash for all sales. However, if the association is committed to extend credit, a thorough system of application for credit may be devised. Furthermore, the personnel responsible for the extension of credit need to be well informed about the financial status of the customers receiving credit.

Selling Approach

A large part of the credit that is extended depends upon the selling approach of the salesman. Many a patron has been known to reach for his checkbook only to leave it in his pocket when the salesman asked if he would like to charge it.

This study indicates that the selling approach of salesmen of nine of the cooperatives constituted asking the customer for cash with no mention of credit (Table 6). Some, however, asked, "cash or credit?" or granted "credit with no mention of cash." Their general approach was to ask for cash from customers that were rated fairly high by the employees at the association.

TABLE 6 -- SELLING APPROACH USED BY SALESMEN IN THE FIFTEEN ASSOCIATIONS

	Number of Associations	% of Total
Ask for cash with no mention of credit	9	60.0
Asked "cash or credit"	4	26.7
Grant credit with no mention of cash	2	13.3
TOTAL	15	100.0

Though the "cash or credit" approach was adopted by four of the associations and the "credit with no mention of cash" approach was employed by two of the associations, the employees in all the associations were instructed to adopt the "cash with no mention of credit," approach to all new customers. To get the account charged would then require the manager's consent.

This same policy was to be adopted for patrons that were regarded to be "too risky" by the management. In the two associations where credit was granted with no mention of cash, average accounts receivable as related to

total sales were 37 percent higher in 1963 and 29 percent higher in 1962 than they were in the nine associations that asked for cash. Credit sales in the two associations were also 27 percent higher in 1963 and 22 percent higher in 1962.

Application for Credit

The efficient extension of credit is influenced by the type of customer to whom it is extended. For this reason the management strives to obtain as much information on the patron's operation, as possible. This is accomplished in the best possible manner only if the management receives reports of the assets and liabilities of the patron and plans a well-organized credit program for him in accordance with his operation.

The safest and surest way of maintaining a check on the size of the accounts receivable is to extend credit only to customers whose operations are such that they are able to keep their accounts current. For the management to determine this, it is necessary to know about the operations of the patron and his credit reputation.

A good manager, before actually extending a large volume of credit, will sit down with the customer and work out a financial plan for his operation. This gives the manager insight into the effectiveness of the customer's operation as well as helps in determining the patron's actual credit needs. The manager may then devise a financial plan for the patron and extend credit to him accordingly. By doing this, the manager not only enables the customer to get on a well organized financial plan, but also may achieve a larger volume of sales to him. This proved true in this study: Managers who had worked out a financial plan with the patron wanting credit reported fewer problems of credit and had also achieved increases in sales volume.

Before credit is extended, complete information pertaining to the credit rating of the patron needs to be assembled and studied. Most managers kept a file containing this type of information. Most of the larger associations studied required the ratings of credit bureaus on a patron or information from other credit agencies before credit was extended. In small associations which catered to smaller areas, generally within a specific community, managers depended primarily upon their personal knowledge about the patron (Table 7). New patrons generally were required to give references of other places where they had done credit business or information about them was gathered from the local banks.

TABLE 7 -- TYPES OF INFORMATION REQUIRED ABOUT PATRONS BEFORE CREDIT IS EXTENDED IN THE 15 ASSOCIATIONS

Type of Information	Number of Associations Requiring the Information
Formal Credit Application	1
Credit Bureau Rating	6
Oral Statement of Income and Expenses	6
Written Statement of Income and Expenses	2
Report of Assets and Liabilities	2
Personal Knowledge of Patron	12
Information from other places where patron has done business	2
Information from bank and other sources	1

Responsibility for Extending Credit

The extension of credit is no doubt the management's or the manager's responsibility. Thirteen of the associations required the approval of the manager before any credit was extended to a patron. In the remaining two associations, the credit managers had the authority to clear a credit sale.

Factors Influencing the Extension of Credit

Before credit is extended, management needs to ask such questions as: What should be the limits to the volume of credit that the association should extend? This question has to be thought of in terms of the association's needs for operating capital.

The next questions to arise are: Which patrons should credit be extended to; and how is it possible to judge whether a patron will really understand, remember, and live up to the credit agreement?

Further questions on evaluating the credit rating of a patron need to be answered. And whether the evaluations or the decisions are in fairness to all patrons is another important consideration.

Credit should be extended up to the point where the additional returns due to the extension of credit equal the additional cost of extending credit. Thus, the additional cost of extending credit should be considered as well as the increases achieved in sales volume. The management should strive to minimize these costs.

Limits on Amount of Credit Extended by Types of Customers

Three categories of customers have been designated Types I, II, and III in this study.

Credit is primarily a matter of convenience for the Type I customer. He has adequate working capital. While credit has some convenience value to him in permitting him to make only one payment each month, he will not want to pay much extra for the convenience. Further, the cost of extending credit to this type of customer is relatively low, since he pays his bills regularly.

To the Type II customer, retail credit is a real service. He is the one who can be given credit on the basis of a well organized plan that insures the generation of income to make payment. Most managers in this study were of the opinion that costs of credit extended to this type of customer were relatively low, too, since he was regular in settling his bills once he had marketed his produce. However, credit extended to him had to be limited to the amount that he could use profitably and productively without having to undergo hardships in repaying or settling the account.

Extending any credit to the Type III customer is a disservice and invariably causes loss to the association. Credit extended to him forces him further into debt and makes his financial status even worse. Since his operation is inefficient, the purchase of a dollar's worth of production supplies is apt to result in a return of less than a dollar's worth in income. Consequently, the more he borrows, the more he plunges himself into the vicious circle of not being able to settle his bills. These customers, according to nearly all the managers, are the most important in the bad debt write-offs and high cost of collection.

From this it is clear that managers need to classify patrons into the different categories to make firm decisions about the amount of credit to extend. In this study, nine managers did not extend any credit to the Type III customer. For Type I and Type II customers, many managers felt that no exact limits could be imposed on how much credit could be extended to them, since this depended upon the current condition of each borrower. Some managers, however, did give maximum figures that varied between \$250 and \$10,000 for the Type I customer. Maximum amounts for the Type II customer varied between \$100 and \$5,000 (Table 8).

Though the managers indicated limits to the amount of credit that would be extended to various groups of customers, most of them probably did not adhere to these religiously, mainly due to their interest in expanding volume. Furthermore, it is doubtful whether they could discern accurately between some of the Type II and Type III customers. As a result of this there were some losses due to credit sales in most of the associations.

TABLE 8 -- LIMITS TO AMOUNT OF CREDIT THAT MANAGERS WOULD EXTEND TO CUSTOMERS OF THREE TYPES, IN THE FIFTEEN ASSOCIATIONS

Association	Type I	Type II	Type III
1	\$ 250	\$ 300	\$ 0
2	4,000	3,000	0
3	5,000	3,000	0
4	1,500	500	0
5	500	300	175
6	2,000	2,000	50
7	200	150	0
8	10,000	5,000	0
9	5,000	1,000	0
10	500	100	25
11	1,300	1,300	0
12	-	-	-
13	No Limit	No Limit	0
14	No Limit	No Limit	25
15	100	100	10

Types of Understandings Formed with Patrons at the Time Credit Is Extended

"An account that is properly opened is half-collected," is an old saying. Therefore, at the time credit is extended to a patron, he should be made aware of what the credit terms actually are. If there are any special arrangements, care should be taken to explain them fully to the patron.

Most credit problems evolve from the fact that the patrons do not properly understand the terms. If special arrangements are made with regard to credit, it should be specifically written down on the bill of sale, and the patron, or the receiver of the supplies, should be required to sign the sales slip. Often managers say that this is impractical, since farmers are out in the fields at the time their supplies are delivered to them and it is not possible to get them to sign the sales slip.

In any case, obtaining the signature of the patron as well as going over the terms with him rather thoroughly would certainly induce the patron to keep his account current, rather than neglecting it completely.

Ten of the associations reported having oral discussions with the patrons at the time credit was extended to them (Table 9). Five of these associations also required signatures on sales slips, if deemed necessary. One of the associations did not make any agreements with the patron at the time credit was extended. And one association just had patrons sign the sales slip without going into any oral discussion of the terms.

The nine associations that required patrons to sign

TABLE 9--TYPES OF UNDERSTANDINGS MADE WITH PATRONS AT THE TIME CREDIT WAS EXTENDED TO THEM IN THE FIFTEEN ASSOCIATIONS

	Number of Associations	% of Total
Oral Understanding	5	33.3
Signatures on Sales Slip as well as Oral Understanding	5	33.3
Signatures on Sales Slip Only	1	6.7
Signatures with regular printed terms on sales slip	2	13.3
Signatures with special written terms on sales slips	1	6.7
No Agreement	1	6.7
TOTAL	15	100.0

on sales slips when credit sales were made reported that this was extremely effective in collecting accounts. On the average, their accounts over one year old were 4.9 percent of total year-end accounts receivable in 1963 and 9.6 percent in 1962. In the associations that did not require signatures on sales slips, the accounts over one year old accounted for 9.8 percent of total year-end accounts receivable in 1963 and 15.8 percent in 1962.

Credit Collection Practices

Responsibility for Collection of Accounts

An effective credit program also necessitates the thorough supervision of accounts receivable. Good credit management requires accounts to be posted immediately after a sale and aged every month, so that the total volume of credit may be determined and accounts that are not turning over investigated. Furthermore, individual accounts need to be checked to insure that each customer stands by the credit agreement made.

A good credit program necessitates a good collection program. In all 15 associations the responsibility for collection was with the manager. In two of the associations the responsibility was shared with the credit manager. Employees were not financially responsible for the credit they extended in any of the associations. Managers were spending about 5 percent of their time making personal visits and about 15 percent of their time in the office for purposes of collection.

Types of Collection Notices Used

Often, a farmer may forget about his account. For this reason it is good practice to send monthly statements to him. Ordinarily, if all the other precautions have been taken, this should induce payment, since it informs the patron about the specific amount that is due by a certain date. This practice brings out errors in accounts early when correction can be made more easily.

All but three associations sent monthly statements or collection letters to their account holders. If this notice didn't work, it was generally followed by either a form letter or a personal letter informing the patron that the account was overdue. Table 10 illustrates the manner in which the associations went about collecting the overdue accounts. Eleven associations sent out personal letters on overdue accounts.

To keep accounts current, the management should take care to send out statements regularly every month indicating when the account is due and the amount, in case there is some question. If this brings no response, a form or a personal letter indicating that the account is overdue should be promptly mailed. If this again is unfruitful, the management should arrange for a prompt personal call to the patron. The promptness and business-like manner in which the management goes about this will probably affect the response from the customers. If the management is indifferent about sending out statements or letters or making personal calls, the patrons will in turn become indifferent and careless about making payments.

Three of the associations did a very good job of following up on overdue accounts; they sent reminders to patrons regularly and even made personal visits to patrons and discussed their problems (Table 10). The results are shown by the fact that in these associations the accounts that were more than 90 days old accounted for only 8.3 percent of their total year-end accounts receivable compared to about 34.7 percent for the remaining associations in 1963. In 1962, accounts more than 90 days old in the three associations were 10.6 percent of their total year-end accounts receivable, compared with 38.6 percent for the remaining associations.

Personal Contacts for Collection of Accounts

Fourteen of the association managers made personal visits to patrons, more or less as a last resort for purposes of collecting accounts. Personal contacts were also made in all of the association offices when patrons with overdue accounts came in for any purchases or other business.

Though most managers felt that personal visits for purposes of collecting accounts were effective, four managers did not believe in personal visits. One manager said, "If the patron doesn't want to pay, he won't pay; there is no use trying to convince him" (Table 11). But personal visits by association personnel should prove to be an effective collection device if made in a tactful manner.

Securing of Accounts by Use of Notes

Managers could reduce the amount of capital that credit ties up by converting accounts receivable to notes receivable and in turn discounting these notes at the bank. And, if the patron is charged interest, he is more anxious to pay the account.

Five of the associations were using notes occasionally, but none of the associations charged interest on notes. Only one association reported that it was hard to get members to sign the notes. Most of the notes were not secured with a chattel mortgage and the management felt that notes were not of much greater value than the accounts they secured. Consequently, all managers were reluctant to ask patrons to sign notes.

Use of Collection Agencies

Five associations had used or were using collection agencies to help in the collection of past due accounts. The attitude of managers toward collection agencies, however, was not very favorable. Four of the associations appeared to be extremely unhappy with collection agencies. They felt that their charges were too high and in

TABLE 10 -- METHODS EMPLOYED IN COLLECTING ACCOUNTS IN THE INDIVIDUAL ASSOCIATIONS AS RELATED TO PERCENT OF YEAR-END ACCOUNTS RECEIVABLE OVER 30 DAYS IN 1963

Assn. Code No.	% of Accounts Receivable over 30 days	Methods Employed in Collecting an Account	
		Monthly Statement	Other Methods*
1	27	x	4
2	44	x	3
3	67	x	5
4	20	x	2
5	45	x	2
6	62	x	2
7	75		2
8	85	x	1
9	82		0
10	65	x	2
11	48	x	2
12	81	x	1
13	61	x	1
14	44	x	2
15	54		2

*Form letter, personal letter, telephone, personal visit and use of law.

TABLE 11--MANAGER'S EVALUATION OF EFFECTIVENESS OF PERSONAL CONTACT FOR PURPOSE OF COLLECTING OVERDUE ACCOUNTS IN THE FIFTEEN ASSOCIATIONS

	Number of Associations	% of Total
Very Effective	7	46.7
Effective	3	20.0
Fair	1	6.7
Not Effective	4	26.7
TOTAL	15	100.0

case an account was uncollectible it was given back.

The remaining association was indifferent about the use of collection agencies. The dollar value of accounts turned over to collection agencies ranged from \$25 to \$3,000. All the associations that were using collection agencies were doing it as a last resort.

Deducting Unpaid Accounts From Marketing Proceeds

One easy way of collecting an account is by deducting the account from the sales proceeds of products marketed through the cooperative by the patron. However,

this would apply only to those associations that had marketing services. Eleven of the 15 cooperatives in the sample had marketing services. All 11 associations deducted accounts receivable from proceeds of products marketed for the patron. Four of the associations used this procedure of deducting all due accounts of the patron before actually paying him the remainder of the marketing proceeds. The remaining seven associations deducted any accounts receivable from marketing proceeds only if the accounts were past due.

In eight of these associations accounts over one year old comprised 1.4 percent of total year-end accounts re-

ceivable in 1963 and 3.2 percent of total year-end accounts receivable in 1962. In the associations that did not have marketing services, the accounts over one year old were about 13.8 percent of total year-end accounts receivable in 1963 and 20.7 percent in 1962.

Deducting Unpaid Accounts From Patronage Refunds

Another means of collecting accounts was by applying patronage refunds or stock dividends to unpaid accounts. Nine of the associations followed this procedure for all accounts while the remaining six applied it to

past due accounts only. Eight of the associations that deducted unpaid accounts from marketing proceeds also made deductions from patronage refunds.

Use of Law

The threat of law had been used by only four of the 15 associations. Managers felt that this was an effective device to collect accounts. However, three of the managers believed that this had stopped patronage. Accounts turned over to attorneys varied from \$50 to \$1,500.

Credit Control Devices

Review of Credit Practices by the Board

Review of credit practices and outstanding accounts by the board of directors is an effective device for credit control. Since the cooperative generally caters to one community of farmers, the board of directors, being farmers themselves, often have some idea about the operations of individual patrons and their status.

Fourteen of the associations had their boards review their credit practices as well as outstanding accounts (Table 1). Thirteen managers were of the opinion that the review was helpful in guiding them. Only one manager felt that the review did not serve any purpose.

Review of Outstanding Accounts by Manager and Other Employees

For effective credit control it is essential that managers review their accounts receivable and outstanding accounts regularly. It is also necessary to review these at employees' meetings so employees may be warned about patrons to whom credit should not be extended.

All of the 15 managers said they reviewed outstanding accounts (Table 12). However, in seven of the associations, the reviews, as well as employee meetings, were held irregularly. To control credit effectively, managers have to be careful in this respect as well as keep their employees well informed. Regular reviews of credit practices in most of the associations that did this lead to the stoppage of credit extension to undependable patrons and thereby to fewer uncollectible accounts.

The objectives of the review by the manager generally were:

TABLE 12 -- INTERVALS DURING WHICH MANAGER'S REVIEWED OUTSTANDING ACCOUNTS IN THE 15 ASSOCIATIONS

	Number of Associations	% of Total
30 days	4	26.7
60 days	1	6.7
90 days	2	13.3
6 months	1	6.7
Irregularly	7	46.7
TOTAL	15	100.0

1. To ferret out past-due accounts.
2. To act upon these accounts promptly and remind the patron of his responsibility to the agreement.
3. To examine the relationship between accounts receivable, charge accounts, and total sales so they may be kept within reasonable limits.

The objectives of the review with the employees generally were:

1. To remind the employees of the policy.
2. To inform the employees about particularly risky patrons.
3. Maintain good personnel relationships by keeping employees informed on the policies and program of the association.

Use of Interest Charges on Overdue Accounts and Discounts on Cash-purchases

Only five of the associations in the sample charged for credit on accounts that were overdue. However, most of the managers thought this would be an extremely useful device in controlling credit and lowering the receivable inventories. If a customer realizes that he will be penalized for running an overdue account, the incentive to keep his account current will increase considerably, especially if the penalty charges amount to more than the interest charges in the banks or other credit institutions available to patrons.

It must not be forgotten that the purpose of the association is to act as a supply business and not as a credit institution. Many managers, however, felt that credit control by this means was restricted by the credit policies of competing supply businesses. Charges for credit by the five associations using this device varied between 10 and 15 percent per annum. The year-end accounts receivable for associations that charged for credit were about 31 percent smaller than those that did not in 1963 and 30 percent smaller in 1962.

If a farm supply association charged enough to pay for the costs of extending credit, patrons would be better off to go to the credit agencies and borrow money.² It was found in this study that patrons did not go to the agencies because the local farm supply associations were not charging anything for the credit extended.

If incentives are provided to the cash customers, in the form of cash discounts, there is a possibility of gains in cash business. Five of the associations rewarded the cash customer with discounts on purchases. However, discounts were limited to certain specific commodities only. Discounts for items varied from two to 15 percent of the total purchases. The year-end accounts receivable are related to the total sales of the associations; they were about 27 percent smaller for associations that used cash discount policies than for those that did not in 1963; they were 30 percent smaller in 1962.

Commodities Causing Most Credit Problems

Six of the managers in the study said that fertilizer was the item that caused the most credit problems, and five said that feed caused the most (Table 13). Only three of these associations gave cash discounts on the commodity that caused major credit problems.

The main reason why fertilizer and feed caused credit problems was that purchases of these items took

TABLE 13 -- COMMODITIES CAUSING THE MOST CREDIT PROBLEMS IN THE FIFTEEN ASSOCIATIONS

	Number of Associations	% of Total
Fertilizer	6	40.0
Feed	5	33.3
Seed	2	13.3
Groceries	2	13.3
TOTAL	15	100.0

place in large amounts at a time of the year when farm incomes were extremely low. Also, these items usually required deliveries by the associations themselves, and quite often the farmers weren't there to pay for the supplies.

Manager's Views of Effects Alternative Policies Would Have

One sure way of controlling credit and virtually doing away with accounts receivable is to adopt a strict cash policy, where payment is made upon delivery or before. When asked what effect this would have on their business, most managers felt that their total sales would decrease considerably and they would lose some customers.

Four managers, however, felt that their customers would eventually come back, though their sales to them might decrease. Managers in five associations felt that total sales would decrease by about 31 to 40 percent. Estimates of decreases in total sales varied from 5 to 75 percent (Table 14).

TABLE 14 -- MANAGERS ESTIMATES OF DECREASE IN BUSINESS IF THEY WENT ON CASH BASIS

Estimated Percent Increase in Business Volume	Number of Cooperatives	Percent of Total
0 - 5	1	6.7
6 - 10	1	6.7
11 - 15	1	6.7
16 - 20	2	13.3
21 - 25	1	6.7
26 - 30	1	6.7
31 - 40	5	33.3
41 - 50	1	6.7
51 - 60	1	6.7
61 - 75	1	6.7
TOTAL	15	100.0

² It will be shown on P. 69, that on the average the costs of extending credit by farm supply associations varies between 13.5 to 18 percent, whereas it costs the P.C.A. about 6.7 percent and banks 7.6 percent. If interest was charged by the supply associations in such a manner that their costs would be covered, it certainly would be cheaper for the patron to borrow money either from the banks or the P.C.A.

When asked about the effect on the business if a more liberal credit policy was adopted, extending credit to more patrons and more credit to present debtors, five managers said that there would be no increases in sales. Estimates varied from 0 to 50 percent increase (Table 15).

Extent and Use of Advance Deposits for Merchandise

All of the associations in this study had sales promotion programs for pre-season order of seed and fertilizer. These orders required advance payment on which a discount was given. However, in response to the question, "Do you encourage advance deposits on your merchandise?" managers answered, "No." This was because they felt that a program of advance deposits would involve greater complications in accounting and consequently higher cost to the association.

TABLE 15 -- MANAGER'S ESTIMATES ON INCREASES IN BUSINESS VOLUMES IF CREDIT WAS EXTENDED OPENLY

Estimated Percent Increase in Business Volume	Number of Cooperatives	Percent of Total
0	5	33.3
1 - 5	1	6.7
6 - 10	4	26.7
11 - 15	1	6.7
16 - 20	3	20.0
21 - 25	0	0.0
26 - 30	0	0.0
31 - 40	0	0.0
41 - 50	1	6.7
TOTAL	15	100.0

Traits and Trends Associated With Credit Sales

The volume of retail sales, credit sales, and year-end inventory of accounts showed steady increases for the years 1955 to 1963. The increases in credit sales accounts receivable and seasonality caused additional problems of controlling accounts receivable.

Total Sales Volume

Total sales of the associations considered in this study in 1963 ranged from \$107,958 to \$3,078,539, and averaged \$802,667, compared with a range in 1955 of \$57,669 to \$1,469,701 and an average of \$728,000. This meant an increase in the average total sales of about 10.3 percent over the nine-year period (Figure 3). In this same period average year-end accounts receivable for these associations increased by 91.2 percent.

Sales to Members

Retail sales to members also showed a steady increase in the associations over the nine-year period of the study. Sales to members in the associations in 1963 ranged from \$103,569 to \$2,221,948, averaging \$578,612 as opposed to a range of \$50,514 to \$1,170,774 and

average of \$415,397 in 1955. This meant an increase of about 39.3 percent over the nine-year period.

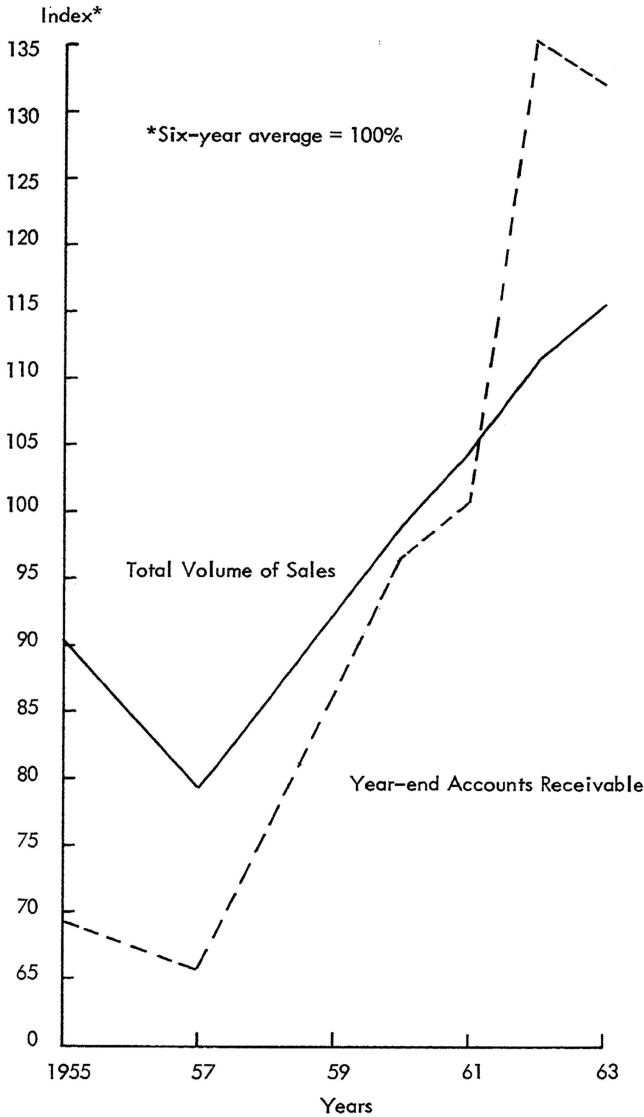
TABLE 16--AVERAGE SALES ON THE MARKET AND SALES TO MEMBERS AS PERCENTAGES OF TOTAL SALES EACH YEAR FROM ELEVEN ASSOCIATIONS

Year	Percentage of Sales		Average Sales per Association
	Member	Market	
1963	63.4	36.6	\$912,645
1962	61.5	38.5	878,446
1961	58.1	41.9	822,419
1960	62.1	37.9	781,173
1957	62.9	37.1	624,577
1955	58.3	41.7	728,000

Seasonality of Credit Sales

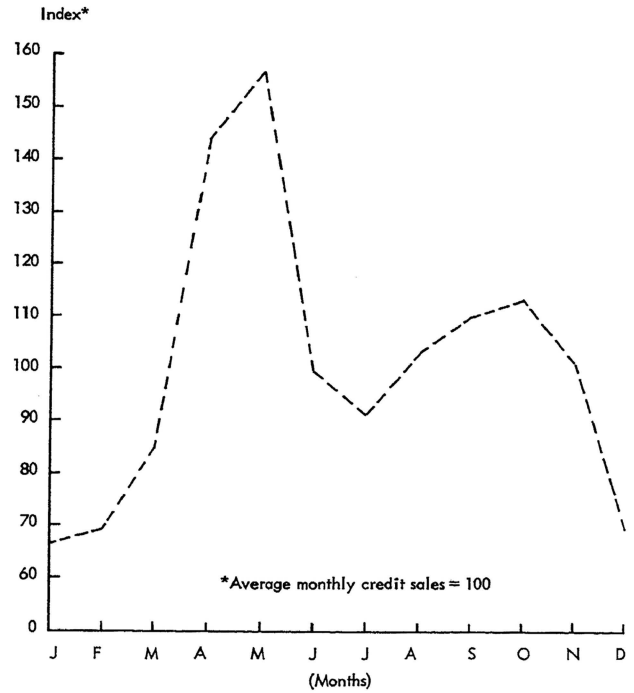
Seasonality of expenses and returns is a necessary result of the biological fact of seasonal agricultural production. As a result, a larger percentage of the demand

Fig. 3 - Indexes of Annual Volume of Sales and Year-end Accounts Receivable



for credit sales comes at two times of the year, and repayments come at another time fixed by the harvest season and marketing customs. Thus, great seasonal fluctuation occurs in the local volume of agricultural retail credit sales (Figure 4). This seasonality in demand for retail credit makes it hard to manage the funds of local farm supply cooperatives that provide short-term retail credit. The seasonality of credit sales also makes it impossible for farm supply co-ops to maintain an even level of cash. This means that co-ops have to either carry large inventories of cash in the off-seasons or obtain funds on the high interest short-term loan basis. Either practice increases cost to the cooperative. Increased cost to the cooperatives must in the long-run be reflected in the higher charges to the farmer for his supplies.

Fig. 4 - Index of Seasonal Pattern of Credit Sales (Average of '62, '63) for the 15 Associations



During the year, sales varied considerably from month to month. They ranged from a low of 66.5 percent of the 12 month average in January to a high of 156.7 percent in May (Figure 4). October displayed a rise in credit sales to 11.9 percent of the average from a low of 91.5 percent in July.

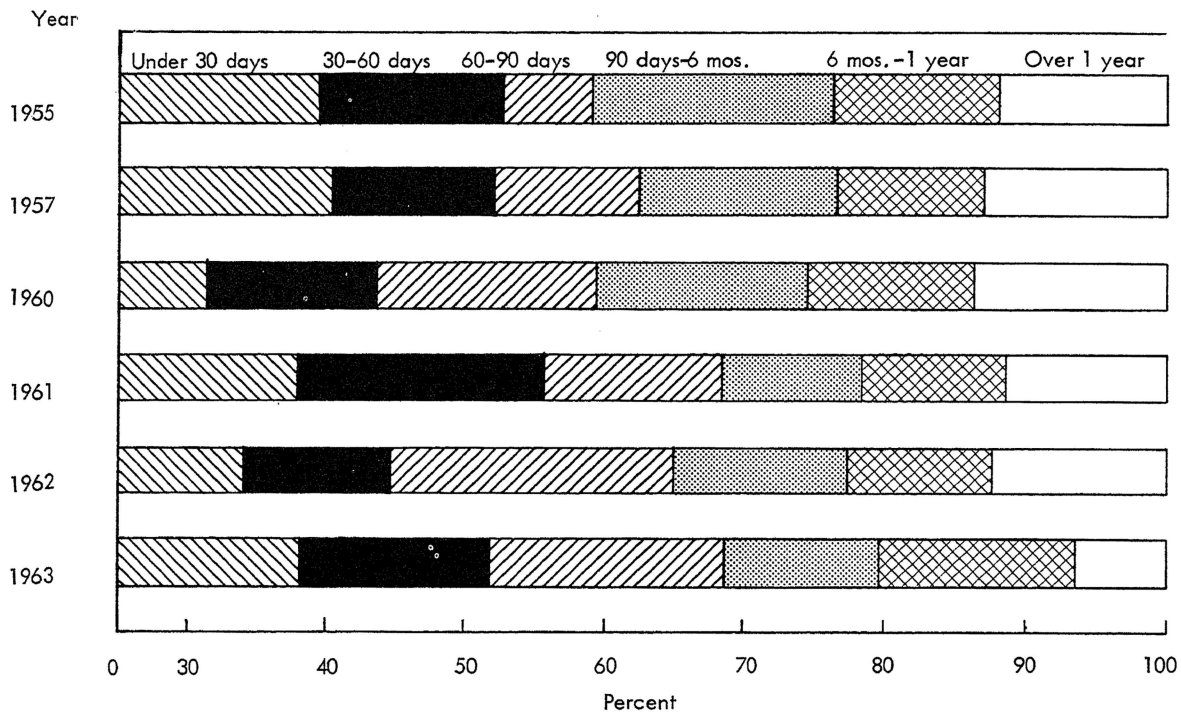
The months of larger credit sales were in the planting season when the demand for seed and fertilizer was huge and during feeding seasons when the demand was high. The first peak in the index of credit sales, during April and May, was probably due to the increased sales in seed and fertilizer. The second peak in the credit sales index for the months of September and October was due to increased feeding of hogs and beef.

Accounts Receivable

Age of accounts receivable on the books at the end of year was obtained from the audits of the association. Figure 5 shows the average ages of accounts in the 15 associations for the years considered in the study.

Year-end accounts receivable inventories for 1963 ranged from \$5,504 to \$88,252 for the associations studied and averaged \$34,182, compared to a range of \$2,574 to \$24,815 and an average of \$17,877 in 1955. Year-end accounts receivable inventories, therefore, increased by 91.2 percent from 1955 to 1963 (Figure 3). This percentage increase in year-end accounts receivable was nine times that of total sales. However, the absolute increase in sales

Fig. 5 - Year-end Accounts Receivable of Various Ages as Percentages of Total Year-end Accounts Receivable (Average for 15 Associations)



was \$201,000 compared to \$16,000 increase in accounts receivable on the books at the end of the year.

Year-end accounts receivable are probably not the most accurate estimate of the average accounts receivable for the year, since managers exert a great deal of pressure on patrons to settle their accounts at the end of the fiscal year. Five associations with figures available for study had monthly average accounts receivable about 11.9 percent higher than their year-end accounts receivable in 1963. In 1962, the monthly average of accounts receivable was about 12.7 percent higher than year-end accounts receivable for these associations.

Relationship Between Year-end Accounts Receivable and Total Sales

The relationship between year-end accounts receivable and total sales was estimated for two periods. The first relationship was estimated from data gathered from 10 of the associations for the years 1955 and 1957 (Figure 6). The estimated curve shows that if total sales equaled \$200,000, year-end accounts receivable would be an estimated \$10,000. If total sales were \$1,000,000, year-end accounts receivable would be \$22,000.

A similar relationship was estimated from data from all the 15 associations for the years 1962 and 1963 (Figure 6). Here again the curve shows that if total sales were

\$200,000, then year-end accounts receivable would be estimated at \$17,000 and if total sales were \$600,000, then year-end accounts receivable would be estimated at \$30,000 and if total sales were \$1,000,000, then year-end accounts receivable would be estimated at \$38,000. These two estimated curves, if compared, show that year-end accounts receivable per dollar of sales have increased considerably in the period from 1955 to 1963.

Relationship Between Credit Sales and Total Sales

The relationship between total sales and credit sales in the years 1963 and 1962 was estimated from data of nine associations. The line of relationship is shown in Figure 7. This shows that if total sales in an association were \$400,000, credit sales would be an estimated \$200,000. Again, if total sales were \$1,000,000, credit sales would be estimated at \$390,000.

Accts. Rec.
(\$1,000)

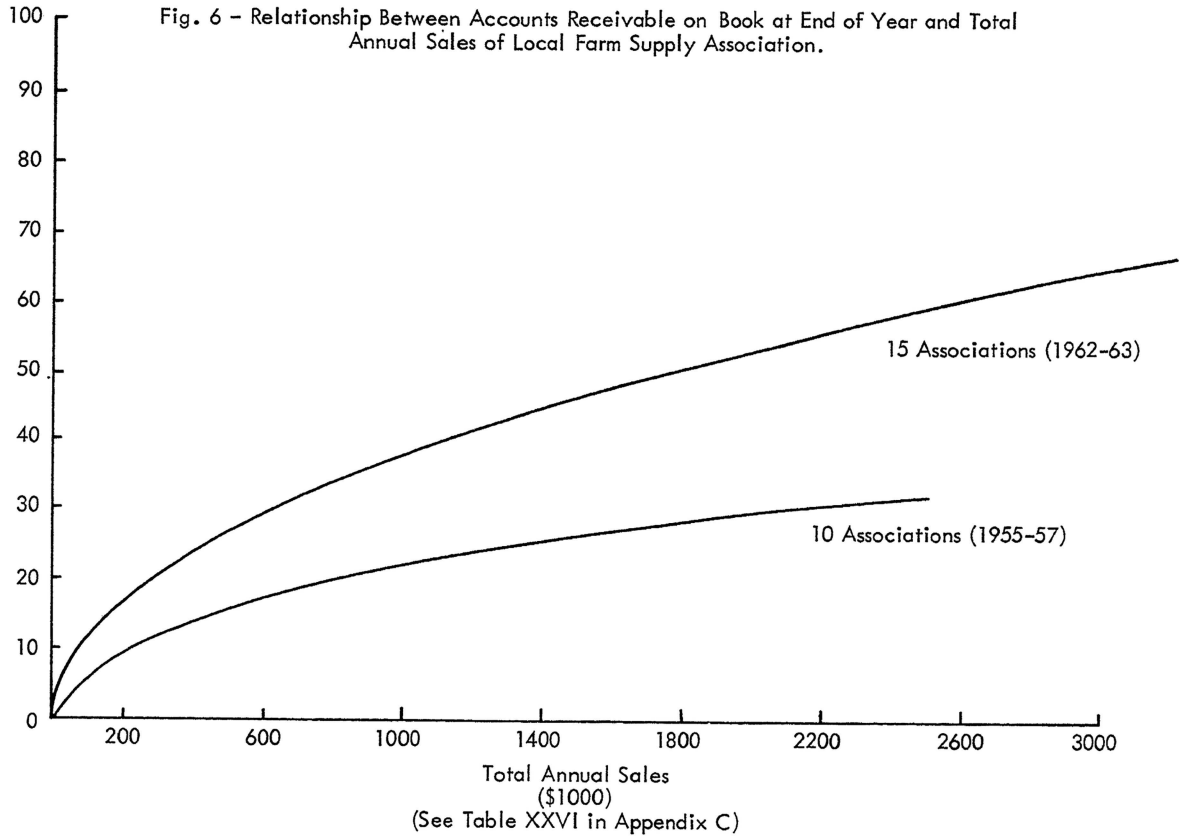
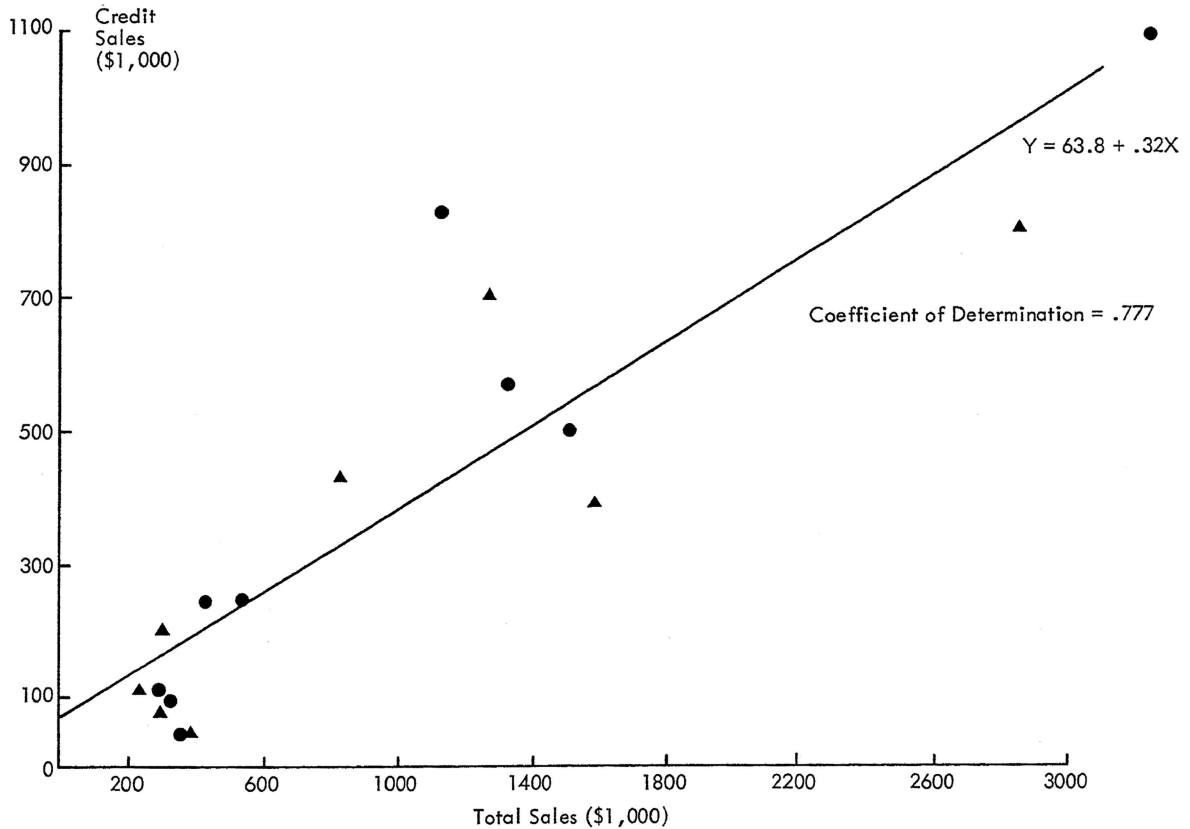


Fig. 7 - Total Sales vs. Credit Sales of Nine Farm Supply Associations (1963 and 1962)



Today, many credit agencies, like the local banks, Production Credit Associations, and credit unions are making their facilities available to farmers. If supply cooperatives charged the costs of credit to the patrons who use it, the customers would use credit agencies more.

In the three-year period, 1954-56, the annual interest cost of dealer installment credit to farmers averaged nearly 18 percent compared with 7.6 percent on commercial bank loans and 6.7 percent on Production Credit Loans.³ Studies by the Farmer's Cooperative Service indicate supply cooperatives' costs of extending credit average 13.5 to 15 percent of accounts receivable. These associations had better than average methods for controlling credit.

This suggests that credit furnished by the farm supply association costs more than credit extended by efficient credit agencies. Inventory of fiscal year-end accounts receivable and write-offs also show that these supply associations have not been good collection agencies.

Ten out of the 15 associations in this study were actually using a financing plan laid out by the Production Credit Associations. The Production Credit Associations worked out agreements with the supply cooperatives for handling producers' credit requirements. Generally, the cooperative has to guarantee farmers' notes to the Production Credit Association covering the credit sales. However, all notes written by producers with good credit ratings are accepted by the Production Credit Association without recourse from the farm supply associations. Such an agreement has its advantages for both the association and the members.

Before a Production Credit loan can actually be made available, the patron is required to fill out a credit application form pertaining to his business needs and financial situation. Information of this type enables the Production Credit Association officials to judge whether a loan should be made. On the basis, the official may advise the manager of the feasibility of guaranteeing a loan.

Most members use the association "budget" plan. Under this plan, a member arranges for a loan sufficient to cover his financial needs during the entire season. He gets the money when he needs it and repays the loan as he sells his products. A farmer does not have to pay interest on any part of a Production Credit loan until the money is made available to him. So, when a farmer applies for a loan from the P.C.A., he must make out a comprehensive plan for the season, estimating business and personal expenses, income, and products to be produced and marketed. Once a farmer's credit needs have been determined and approved, he can then borrow up

to a designated amount for his season's operation. The manager of the supply association can then apply the bill of sale for a customer to the amount that has been approved by the P.C.A. officials. This means that not only is the problem of the tying down of operating capital avoided by the supply association but, also, the farmer operates through a credit line, which means that he borrows money to meet immediate needs and is charged interest on it only from the time he makes a purchase on credit.

Experience with Financing Plans

Attitudes of Managers

Though the P.C.A. financing plan appears to be ideal in many ways, only two out of the 10 managers using it were fully satisfied with it (Table 17). Most managers considered it disadvantageous, since it involved a lot of paper work and red-tape before a loan could be made. For some reason managers seemed to be extremely reluctant to involve patrons in any paper work, even to the extent of having them sign sales slips. Some of them felt that even though the cooperative had to guarantee a customer and consequently bear the responsibility of collection, the requirements set forth by the P.C.A. for a customer were extreme. Furthermore, five managers reported that the plan was really a means on the part of

TABLE 17--MANAGER'S ATTITUDES TOWARD THE P. C. A. FINANCE PLAN IN THE FIFTEEN ASSOCIATIONS

ATTITUDE	Number of Assns. Expressing the Attitude	% of Total
Satisfied with P. C. A. plan	2	20.0
Not Satisfied with P. C. A. plan	8	80.0
Indifferent	0	
Total	10	100.0

the P.C.A. to expand their own business, rather than be of any real help to the farm cooperative business.

Attitudes of Patrons

Attitudes of patrons toward the finance plans set up by the P.C.A. were gathered from the managers of the supply organizations in this study.

Though the interest charges on the P.C.A. loans were low, between 6 and 7 percent, seven managers felt that customers were not willing to go under the plan because they would have to pay interest. They could obtain free credit from the supply organization. However, it is interesting to observe here that customer use of Production Credit loans in supply associations that charged for credit was about 123 percent more than in those that

³ J. T. Romans, "Knowledge and Attitudes of Tennessee Farmers Concerning Credit Practices and Some Effects on Credit Management and Credit Costs", a thesis submitted to the Graduate Council of the University of Tennessee in partial fulfillment of the requirements for the Degree of Master of Science, December, 1957.

TABLE 18--NUMBER OF PATRONS USING P.C.A. FINANCING PLANS COMPARED TO TOTAL NUMBER OF PATRONS PER ASSOCIATION; 1961 to 1963.

Assoc. Code No.	1963			1962			1961		
	Total No. of Patrons	Patrons With P.C.A. Plan	% Using P.C.A. Plan	Total No. of Patrons	Patrons With P.C.A. Plan	% Using P.C.A. Plan	Total No. of Patrons	Patrons With P.C.A. Plan	% Using P.C.A. Plan
1	1,344	35	2.60	1,351	25	1.85	1,104	15	1.36
2	636	6	.94	542	6	1.11	641	4	.62
3	688	5	.73	990	3	.30	865	1	.12
4	166	15	9.04	185	13	7.03	58	12	20.69
6	1,162	150	12.91	1,192	150	12.58	637	100	15.70
9	389	15	3.86	387	15	3.88	554	15	2.71
10	297	0	0	255	0	0	204	1	.49
11	309	11	3.56	319	2	.63	334	--	--
12	1,600	25	1.56	1,400	20	1.43	1,400	15	1.07
13	--	4	--	--	2	--	--	1	--
Total	6,591	266	4.04	6,621	236	3.56	5,797	164	2.83
Average	659.1	26.6		662.1	23.6		579.7	16.4	

TABLE 19--MANAGER'S ESTIMATE OF SIZES OF PURCHASES BY PATRONS USING FINANCING PLANS AS COMPARED TO PURCHASES BY THE AVERAGE PATRONS

	Number of Associations	% of Total
Larger Than Average	3	30.0
Same as Average	5	50.0
Smaller Than Average	2	20.0
TOTAL	10	100.0

TABLE 20--MANAGER'S ESTIMATES ON ITEMS MOST FREQUENTLY PURCHASED UNDER THE FINANCING PLANS

Items	Number of Associations
Fertilizer	5
Feed	4
Seed	1
Groceries	0
TOTAL	10

did not. This was due to the fact that these associations charged interest that varied between 10 and 15 percent per annum on overdue accounts.

Apparently, the main reason patrons have not used P.C.A. financing is that they can get free credit from the supply associations. The P.C.A. financing plan or financing plans of other credit agencies can succeed only if the associations charge for credit and provide for cash-discounts at a rate higher than the charges of the lending agencies.

The average number of patrons using the P.C.A. financing plan was estimated at 27 per association in 1963, as opposed to 24 members in 1962 (Table 18). In one

association only one customer used P.C.A.'s financing plan. The size of purchases of patrons using the plan, as compared to the purchases of other patrons, was reported to be larger than average by three managers and smaller than average by two (Table 19).

Fertilizer and feed were major sources of credit problems. Managers should try to arrange for purchases of these items to be made by patrons under the P.C.A. financing plan. Managers in five associations reported fertilizer was bought most often with money from the financing plan of P.C.A. Four managers reported feed was purchased most frequently, and one manager reported seed as the item most frequently purchased with P.C.A. financing (Table 20).

Estimating Costs of Credit

This study was designed to reveal how margins are affected by the extension of credit. It should also be helpful for later work in the area of determining price for organizations that cater to customers with credit sales and can serve as suitable frame of reference in calculating the ideal volume of credit sales to maximize profits.

Numerous studies have been conducted to determine why retail credit is important in businesses. All the answers boil down to one simple fact; the management hopes to increase sales by this additional service and thereby increase profits. Profits will increase if, and only if, sales increase at a faster rate than costs or costs decline more than sales.

Profits are a residual, involving sales and expenses. Reliable records are necessary to determine the combination that will yield the highest returns. It is fairly easy to gather data on sales, but reliable data pertaining to costs of extending credit are extremely hard to find. These costs may be hidden in such general cost items as travel, postage expense, salaries, interest-expense, and so on. At best an estimation may be made.

In estimating the costs of extending credit, bad-debt expense, interest expense, bookkeeping and collection expense, and the extra amount of time that the management has to put in to carry on a credit business need to be considered in detail.

Bad Debt Expense

The most obvious expenses are those accounts that turn out to be worthless. These may be classified under the bad-debt expense. A Dun and Bradstreet study claims

that the following are the average values of accounts in relation to their age.⁴

<i>Age of Accounts</i>	<i>% of Face Value</i>
30 days	100%
60 days	90%
6 months	67%
1 year	45%
2 years	23%
3 years	15%
5 years	1%

However, this estimation may not be comparable to the farm supply associations.

Bad-debt expenses and write-offs were found to be small compared to total year-end accounts receivable (Table 21). "Bad-debt expense" is the amount that was charged to general expense to adjust the reserve account to equal the accounts receivable (debts of patrons) that were more than six months or a year old. The negative \$194 on the "bad debt expense" indicates that the amount of old accounts was \$194 less in 1963 than in 1962, therefore, the reserve was reduced. The average bad-debt expense in 1962 was \$177.

The annual average write-off for the 15 supply associations was \$559 or 1.64 percent of the average accounts at the end of 1963 (Table 21). In 1960 the accounts receivable written off were 2.31 percent of the average accounts receivable at the end of the year.

Interest Expense

Another expense would be represented by the in-

⁴ See H. Ecker, Op. Cit.

TABLE 21--AVERAGE ACCOUNTS RECEIVABLE, BAD-DEBT EXPENSES AND WRITE-OFFS IN THE FIFTEEN ASSOCIATIONS

	Average year-end accounts receivable in \$	Average Bad debt expense in \$	Average write offs in \$	Write-offs as percentages of total year-end accounts receivable
1963	34,182	(194)*	559	1.64%
1962	34,991	177	121	.35%
1961	26,082	272	66	.25%
1960	25,019	513	579	2.31%

*Negative indicating that the adjustment to reserve for bad debts was to reduce the reserve and thereby causing a negative general expense charge.

terest that the organization has to pay on the money invested in accounts. Assuming an average accounts receivable of \$25,000 and the average net margin to be 5 percent, this would mean that \$23,750 was invested in the accounts receivable. If the interest rate were 7 percent, this would mean an annual interest cost of \$1,662.50.

Bookkeeping, Collection, and Management Time

These represent less obvious expenses, which should prove more difficult to estimate. Others that need to be included:

1. Time required to post and age accounts.

2. Time required to prepare monthly statements.
3. Time required to write and mail collection letters.
4. Supplies and postage.
5. Travel for purposes of collection.
6. Collection agency fees.
7. Credit Bureau fees.
8. Lawyers fees.
9. Time spent by management for conducting a credit sale and for collecting accounts.

An average of costs on items such as these is needed to give a meaningful total cost picture.

Impact of Credit Costs on Sales and Margins

Now look at how margins are influenced by additional costs due to credit extension. For example, credit costs are estimated to add up to \$5,000 for an organization. This means that net profits are \$5,000 less than they would have been if the same volume were obtained without credit. Assuming that the organization is operating at a 5 percent net margin, sales would have to be built up \$100,000 to offset credit costs alone. The pertinent question is whether the given credit policy would permit the addition of \$100,000 in sales.

T. R. Eichers in his study estimates the costs of handling credit by farmer supply organizations to be about \$1.74 for each \$100 of credit extended by 26 reporting cooperatives. The principal elements making up the credit cost reported in his study were as shown in Table 22.⁵

Interest. 37 percent of the total credit handling cost was the largest single cost item. Interest cost \$5.92 for \$100 of monthly average accounts receivable and \$0.65 for each hundred dollars of credit sales.

Bookkeeping costs amounted to \$4.80 per \$100 of monthly average accounts receivable. This item included the estimated time of the manager and other employees for the additional accounting required to handle credit. It also included the cost of additional accounting materials.

Extension costs amount to \$1.12 per \$100 of month-

TABLE 22--COST PER \$100 OF CREDIT SALES AND PER \$100 OF MONTHLY AVERAGE ACCOUNTS RECEIVABLE

Item	Cost per \$100 of Credit Sales	Cost per \$100 of monthly average accounts receivable
1. Interest	\$0.65	\$5.92
2. Extension	.12	1.12
3. Bookkeeping	.52	4.80
4. Collection	.35	3.20
5. Bad debts	.10	.96
Total	\$1.74	\$16.00

ly average accounts receivable. That includes charges for the estimated time required to establish a policy, to explain the policy to the patrons, to investigate the patrons' credit rating and the cost of opening a credit account.

Collection costs, including the time spent by the manager and other employees in collecting accounts, postage and stationery needed for collection, travel expense involved in collection accounts and fees paid to professional collectors, amounted to \$10.20 per \$100 of monthly average accounts receivable.

Debt loss is often considered one of the major costs of handling credit, but in these associations it amounted to only \$0.96 per \$100 of monthly average accounts receivable.

⁵ See T. R. Eichers, Op. Cit., P. 23.

Conclusions and Suggestions

One task of a credit manager of a farm supply cooperative is to determine which producers, whether because of incompetence or dishonesty, are not trustworthy. But the credit manager's work for the most part is devoted to examining the affairs of producer patrons who are honest and reasonably competent. He protects the cooperative and its members in general by limiting the extent to which these patrons can obtain goods on credit within the policies set up by the board of directors.

If the majority of producers were not competent and honest, the business of cooperatives would either come to a standstill or turn into quite a state of confusion. But, since there are all levels of competence, and since capital is limited, it is to the best interest of a cooperative that its resources be allocated according to efficiency and honesty.

If the credit manager is efficient, the business of marketing farm products and supplying productive resources will be accomplished at a minimum cost. Thus, the credit department is constructive, creative, and economical.

The decision facing cooperatives as to whether to sell on open account is a major policy question, to be decided by the board of directors. Such a decision, however, is not always discretionary, for the practices of competitors may often determine whether or not credit in the form of charge accounts shall be made available. Nevertheless, from an institutional standpoint and to the extent that choice may be exercised, there are a number of arguments for and against the charge account policy.

Arguments made in favor of granting credit through regular charge accounts relate mainly to the amount and kind of business which such accounts stimulate. These arguments are as follows:

Credit increases sales.

Credit attracts better class of trade.

Credit irons out business peaks.

Credit may reduce other operating cost.

On the other hand the disadvantages of extending credit are as follows:

Credit increases cost of doing business.

Credit leads to extravagance and recklessness.

Credit ties up capital.

Credit invites complaint, and too often cash customers pay for bad debts.

However, since sales are a function of the credit policy of the association as well as that of competitors, a certain degree of credit sales may have to be maintained in order to maximize profits. These credit sales should

be accomplished in the most efficient manner possible. This means the establishment of credit policies to suit various groups of customers as a suitable frame of reference, the adoption of specific procedures for extending credit to various groups of customers, and a thorough program for announcing these policies so that patrons may understand them fully.

In associations where credit programs were well advertised, though credit sales were considerably higher, year-end accounts receivable were considerably lower than in the other associations. This is an indication that thorough information about credit policies not only brings greater use of credit sales but results in better compliance with those policies.

A thorough check on credit extension should be maintained. A tremendous amount of unnecessary credit is extended due to the selling approach of the salesman. The selling approach should always be to ask the patron for cash without mentioning credit. In this study, two associations granted credit sometimes without asking patrons for cash. In these associations the amount of credit extended was considerably higher than in the associations that made it a practice to always ask for cash. If a customer asks for credit on his own, then credit arrangements may be made. If credit arrangements are made with a customer, suitable limits should be placed on him according to his operation.

In extending credit, managers need to devise systems for collecting information about businesses of patrons. They may then help the patron in determining his credit needs on the basis of this information and his credit rating and extend credit accordingly. The patron should be made fully aware of the terms, and sufficient evidence of agreement to these terms such as signatures on sales slips where terms are written should be kept. Regular credit policies should be recorded on the sales tickets and statements, and patrons should be impressed with the necessity to adhere to them unless special arrangements are made.

Accounts should be posted daily to the ledgers and the bookkeeper and manager should go over them quite thoroughly at regular intervals. Special notes should be made of defaulting patrons and employees should be informed about these patrons at regular employee meetings to avoid further extension of credit to them.

Outstanding accounts should be reviewed at meetings of the board of directors to obtain further information about defaulting patrons and enable the board to

exert pressure on the patrons to keep their accounts current.

Collection letters to overdue accounts should be written and mailed regularly to remind patrons about their accounts. Personal visits often prove effective. Such a visit should be made if an account is past due. Three associations in this study did an excellent job of following up on overdue accounts. As a result of this their accounts that were over 90 days old at the year end were only 8.3 percent of their total year-end accounts receivable as compared to 39.7 percent for the remaining associations in 1963. If feasible, managers should try to convert overdue accounts into notes.

A suitable set of incentives for paying cash or early payment of accounts is an effective way of keeping accounts receivable at a minimum.

Discounts given to the cash customer and interest charged to the credit customer are appropriate incentives. In this study, associations that gave cash discounts had 27 percent smaller year end accounts receivable in respect to total sales in 1963 and 30 percent smaller ones in 1962 than associations that did not give cash discounts. Also, in the associations that charged for credit, accounts receivable were 31 percent smaller in 1963 and 30 percent smaller in 1962 than in those associations that did not charge for credit.

Since farmers need credit to obtain supplies, they should be encouraged more and more to use existing credit agencies. Generally, a farmer purchases on credit to obtain operating supplies and is not in a position to meet his account until his produce is marketed. This might vary over quite a period of time. Consequently, carrying such accounts on the books without charging for them would involve considerable costs to the association. However, this problem may be avoided if a plan like the P.C.A. guarantee plan is brought into more extensive use.

This may be accomplished in several ways. First of all, working agreements with officials of credit agencies that are willing to cater to farmers should be established. Their services, requirements, and terms should be vigorously advertised and explained to patrons.

The finance plans of P.C.A. had not come into much use in the area under study. One reason was that little publicity had been given to this credit source. None of the managers displayed posters in their offices to inform patrons that short-term financing at low rates was avail-

able to them. Only one manager had repeatedly promoted the plan with patrons by oral discussions. Nine of the managers reported that they had talked to patrons off and on about the financing plan but not regularly. All the ten associations using the plan had been visited by P.C.A. fieldmen. The plan also had been explained to patrons at membership meetings. However, none had undertaken repetitive advertisement of this type.

The plan also had suffered due to the attitudes of some managers and their policies that offered free credit to customers.

Interest payments on borrowed operating capital necessitated by the extension of credit represent the major item among the various costs of extending credit. This is a fact that cannot be ignored by the management of the supply associations. Though the P.C.A. plan would not eradicate all the problems and costs of extending credit, it certainly would remove the major costs.

Managers in all supply businesses should strive to get all their Type II customers (the efficient operators who lack working capital) under such plans. These customers are a good risk but they need a great deal of short-term operating capital, if the associations do not charge for credit. Such capital is obtained by these customers as free credit and duly paid only after their products have been marketed. This causes associations to carry large volumes of accounts receivable, necessitating loans from financing agencies to carry on with the business.

If the supply associations would give cash discounts or charge for credit on accounts running over 30 days at a rate high enough to pay the cost of such service, patrons would find it cheaper to borrow money for their purchases. This, however, would not work with the Type I customer (who has the cash), since to him credit is a matter of convenience; he would be unwilling to pay even interest charges. However, interest charges on overdue accounts would induce him to make his payment more promptly.

Finance plans enable the patron to plan his operation and consequently his purchases in an orderly manner. They also enable the management to gain some perspective of the patron's operation. On the basis of this information, association managers may be able to determine more meaningfully the amount of credit that should be extended to a particular patron, and help him in planning his operation in an efficient manner.

Appendix

Method and Scope of Study

The sample of farm supply cooperatives for this study was obtained from a circle with radius of 75 miles, having Columbia as the center (Figure 1). From this area a random sample of 30 cooperatives was taken. The cooperatives were classified as good, fair, or poor on the basis of their year-end accounts receivable inventories and total volume of sales. A stratified random sample of 15 associations was then taken from these 30 farm supply associations.

Personal interviews were conducted with the managers of these associations for purposes of obtaining the necessary information. Additional information pertaining to credit data was obtained from the financial records of the associations.

The 15 local farm supply cooperatives selected for the personal interviews were located in 11 different counties. Four counties had two associations each.

Only the local farm supply and marketing cooperatives were considered for this study. Of the 15 local cooperatives where interviews were held, five were of the centralized type and the remaining 10 were independent local associations.

TABLE A--CREDIT SALES AND TOTAL SALES IN NINE FARM SUPPLY ASSOCIATIONS

Assoc. No.	1963		1962	
	Total Sales	Credit Sales	Total Sales	Credit Sales
	(in \$1, 000)			
1	3, 079	1, 037	2, 848	811
2	429	241	307	197
3	1, 510	503	1, 578	394
4	277	109	239	109
5	565	241	532	241
6	1, 126	833	1, 252	705
7	679	571	696	429
8	1, 321	91	810	74
9	316	41	316	42
Total	9, 302	2, 767	8, 578	3, 002
Average	1, 034	308	953	334

TABLE B--YEAR-END ACCOUNTS RECEIVABLE AND TOTAL SALES IN FIFTEEN FARM
SUPPLY ASSOCIATIONS IN 1962 AND 1963

Assoc. No.	1963		1962	
	Total Sales	Accts. Rec.	Total Sales	Accts. Rec.
	(in \$1,000)			
1	3,079	88	2,848	53
2	429	15	307	14
3	1,510	55	1,578	47
4	277	11	239	6
5	565	13	532	14
6	1,126	49	1,252	49
7	679	22	696	17
8	1,321	28	810	57
9	316	13	316	16
10	355	14	391	14
11	108	6	106	6
12	254	27	240	42
13	1,188	26	903	21
14	530	76	403	51
15	303	22	258	25
Total	12,040	465	10,879	432
Average	803	31	725	29

TABLE C--YEAR-END ACCOUNTS RECEIVABLE AND TOTAL SALES IN
NINE LOCAL ASSOCIATIONS IN 1955 AND ELEVEN IN 1957

Assoc. No.	1957		1955	
	Total Sales	Accts. Rec.	Total Sales	Accts. Rec.
	(in \$1,000)			
1	2,016	14	1,470	17
2	73	2	---	--
3	541	20	1,272	25
4	248	3	---	--
5	378	23	222	4
6	858	21	590	18
7	716	18	970	22
8	1,222	33	---	--
9	310	19	1,258	22
10	406	14	284	14
11	53	2	430	13
12	---	--	58	3
Total	6,821	169	6,554	138
Average	620	15	728	15