KANSAS FARMERS' ATTITUDES TOWARD COOPERATIVES

by

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B.S., Kansas State University, 1976

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A MASTER'S THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Agricultural Economics

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1977

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## ACKNOWLEDGEMENT

Many persons contributed to the completion of this thesis, as well as of my M.S. degree work. My acknowledgement and appreciation is for all of them.

I owe special thanks to Dr. Milton L. Manuel for his guidance, personal enthusiasm, and patient encouragement throughout the difficult phases of my study. I am also grateful to Drs. Orlo Sorenson and Wilfred Pine for their contributions and advice.

My deepest thanks goes to my wife, Barbara, my son and my family for the support, encouragement, and understanding that made successful completion of my studies possible.

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CHAPTER I

INTRODUCTION

A cooperative is defined as "A business voluntarily organized, operating at cost, which is owned, capitalized and controlled by member-patrons, sharing risks and benefits proportional to their participation."[1] Cooperatives are unique among business organizations in that they are democratically owned and controlled by the same people who use their services. Today's cooperatives are becoming increasingly large and complex business organizations, but they are still dependent upon active support by member-patrons. This active support is generally thought to be dependent upon members having favorable attitudes toward their cooperatives.[2]

The word "attitude" is one of the most commonly used terms in the social sciences. Its definition is as varied as the authors trying to define it. Probably the most accepted definition is that of G. W. Allport, who defined attitude as "a mental state of readiness, organized through experience and exerting a directive influence upon the individual's response to all objects or situations with which it is

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[1] E. P. Roy, Cooperatives: Today and Tomorrow, 2nd edition, Interstate Printers & Publishers, Inc., 1969, p. 1.

[2] H. C. Spurlock and D. E. Crawford, Farmer Needs, Attitudes and Participation in Selected Cooperatives in South Carolina, Bulletin 380, South Carolina Agr. Expt. Sta., Clemson University, Jan. 1975, p. 2.

associated."[3]  It is also thought that attitudinal behavior is learned, and is therefore, subject to modification through further learning.[4]

Cooperative leaders have long realized the importance of developing and maintaining favorable attitudes toward their organizations.  The Rochdale Pioneers were among the first to recognize that the process of member education was necessary for the continued success of their organization.[5]  It was felt that members needed to be continually reminded of the positive aspects of the cooperative, lest they forget why they joined.  Since the Rochdale times, specialized member relations programs have been developed to improve the attitudes and understanding which farmers have toward cooperative organizations.

## Problem and Objectives of the Study

It is known that cooperatives are dependent upon favorable member attitudes to achieve success and it is felt that attitudes can be improved through the use of effective member relations programs.  In order to develop an effective member relations program, however, the attitudes and understanding that members, and farmers in general, have toward their cooperatives must be known.

Numerous studies have been conducted across the nation with the intent of measuring farmers feelings toward cooperatives.  Differences

[3]Gordon W. Allport, "Attitudes," Readings in Attitude Theory and Measurement, Martin Fishbein, ed., John Wiley & Sons, Inc., New York, 1967, p. 3.

[4]Nigel Lemon, Attitudes and Their Measurement, John Wiley & Sons, Inc., New York, 1973, p. 15.

[5]H. E. Erdman and J. M. Tinley, The Principles of Cooperation, Bulletin 758, California Agr. Expt. Stat., Berkeley, Calif., Feb. 1957, p. 19.

in the structure of cooperative systems, as well as differences in characteristics about farmers from different regions make it difficult to apply the results of studies from different regions. For instance, the results of an attitude study for members of a centralized California vegetable cooperative are not necessarily representative of the attitudes for members of a federated Kansas grain marketing cooperative. Changes in attitudes over time also justify the need for continued updating of such studies.

A similar attitude study was conducted in 1964 by the Farmer Cooperative Service branch of the U.S.D.A. However, only partial analysis was made of the data and published results were incomplete. The original data base was kept intact and new analysis and tabulation was made. This study provides a base from which conclusions about changes in farmer attitudes since 1964 can be drawn.[6]

This study, then, is designed especially to measure the attitudes and understanding that Kansas farmers have toward cooperatives in 1977. The results of this study may be of use to interested researchers in other states and at other times, but the primary emphasis is to help Kansas cooperative leaders better understand the attitudes of the farmers which their organizations are designed to serve.

The primary objectives of this study are:

1. To determine Kansas farmers current attitudes and understanding toward their local cooperatives and cooperatives in general.

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[6]Irwin Rust, What Kansas Farmers Think About Cooperatives--and Why, F.C.S. Report No. 81, F.C.S., U.S.D.A., April 1966.

2.  To compare current Kansas farmers attitudes and understanding to those determined in 1964 and to analyze any changes that have taken place.

3.  To identify those factors which influence Kansas farmers attitudes toward cooperatives.

## Review of Literature

An examination of the literature on farmers' attitudes toward their cooperatives reveals that relatively few studies have been conducted on such a large sample of farmers as this study.  In addition, most of the studies involved only farmers who were already members of farmer cooperatives and did not survey non-member farmers for their attitudes.  The results of nearly all previous studies show that there is general agreement on the importance of favorable member attitudes for the success of any cooperative.

A survey of 481 members of twelve Missouri cooperatives found that farmers who do a large share of their business with cooperatives are more likely to agree that the success or failure of their local cooperative depends on their support.  The study also found favorable attitudes toward the local cooperative growing larger, but unfavorable attitudes toward expansion of regional cooperative activities.[7]  Most of these unfavorable attitudes were tied to a lack of knowledge about the regional organization.  Likewise, a random sample of 200 Missouri farmers surveyed in 1974 found that farmers views were positively

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[7] Carl Utterstrom, William Heffernan, and Randall Torgerson, Farmers' Attitudes Toward Cooperatives, Missouri Agr. Exp. Stat. Special Report 181, University of Missouri, Columbia, Missouri, March 1976, p. 5.

related to understanding about the cooperative, especially at the
regional level.[8] The study also found that positive attitudes were
highly associated with farmers relying on the cooperative management and
employees for their information about cooperatives.

In 1973, 500 randomly selected members of twenty South Carolina
cooperatives were in strong agreement that their continued participation
was important to the success of their cooperatives.[9] Members expressed
a high degree of satisfaction with the operation of their cooperatives
and also felt that cooperatives were adequately performing their role in
helping farmers and the community.

A study of Oregon cooperative members found that well-informed
members were the basic means of building favorable attitudes toward
cooperatives. The annual member meeting was found to be the most
effective method of informing members, provided there was good attend-
ance. The newsletter published by the cooperative was also found to be
highly effective in building favorable attitudes.[10]

A 1971 survey of 450 members of nine North Dakota cooperatives,
found that members had favorable attitudes toward their cooperatives,
and that those attitudes were positively related to their cooperative's
financial performance and to the extent of their patronization of that

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[8]Randall Torgerson, Stephen Plank, and William Heffernan, Farm
Operators Attitudes Toward Cooperatives, Missouri Agr. Exp. Stat.
Special Report 143, University of Missouri, Columbia, Missouri, March
1976, p. 15

[9]Idem, Farmer Needs, Attitudes, and Participation in Selected South
Carolina Cooperatives, South Carolina Agr. Expt. Sta. Report 380,
Clemson University, January 1975, p. 23.

[10]Gerald Korzan, Member Attitudes Toward Cooperatives, Oregon Agr.
Exp. Sta, Bulletin 509, Oregon State University, Corvallis, Oregon,
January 1952, p. 5.

cooperative.[11] No relationships were found to exist between attitudes and gross farm income, farm size or farming experience. Older members were more favorable towards cooperatives in general than were younger members, but were less favorable in their attitudes toward the local cooperative.

A study of Kansas urban officials in 1964 found them to have slightly negative attitudes toward farmer cooperatives. Most felt that farmers had a right to organize cooperatives, but that those cooperatives had a negative impact on other forms of businesses. A great deal of misunderstanding about public policies affecting cooperatives was revealed by the urban officials. As understanding improved, so did attitudes. Urban officials were more negative in their attitudes toward cooperatives in general than they were toward Kansas cooperatives. Those officials with negative attitudes tended to have strong feelings about their views. Demographic characteristics of the urban officials were found to have little or no significant influence on their attitudes. Those officials with more negative attitudes tended to rely on pamphlets published by business organizations for their information about cooperatives, while those with more favorable attitudes relied on cooperative pamphlets for their information.[12]

The farmer attitude study conducted by the Farmer Cooperative Service for Kansas (1964) involved sampling 1,200 Kansas farmers on

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[11]Luis A. Navarro, Members' Attitudes and Their Cooperatives' Financial Performance, Master's Thesis, Dept. of Ag. Economics, North Dakota State University, Fargo, N. Dak., December 1971, pp. 113-117.

[12]Agri-Research, Inc., Attitudes Toward Farmer Cooperatives By Urban Officials in Kansas, Unpublished Research Report for F.C.S., U.S.D.A., October 1964, pp. s-2 - s-6.

their views toward cooperatives.[13] The survey found that Kansas farmers had a good over-all understanding of cooperatives. They understood the nature and operation of cooperatives better than the role or public policies affecting these organizations. Farmers were found to have slightly better understanding of cooperatives than did Kansas urban officials. In terms of attitude scores, farmers were found to have only slightly favorable attitudes toward cooperatives. Attitudes toward local cooperatives were slightly more favorable than attitudes toward cooperatives in general. The sources of information about which cooperatives have the greatest control (managers, employees and directors), were associated with favorable attitudes, while those information sources about which cooperatives have least control (pamphlets from business organizations and talking with neighbors) were associated with unfavorable attitudes.

## Methodology of the Study

In order to insure more uniform survey results, each interview was conducted on a personal basis. Interviewers were volunteers from Kansas cooperatives, working in conjunction with the Kansas Cooperative Council. The questionnaire was designed so it could be completed in 45-60 minutes. Only actual farm operators were interviewed. In a few cases, farm wives agreed to complete the survey in the absence of their husbands when they felt sufficiently involved in the farm business. Each interviewer was supplied with a map of his assigned area showing the pre-selected sample sections. All farm operators within the sample sections were to be

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[13]Idem, What Kansas Farmers Think About Cooperatives--And Why, F.C.S. Report No. 81, F.C.S., U.S.D.A., April 1966.

surveyed. The sample areas had been selected in 1964 from the U.S.D.A. Master Sample of Agriculture.[14] Nearly all the sample areas used in this survey were the same ones used in the 1964 survey. This was done so that theoretically, the same farm operators would be resurveyed to detect any attitude changes. The sample sections were transferred from the 1964 county highway maps to more recently updated highway maps. In some cases, the newer maps showed that certain areas sampled in 1964 were either no longer farming areas, as in the case of the Fort Riley Military Reservation expansion in Geary County, or they showed that no farm operators were currently living in the sample areas. In these instances, new sample areas of equal size and shape were chosen by strict randomization procedures. All of the primary sample areas were adjoined by an alternate sample area from which farm operators were to be surveyed in the event it was not possible to interview those within the primary sample area.

This survey was conducted from December 1976 through April 1977. Each interviewer was responsible for surveying all farm operators in the areas assigned. In total, 1,041 useable questionnaires were completed, representing a 1.3 percent sample of all Kansas farm operators.[15] This compares to 1,148 farmers surveyed in 1964.

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[14]The Master Sample of Agriculture is an area frame for sampling characteristics associated with farms. It was constructed in 1950 at Iowa State University with the U.S.D.A. and Bureau of Census cooperating. The sampling frame consists of county maps upon which minor civil divisions and county units, each containing a specified number of segments, have been delineated. Each segment was equalized to contain approximately four farms. This was considered the minimum number that would produce segments for which acceptable boundaries could be found on county maps.

[15]Based on 1974 Census of Agriculture data.

The eight-page questionnaire (Appendix A) includes all the questions asked in the 1964 survey without any wording changes. In addition, several questions which covered topics of special interest to today's cooperatives were included. Also, more detailed background information was requested from the farm operators in the 1977 survey. Each interviewer attended a training session where topics such as, how to contact the farmers in the sample, conducting the interview, the meaning behind each question and what to do with the completed survey forms were discussed. Interviewers were also supplied with a set of written instructions to use as a reference guide when actually interviewing. The completed forms were returned to the Department of Economics where they were coded and punched onto data processing cards for analysis and tabulation.

The questionnaire had originally been developed by the Farmer Cooperative Service branch of the U.S.D.A. in Washington and was carefully designed to provide an accurate measurement of farmers attitudes and understanding of cooperatives. The questionnaire consists of six sections. The first section deals with the background information about the farm operator such as age, farm size, education, cooperative membership, cooperative patronage, and if his father was a member of a cooperative. The second section contains fifteen attitude questions concerning the local cooperatives in the respondent's part of Kansas. The third section contains eleven attitude questions concerning cooperatives in general. The fourth section of the questionnaire has eleven factual questions designed to test the farmer's understanding of cooperatives. The fifth section contains thirty-one information sources which the farmer might use to inform himself about cooperatives. The

last section of the questionnaire provided space for the farmers to make any additional comments they felt might be useful in expressing their beliefs.

In measuring attitudes, the wording and construction of the questionnaire has much to do with the usefulness of the results. Carefully thought-out principles were utilized in the design of the questionnaire. First, the questionnaire was designed to obtain as much information as possible in the 45 to 60 minutes of interviewing time. Questions were designed for "first-reaction" answers and every effort was made to use familiar wording so as to lessen the chance of misinterpretation. The questions in sections II and III of the survey were designed to measure the farmer's attitudes, the strength of their feelings and their willingness to express an opinion. These questions covered three general subject categories: (1) the nature and operation of cooperatives, (2) the economic role of cooperatives, and (3) public policy affecting cooperatives. Questions covering each of these categories were randomly mixed throughout the questionnaire so as to minimize any possible bias caused by "interview fatigue." Farmers could give any one of five responses to the twenty-six questions asked in sections II and III. The responses were "definitely agree," "generally agree," "no opinion," "generally disagree," "definitely disagree." Questions were stated rather strongly so one could be sure that farmers who checked the "definitely agree" or "definitely disagree" had strong feelings on the subject.

Responses to the eleven factual questions in section IV could be given as "correct," "incorrect," and "no opinion." These questions were designed to measure the farmer's understanding of cooperatives, as well

as his willingness to express some knowledge of cooperatives, whether right or wrong. The questions were divided among the three subject categories, nature, role, and policy and were randomly mixed as before.

The information sources in Section V were grouped under four main headings: (1) Personal contacts, (2) Meetings, (3) Press, Radio and Television, and (4) Other activities. Responses to each source of information could be recorded as of "major importance," "some importance," "little importance," or "no importance" to the farm operator. These responses were not included in the computation of the attitude or understanding indexes, but are utilized in a separate summary and analysis.

A significant source of bias can result when respondents show a tendency to agree with questions as they are stated in the questionnaire, whether they are stated in the positive or negative form. This tendency is referred to as the Halo Effect. Separate analysis allows this tendency to be measured and analyzed. This analysis is discussed in Chapter III. To minimize any bias caused by the Halo Effect a balance was maintained between questions stated in the positive form and questions stated in the negative form. Each subject category was covered by several questions so as to minimize any influence caused by misinterpretation of a question.

## Computation of the Indexes

The responses to the twenty-six attitude questions in Sections II and III and the eleven factual questions in Section IV were used to derive a complete series of five indexes for each respondent. Each

index has a possible score ranging from 0 to 100. An explanation of the meaning for each of the five indexes follows:

1. <u>Attitude Index</u> - A measure of the degree of respondent's approval or disapproval of the nature and role of cooperatives and public policies affecting them. An index score of 50 indicates a neutral attitude, index scores greater than 50 indicate relatively favorable attitudes and index scores less than 50 indicate relatively unfavorable attitudes. A score of 100 would indicate a very strong favorable attitude and a score of 0 indicates a very strong unfavorable response to all attitude questions used in that index.

2. <u>Feeling Index</u> - A measure of how strong the respondent's feelings are about cooperatives whether his attitudes are favorable or unfavorable. An index score of 100 would indicate that the respondent checked all the questions either "definitely agree" or "definitely disagree." A score of 0 would indicate all questions were responded to with "no opinion."

3. <u>Opinion Index</u> - The percentage of attitude questions in Sections II and III about which the respondent expressed an attitude. A score of 100 indicates an opinionated response to all questions while a score of 0 indicates a "no opinion" response to each question.

4. <u>Understanding Index</u> - A measure of the respondent's understanding of cooperatives. An index score of 100 indicates complete understanding and a score of 0 shows complete misunderstanding.

5. <u>Knowledge Index</u> - The percentage of factual questions in Section IV about which the respondent professed some knowledge whether he knew the correct answer or not. An index score of 100 indicates a

response of "correct" or "incorrect" to all questions and a score of 0 would signify "no opinion" responses to each question.

Each of the five above types of indexes were derived separately for the three subject categories of role, nature and public policy. As discussed before, there were separate questions relative to local cooperatives and cooperatives in general, so indexes were further divided to cover each of these subjects. A total of thirty-two separate indexes were computed. Table I-1 provides a summary of the indexes computed. Eighteen additional indexes were derived to analyze the Halo Effect and these are discussed in Chapter III.

Table I-1

Summary of Indexes Derived

|  | Attitude | Feeling | Opinion | Understanding | Knowledge |
|---|---|---|---|---|---|
| Cooperatives in General | | | | | |
| Nature | X | X | X | X | X |
| Role | X | X | X | X | X |
| Policy | X | X | X | X | X |
| Local Cooperatives | | | | | |
| Nature | X | X | X | | |
| Role | X | X | X | | |
| Policy | X | X | X | | |

The questions which were used in the computation of each index are shown in the index code in Appendix A. Certain questions were broad enough to be used in both the attitude indexes and the understanding indexes. Some sample questions used in the respective indexes are shown below. Note that both the positive and negative forms are shown.

## Sample Attitude, Feeling and Opinion Questions

<u>Positive Form</u>                     <u>Negative Form</u>

### I.  The Nature and Operation of Cooperatives

Local Cooperatives--

Serve both large farmers and
small farmers, without subsidiz-
ing either group at the expense
of the other.

Are controlled by large organi-
zations in cities like Kansas
City, Topeka, Hutchinson,
Manhattan, rather than by local
farmers.

Cooperatives in General--

Serve both large farmers and
small farmers, without subsidiz-
ing either group at the expense
of the other.

Have lost touch with the farmers
whose interests they are
supposed to serve.

### II.  The Economic Role of Cooperatives

Local Cooperatives--

Have helped in the economic
development of this community.

Have lacked the leadership and
management needed to be effec-
tive in setting the competitive
pace.

Cooperatives in General--

Are helping to preserve the
family farm by increasing
farmer's incomes.

Are outliving their usefulness
as farms are continuing to
become larger and more commer-
cialized.

### III.  Public Policy Affecting Cooperatives

Local Cooperatives--

Must pay all local property
taxes at the same rate as any
other type of business.

Have hurt private businesses in
this area because of the tax
exemptions and special treatment
they receive.

Cooperatives in General--

| | |
|---|---|
| Have been successful because of good management rather than because of tax advantages and special treatment. | Should be subject to every tax that other private businesses must pay. |

The eleven factual questions from Section IV of the questionnaire were not divided between local cooperatives and cooperatives in general, but instead were directed toward all cooperatives. Sample questions used in the indexes of understanding and knowledge are shown below.

<u>Sample Understanding and Knowledge Questions</u>

<u>Positive Form</u>                                    <u>Negative Form</u>

I.  The Nature and Operation of Cooperatives

Farmers Cooperatives--

| | |
|---|---|
| Are controlled by members on a one-member one-vote basis regardless of money invested or volume of business in the co-op. | Are owned jointly by their employees and their farmer customers. |

II.  The Economic Role of Cooperatives

Farmer Cooperatives--

| | |
|---|---|
| Have formed federated cooperatives whose members are other cooperatives rather than individual farmers. | Sell feed, fertilizer and other farm supplies at prices below those charged by private dealers. |

III.  Public Policy Affecting Cooperatives

Farmer Cooperatives--

| | |
|---|---|
| Are incorporated under special state laws rather than the general laws for incorporation. | Are totally exempt from many taxes which must be paid by private businesses. |

Each of the various indexes were derived through specific computational methods, starting directly with the responses to the

questionnaire. Responses to the attitude questions in Sections II and III were scored as +2 for "definitely agree," +1 for "generally agree," 0 for "no opinion," -1 for "generally disagree, -2 for "definitely disagree." Responses to the factual questions used to derive the indexes of understanding and knowledge were scored as +1 for "correct," -1 for "incorrect," and 0 for "no opinion." This scoring was utilized in the computation of all indexes.

Each of the five types of indexes had a slightly different computational method. The complete computational procedure for each index is detailed in the index code (Appendix A).

The indexes of attitude were obtained by adding algebraically the corresponding response scored for each question used in that index. Responses to questions stated in the negative form were summed separately and the sum multiplied by -1 to make them comparable to the sum of the positively stated questions. These two sums were then added together to provide a raw attitude score. This score could range from a +2 times the number of questions to a -2 times the questions used in that index. These raw scores were converted to index numbers by adding a positive number equal to twice the total number of questions used in that index and then multiplying the number by a positive number equal to 100 divided by four times the number of questions used in that index. An example of how an attitude index might be computed should help to clarify the procedure. The general policy attitude index (index 11 in the Index Code) provides a good example. Suppose Farmer Brown took the survey and "generally agreed" with the positive questions and "generally disagreed" with the negative question used in this particular index. We start by adding the scores of his responses to the negative questions.

There are two negative questions and he has a score of -1 on each so we add the two scores. This equals -2 so now we multiply this by -1 and the raw score for negative questions is +2. Now the positive response scores are summed and since there are three positive questions, his sum is +3. Now we add the two raw scores together so that our raw index score is +5. Since there were five questions used in this index we add two times five to the raw score, giving us 15. We then multiply 15 by 100 divided by 4 times 5, or 5 and this gives us the final index score of 75. Farmer Brown has a fairly favorable general policy attitude.

The raw feeling scores were obtained by summation of the absolute values of the response scores to the attitude questions used in each index. These raw scores varied from a possible low of zero to a possible high of twice the number of questions in each index. These raw scores were converted to indexes by multiplying by a positive number equal to twice the number of questions used in each index. Again, looking at Farmer Brown's responses for the questions in the general policy index we get a raw score of 5 by summing the absolute of -2 and +3. This raw score is multiplied by ten (100 divided by twice the number of questions) and the index of feeling is 50.

Raw opinion scores were obtained by counting the number of zero scored responses to questions used in each index and subtracting the sum from the total number of questions used in that index. Raw opinion scores varied from a possible low of zero to a possible high equal to the total number of questions in the index. The raw scores were converted to index numbers by multiplying by a positive number equal to 100 divided by the total number of questions in the index. Since Farmer Brown did not answer any of the questions in the general policy index

with a "no opinion" he has no zero scores and his opinion index is 5 times 20 (100 divided by 5) or 100.

Indexes of understanding were computed in the same manner as the attitude indexes. The raw understanding scores were obtained by summing algebraically the responses scores for each of the factual questions used in that index. Responses to questions stated in false form were summed separately and the result multiplied by -1 before adding the sum obtained for questions stated in true form. The raw scores could vary from a possible -1 times the number of questions used in that index to a possible +1 times the number of questions. The raw scores were converted to indexes by adding a positive number equal to the total number of questions used in the index and multiplying the result by a positive number equal to 100 divided by twice the number of questions in the index. Suppose that Farmer Brown had answered all the questions in the index of policy understanding as "correct." Two of the questions, however, are stated in the false form so he has answered them wrongly and his index score will show it. His raw score is +2 times -1 plus +3 or +1. Now we add to the raw score one times the number of questions in the index or 5. This gives a total of 6 and we multiply this by 10 (100 divided by 2 times 5) and the index number for policy understanding is 60.

Knowledge indexes were computed in the same manner as opinion indexes except that they were based on responses to the factual questions rather than attitude questions. The raw scores were obtained by counting the number of zero scored responses and subtracting the sum from the total number of questions used in the index. Knowledge raw scores could range from a possible low of zero to a possible high equal

to the total number of questions in the index. The raw scores converted to indexes by multiplying a positive number equal to 100 divided by the number of questions used in the index. Since Farmer Brown answered all the questions pertaining to the policy knowledge index as "correct" he has no zero scores and his raw score is 5. We multiply this score by 20 (100 divided by 5) and his knowledge index score for policy is 100.

While no indexes were calculated for the information sources in Section V of the questionnaire, the responses were still given numerical scores. The responses were scored as 8 for "major importance," 4 for "some importance," 2 for "little importance," and 0 for "no importance." This scoring provided a tool for summarizing, measuring, and analysis of the relative importance of each information source to Kansas farmers.

CHAPTER II

CHARACTERISTICS OF FARMERS IN THE SURVEY

## Size of Farm Operation

The 1,041 farm operators participating in this study were fairly typical Kansas farmers. In terms of farm size, the sample of Kansas farmers in this survey included slightly more larger farmers than the 1974 Census of Agriculture would indicate. Census data show only 36.7 percent of Kansas farms were over 500 acres, while the survey data show that 53.6 percent of those interviewed farmed more than 500 acres. This was also increased over the 1964 farmer attitude survey which showed only 37.1 percent of the farms were over 500 acres. The information on farm size for the 1977 and 1964 surveys, as well as the 1974 Census is shown in Table II-1.

Table II-1

Comparison of Size of Farming Operation for 1977 and
1964 Surveys with 1974 Census Data, Kansas

|  | 1974 Census[a] | 1977 Survey | 1964 Survey |
|---|---|---|---|
|  | (percentages) | | |
| Under 200 Acres | 35.5 | 17.3 | 22.1 |
| 200-499 | 27.8 | 29.1 | 40.3 |
| 500-999 | 20.3 | 28.3 | 37.1[b] |
| 1,000 & Over Acres | 16.4 | 25.3 | |

[a]1974 Census of Agriculture, Kansas, Vol. 1, Part 16, Section I, Table 2, Page 2.

[b]These categories were combined in the 1964 survey.

## Age of Farm Operator

The average age of farmers in the 1977 attitude survey was 50.4 years, slightly below the 1974 Census average for Kansas farmers of 52.2 years. The survey data showed a higher percentage of farmers under the age of thirty-five than comparable Census data would indicate. This could be partially due to the greater numbers of young men going into farming since the 1974 Census was completed. Table II-2 shows the percentages of farmers in each of three age categories. Only three age categories are used, due to a difference in age brackets for Census data and survey data, even though more detailed age information is available in Appendix Table B-1. In Table II-2 the Under 35 age category represents the younger, less established farmers. The 35-64 age category represents the more established, middle-aged farmers, and the Over 65 category represents the retiring and less active farm operators. The 1964 survey respondents were asked only to respond if they were over 40 years old or under 40 years old. Table II-3 shows how this information compares with the 1977 survey.

Table II-2

Comparison of Age of Farm Operators in 1977 Survey
with 1974 Census Data, Kansas

|  | 1974 Census[a] | 1977 Survey |
|---|---|---|
|  | (percentages) | |
| Under 35 Years | 13.5 | 15.8 |
| 35-64 Years | 65.7 | 69.1 |
| 65 Years & Older | 20.8 | 15.1 |
| Average Age | 52.2 years | 50.4 years |

[a]1974 Census of Agriculture, Kansas, Vol. 1, Part 16, Section I, Table 3, Page 2.

Table II-3

Comparison of Age of Farm Operator in 1977 and
1964 Attitude Surveys, Kansas

|  | 1977 Survey | 1964 Survey |
|---|---|---|
|  | (percentages) | |
| Under 40 Years | 24.3 | 25.4 |
| 40 Years & Older | 75.7 | 74.3 |

## Education

Of all farmers surveyed in 1977, 18.0 percent had eight years or less of formal education, while 50.8 percent had graduated from high school and 21.4 percent of the farmers had at least some college education. Breaking the farmers down into age categories showed that there was a highly significant difference in education between the various groups. Using the Chi-Square Proportionate Difference test, the difference in education between the six age groups was significant at the .005 level. Table II-4 summarizes the age and education comparisons.

Table II-4

Comparison of Age to Highest Level of
Education Attained, Kansas, 1977

| Education | Age of Farm Operator | | | | | |
|---|---|---|---|---|---|---|
|  | Under 35 | 35-39 | 40-49 | 50-59 | 60-64 | 65-Older |
| 8th Grade | 3.0 | 1.1 | 6.6 | 17.2 | 26.2 | 52.2 |
| High School | 34.8 | 50.6 | 56.6 | 62.0 | 57.2 | 34.4 |
| Some College | 40.9 | 31.5 | 24.1 | 17.2 | 10.3 | 9.6 |
| College Degree | 21.3 | 16.9 | 12.7 | 3.6 | 6.2 | 3.8 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

*Significant at .005 level, Chi-square = 289.5; critical value d.f. = 15 is 32.80.

Note that 97 percent of the farmers under thirty-five had completed high school while only 47.8 percent of those over sixty-five had done the same. The results of this tabulation showed that, as expected, younger farmers tended to have more years of formal education.

Further analysis indicated that those with college education tended to be the larger farmers. Table II-5 shows how farm size compared to education in the 1977 survey. The differences in farm size between the various education levels were also significant at the .005 level.

Table II-5

Comparison of Farm Size to Education, Kansas, 1977

| Farm Size | Level of Education | | | |
| | 8th Grade | High School | Some College | College Degree |
|---|---|---|---|---|
| | (percentages) | | | |
| Under 200 Acres | 25.1 | 36.9 | 24.1 | 13.9 |
| 200-499 Acres | 17.0 | 30.4 | 28.7 | 23.8 |
| 500-999 Acres | 12.6 | 26.9 | 29.6 | 30.9 |
| 1,000 & Over Acres | 14.7 | 12.7 | 31.4 | 41.2 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |

*Significant at .005 level, Chi-square = 46.52; critical value d.f. = 9 is 23.59.

The 1964 farmer attitude study did not ask questions concerning the farmers' level of education, therefore no comparison could be drawn between the two surveys.

## Cooperative Membership

Nearly 91 percent of the farmers surveyed in 1977 belonged to at least one farmer cooperative, while 40.7 percent belonged to at least three or more cooperatives.  The average Kansas farmer belonged to two cooperatives.  Table II-6 shows the comparison of 1977 and 1964 membership figures.  In percentage terms, more farmers belonged to farmer cooperatives in 1977 (90.9 percent) than in 1964 (88.7 percent).  However, due to the declining farm population, total membership in farmer cooperatives had been decreasing since 1955.  For the United States, total cooperative membership had declined 13.5 percent from 1964 to 1975.[16]

Table II-6

Cooperative Membership of Farmers Surveyed, Kansas

| Number of Cooperatives Farmers Belong to | 1977 | 1964 |
|---|---|---|
| | (percentages of all farmers surveyed) | |
| None | 9.1 | 11.3 |
| 1 | 19.7 | 21.5 |
| 2 | 30.5 | 34.2 |
| 3 | 22.0 | 20.2 |
| 4 | 11.6 | 8.4 |
| 5 | 4.4 | 3.1 |
| 6 | 2.4 | 0.7 |
| 7 | 0.0 | 0.3 |
| 8 | 0.0 | 0.1 |
| 9 | 0.3 | 0.0 |
| Total | 100.0 | 100.0 |

[16]Statistics for Farmer Cooperatives, Farmer Cooperative Service, Research Report 39, April 1977, Table 3, p. 9.

A further breakdown of cooperative membership shows that there was a highly significant difference in cooperative membership between the various size farmers. Table II-7 shows that the larger farmers were more likely to be members of cooperatives and that generally, those who did belong were members of more cooperatives than their smaller counterparts. A greater percentage of smaller farmers were not members of cooperatives and those who did belong generally, were members of only one or two.

Table II-7

Comparison of Cooperative Membership
and Farm Size, Kansas, 1977

| Number of Cooperatives Farmers Belong to | Farm Size | | | |
|---|---|---|---|---|
| | Under 200 Acres | 200-499 | 500-999 | 1,000-Over |
| | (percentages) | | | |
| None | 23.6 | 8.6 | 6.1 | 3.0 |
| 1 | 32.8 | 22.4 | 16.3 | 11.4 |
| 2 | 25.0 | 36.6 | 31.2 | 26.2 |
| 3 | 14.4 | 20.5 | 25.1 | 25.5 |
| 4 | 3.3 | 7.3 | 12.9 | 20.9 |
| 5 | 0.0 | 3.6 | 5.8 | 6.8 |
| 6 | 0.6 | 1.0 | 2.4 | 5.3 |
| 9 | 0.0 | 0.0 | 0.3 | 0.8 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |

*Significant at the .005 level, Chi-square = 166.75; critical value d.f. = 21 is 41.40.

A comparison of age to cooperative membership shows that younger farmers were less likely to be members of cooperatives than were older farmers. However, the difference was not great enough to be

statistically significant, even at the .10 level.  Table II-8 summarizes
the comparison.

Table II-8

Comparison of Cooperative Membership to Age
of Farm Operator, Kansas, 1977

| Number of Coop-<br>eratives Farmers<br>Belong to | Age | | | | | |
|---|---|---|---|---|---|---|
| | Under<br>35 Yrs. | 35-39 | 40-49 | 50-59 | 60-64 | 65 &<br>Older |
| | (percentages) | | | | | |
| None | 12.2 | 10.1 | 9.9 | 7.3 | 7.6 | 8.9 |
| 1 | 23.2 | 15.7 | 16.0 | 17.5 | 22.1 | 24.8 |
| 2 | 28.0 | 31.5 | 26.4 | 30.7 | 37.9 | 30.6 |
| 3 | 18.9 | 28.1 | 25.9 | 22.3 | 16.6 | 21.0 |
| 4 | 11.6 | 10.1 | 11.3 | 13.9 | 9.7 | 10.8 |
| 5 | 4.3 | 1.1 | 6.1 | 6.2 | 4.8 | 0.6 |
| 6 | 1.8 | 3.4 | 3.3 | 1.5 | 1.4 | 3.2 |
| 9 | 0.0 | 0.0 | 0.5 | 0.7 | 0.0 | 0.0 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

*Not significant at .10 level, Chi-square = 30.80; critical value
d.f. = 35 is 45.25.

Education also appeared to have an effect on cooperative membership
but, as in the case of age, the differences shown in Table II-9 were not
great enough to be statistically significant at the .10 level.

Those farmers who responded that they were not members of any
farmer cooperative (9.1 percent of all farmers) were asked to indicate
if they patronized any cooperatives.  A total of 57 percent of the
non-member farmers (5.2 percent of all farmers) said that even though
they did not belong to any cooperatives they did conduct some of their
business through them.  This left a total of only 3.7 percent of all

farmers surveyed who neither belonged, nor patronized farmer coopera-
tives.

Table II-9

Comparison of Cooperative Membership
to Education, Kansas, 1977

| Number of Cooperatives Farmers Belong to | Level of Education | | | |
| --- | --- | --- | --- | --- |
| | 8th Grade | High School | Some College | College Degree |
| | (percentages) | | | |
| None | 10.7 | 10.2 | 5.8 | 7.8 |
| 1 | 23.0 | 19.3 | 20.6 | 13.7 |
| 2 | 30.5 | 33.5 | 24.2 | 28.4 |
| 3 | 21.9 | 19.1 | 27.4 | 25.5 |
| 4 | 7.5 | 11.3 | 13.0 | 17.6 |
| 5 | 4.3 | 4.7 | 4.9 | 2.0 |
| 6 | 2.1 | 1.7 | 4.0 | 2.9 |
| 9 | 0.0 | 0.2 | 0.0 | 0.7 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |

*Not significant at .10 level, Chi-square = 27.09; critical value
d.f. = 21 is 29.62.

## Father's Cooperative Membership

Survey respondents were also asked if their father had been a
member of a farmer cooperative. Nearly two-thirds (65.9 percent)
responded that their father did belong to a cooperative. A useful
analysis is to compare the son's cooperative membership to the father's.
The percentages of farmers whose father belonged to a cooperative ranged
from 25.8 percent among farmers who did not belong to a cooperative
themselves, to 100.0 percent for those farmers belonging to nine cooper-
atives. Table II-10 shows the percentages of farmers belonging to each

number of cooperatives whose father also belonged to a cooperative. The differences were highly significant at the .005 level indicating that a strong relationship existed between the father belonging to a cooperative and the son also becoming involved. Only 1.3 percent of all farmers surveyed reported that their fathers did not belong to a cooperative. The remaining 32.8 percent either did not know if their father had been a member or gave no response to the question.

Table II-10

Comparison of Son vs. Father Cooperative
Membership, Kansas, 1977

| Number of Cooperatives the Respondent Belongs to | Membership by Father | | | |
|---|---|---|---|---|
| | Yes | No | Don't Know[a] | Total |
| | (percentages) | | | |
| None | 25.8 | 1.1 | 73.1 | 100.0 |
| 1 | 50.2 | 2.4 | 47.3 | 100.0 |
| 2 | 69.1 | 1.9 | 29.0 | 100.0 |
| 3 | 72.5 | 0.9 | 26.7 | 100.0 |
| 4 | 87.6 | 0.0 | 12.4 | 100.0 |
| 5 | 89.1 | 0.0 | 10.9 | 100.0 |
| 6 | 92.0 | 0.0 | 8.0 | 100.0 |
| 9 | 100.0 | 0.0 | 0.0 | 100.0 |

[a]Includes those who gave no response to the question.

*Significant at the .005 level, Chi-square = 140.6; critical value d.f. = 14 is 31.32.

CHAPTER III

MEAN SCORES FOR INDEXES AND INFORMATION SOURCES

## Mean Index Scores

As was mentioned in Chapter I, the responses to the twenty-three attitude questions and eleven factual questions were used to develop fifty-two separate index scores for each respondent. These index scores were designed to measure farmers attitudes, feelings, willingness to express an opinion, understanding and willingness to profess knowledge about cooperatives. The computational method, as well as the questions used to calculate each index, are shown in Appendix A. The range and explanation for each index are given in Chapter I.

For summary purposes, the scores of all respondents for each index were averaged so that a mean index score for each index could be obtained. Then, to provide for more useful analysis, the respondents were categorized into various demographic categories and mean scores were computed for each index and each category. (These scores are shown in Tables III-1 - III-8). Analysis of variance between the mean scores was used to analyze differences between index scores when broken down into various categories. The F-ratios are also indicated in Tables III-1 - III-8 and the significance of each ratio is indicated by the subscript beside it.

## Understanding

Mean scores for all respondents showed that Kansas farmers gener-
ally had a good understanding of cooperatives. They showed somewhat
better understanding of the nature and operation of cooperatives than
they did for both the role of cooperatives and public policies affecting
them. Farmers had higher understanding scores when questions were
stated in positive form, as opposed to those questions stated in the
negative form. In comparing mean understanding scores for each of the
demographic categories, we see that the mean scores for all six under-
standing indexes were significantly different between the various sizes
of farming operations. Generally, farmers with the larger farming
operations tended to have a better understanding of cooperatives than
did farmers with smaller operations. There was an especially noticeable
difference in understanding between farmers having 1,000 or more acres
and those farming less than 200 acres. The differences in mean scores
between the various sizes of farms were especially large in the index
measuring over-all understanding. Although the differences in mean
scores for policy understanding were significantly different, the
F-ratio was not as high as for the other indexes.

The mean scores for understanding were significantly different
between age groups for five of the six indexes. Mean scores for
over-all understanding (pos. questions) were not significantly different
between age groups. Generally, farmers under 40 years and over 65 years
tended to have slightly less understanding of cooperatives than did
middle-aged farmers. The differences in role understanding were espe-
cially notable where farmers under 35 had understanding index well below
those of middle-aged farmers. These findings tended to underscore the

Table III-1

Comparison of Mean Index Scores Between Demographic Categories
for Indexes of Understanding, Kansas, 1977

| | Over-all Understanding (Neg. Quest.) | Over-all Understanding (Pos. Quest.) | Over-all Understanding (All Quest.) | Nature Undstd. | Role Undstd. | Policy Undstd. |
|---|---|---|---|---|---|---|
| Mean scores for all respondents | 64.3 | 80.0 | 73.7 | 78.7 | 68.1 | 69.1 |
| **Farm Size** | | | | | | |
| Under 200 | 55.1 | 74.8 | 67.5 | 72.6 | 60.0 | 65.6 |
| 200-499 | 61.0 | 79.3 | 72.0 | 77.1 | 66.6 | 67.1 |
| 499-999 | 68.8 | 81.2 | 76.3 | 81.2 | 71.1 | 70.9 |
| 1,000 & Over | 69.2 | 82.3 | 77.1 | 82.1 | 72.0 | 71.7 |
| F-ratio | 22.15[a] | 10.80[a] | 27.15[a] | 17.99[a] | 12.48[a] | 6.91[a] |
| **Age of Farm Operator** | | | | | | |
| Under 35 | 60.2 | 78.7 | 71.3 | 77.1 | 63.1 | 64.8 |
| 35-39 | 61.0 | 79.5 | 72.2 | 75.6 | 71.7 | 65.5 |
| 40-49 | 68.9 | 80.6 | 76.0 | 80.1 | 70.0 | 70.7 |
| 50-59 | 66.2 | 81.4 | 75.3 | 80.4 | 71.2 | 70.8 |
| 60-64 | 64.0 | 80.0 | 73.5 | 78.8 | 65.7 | 70.3 |
| 65 & Older | 61.0 | 78.5 | 71.5 | 77.2 | 65.6 | 69.1 |
| F-ratio | 4.26[a] | 1.69[b] | 4.48[a] | 2.50[a] | 4.02[a] | 3.68[a] |
| **Level of Education** | | | | | | |
| 8th Grade | 59.9 | 78.2 | 70.9 | 76.1 | 62.6 | 68.9 |
| High School | 63.7 | 80.1 | 73.5 | 77.8 | 68.2 | 68.8 |
| Some College | 66.7 | 79.5 | 74.4 | 81.0 | 69.4 | 68.8 |
| College Degree | 69.9 | 83.8 | 78.3 | 83.5 | 74.6 | 71.1 |
| F-ratio | 5.73[a] | 4.46[a] | 7.68[a] | 7.36[a] | 6.49[a] | 0.51[b] |

Table III-1--Continued

| | Over-all Understanding (Neg. Quest.) | Over-all Understanding (Pos. Quest.) | Over-all Understanding (All Quest.) | Nature Undstd. | Role Undstd. | Policy Undstd. |
|---|---|---|---|---|---|---|
| **Cooperative Membership** | | | | | | |
| None | 46.5 | 70.0 | 60.6 | 62.1 | 57.3 | 58.4 |
| 1 | 59.0 | 79.1 | 71.1 | 76.3 | 65.5 | 64.7 |
| 2 | 65.4 | 80.1 | 74.3 | 78.9 | 67.9 | 69.7 |
| 3 | 68.4 | 82.8 | 77.1 | 82.7 | 71.9 | 72.7 |
| 4 | 78.4 | 81.7 | 77.2 | 84.0 | 71.8 | 72.4 |
| 5 | 76.7 | 82.2 | 80.1 | 83.9 | 71.5 | 76.7 |
| 6 | 71.9 | 84.1 | 79.4 | 86.9 | 73.0 | 74.6 |
| 9 | 50.3 | 83.0 | 70.0 | 88.3 | 66.3 | 66.7 |
| F-ratio | $16.59^a$ | $11.79^a$ | $23.90^a$ | $25.59^a$ | $5.05^a$ | $11.10^a$ |
| **Father a Co-op Member** | | | | | | |
| Don't Know | 56.4 | 79.8 | 74.6 | 77.7 | 66.7 | 68.0 |
| Yes | 67.3 | 81.3 | 75.7 | 81.2 | 69.6 | 71.0 |
| No | 65.4 | 78.6 | 73.2 | 78.5 | 73.7 | 65.7 |
| F-ratio | $0.05^b$ | $1.20^b$ | $0.56^b$ | $2.12^b$ | $0.68^b$ | $1.51^b$ |

[a] F-ratio is significant at .05 probability level.

[b] F-ratio is not significant at .05 probability level.

importance of cooperative educational programs directed especially toward younger farmers.

Differences in mean scores between the various levels of education were significant for all understanding indexes, except for policy understanding. Those farmers with college education tended to have better understanding of cooperatives than did farmers with eighth grade or high school education. It was reported in Chapter II that farmers with college educations tended to have larger farming operations, so some of the differences in mean scores between education groups may have been tied in with differences in farm size. The lack of a significant F-ratio for policy understanding indicated that more years of formal education does not necessarily mean that the level of cooperative policy understanding by farmers will also increase.

Differences in mean understanding scores between farmers belonging to different numbers of cooperatives were significant for all six indexes. The differences are especially significant in the over-all and nature understanding indexes. As farmers belonged to more cooperatives, their understanding of those organizations increased. Although in several indexes, the mean understanding scores appeared to decrease for farmers who were members of five, six and nine cooperatives, this was likely due to the small number of farmers included in these categories. Role understanding showed the least significant difference between the cooperative membership categories for any of the indexes. However, even in this index, farmers who did not belong to a cooperative had significantly lower levels of understanding than did farmers who belonged to one or more cooperatives.

The mean scores for understanding between farmers whose fathers were members of cooperatives and those who were not are not significantly different. Although the understanding scores for those farmers whose fathers had been cooperative members were higher than for those whose fathers had not been, the differences were not great enough to be significant at the .05 level.

## Knowledge

The mean scores for indexes of knowledge, Table III-2, show that Kansas farmers were willing to profess some knowledge about cooperatives on 77.3 percent of the over-all knowledge questions, 90.1 percent of the nature knowledge questions, and 80.5 percent of role knowledge questions. Farmers were less willing to profess knowledge to questions concerning public policy issues affecting cooperatives (64.4 percent).

Larger farmers were generally more willing to profess knowledge about cooperatives than were smaller farmers. This coincides with the understanding indexes, where larger farmers scored higher than smaller farmers. As in the understanding indexes, the differences in mean scores for public policy knowledge were less than for the other knowledge indexes.

None of the four knowledge indexes showed significant differences between educational groups for Kansas farmers. Apparently, more formal education did not help farmers to feel they had more knowledge about cooperatives.

The mean scores for knowledge indexes did show significant differences between groups of farmers belonging to different numbers of cooperatives. Knowledge toward the nature of cooperatives showed the

Table III-2

Comparison of Mean Index Scores Between Demographic Categories
for Indexes of Knowledge, Kansas, 1977

| | Over-all Knowledge | Nature Knowledge | Role Knowledge | Policy Knowledge |
|---|---|---|---|---|
| Mean Scores for all Respondents . . . . . | 77.3 | 90.1 | 80.6 | 64.4 |
| **Farm Size** | | | | |
| Under 200 | 70.4 | 82.6 | 73.0 | 60.2 |
| 200-499 | 76.5 | 90.7 | 79.5 | 63.4 |
| 500-999 | 78.5 | 91.5 | 82.4 | 63.9 |
| 1,000 & Over | 81.5 | 92.9 | 85.0 | 69.3 |
| F-ratio | 10.67[a] | 14.01[a] | 10.00[a] | 3.90[a] |
| **Age of Farm Operator** | | | | |
| Under 35 | 72.1 | 87.8 | 77.6 | 54.0 |
| 35-39 | 76.5 | 89.4 | 83.1 | 61.8 |
| 40-49 | 78.6 | 90.9 | 80.5 | 67.8 |
| 50-59 | 80.0 | 91.7 | 82.9 | 68.8 |
| 60-64 | 78.7 | 91.0 | 80.0 | 68.7 |
| 65 & Older | 75.2 | 88.0 | 78.9 | 61.5 |
| F-ratio | 3.42[a] | 1.65[b] | 1.31[b] | 6.95[a] |
| **Level of Education** | | | | |
| 8th Grade | 76.0 | 88.5 | 80.9 | 63.0 |
| High School | 77.1 | 89.8 | 80.0 | 64.8 |
| Some College | 76.7 | 90.4 | 80.6 | 62.8 |
| College Degree | 81.6 | 93.8 | 83.2 | 68.8 |
| F-ratio | 1.71[b] | 2.02[b] | 0.53[b] | 1.14[b] |
| **Cooperative Membership** | | | | |
| None | 59.1 | 69.1 | 65.9 | 53.2 |
| 1 | 74.0 | 87.4 | 78.1 | 60.5 |
| 2 | 78.4 | 92.5 | 79.6 | 64.9 |
| 3 | 80.8 | 93.2 | 83.7 | 68.0 |
| 4 | 82.7 | 95.3 | 87.6 | 67.5 |
| 5 | 84.7 | 95.9 | 90.5 | 69.6 |
| 6 | 87.1 | 95.2 | 88.8 | 79.4 |
| 9 | 80.0 | 99.0 | 77.7 | 60.0 |
| F-ratio | 15.70[a] | 22.27[a] | 9.27[a] | 4.39[a] |
| **Father a Co-op Member** | | | | |
| Don't Know | 71.7 | 83.0 | 72.2 | 59.1 |
| Yes | 80.8 | 93.6 | 83.4 | 67.3 |
| No | 74.9 | 92.1 | 75.9 | 62.7 |
| F-ratio | 7.22[a] | 15.80[a] | 7.58[a] | 2.37[b] |

[a] F-ratio is significant at .05 probability level.

[b] F-ratio is not significant at .05 probability level.

greatest differences between those not belonging to any cooperatives and those belonging to several. Policy knowledge showed the least differences between the various membership groups, although it was still highly significant. Farmers who belonged to several cooperatives had better understandings of cooperatives and were more willing to profess this knowledge than were farmers who did not belong to cooperatives. There may have been an important and unclear cause and effect relationship at work here. It is not known here whether the act of belonging to more cooperatives improves understanding, or whether improved understanding is causing increased cooperative membership. The relationship is probably working in both directions and will be discussed in more detail in Chapter IV.

The mean scores for profession of knowledge showed significant differences between the three groups of farmers concerning the father being a cooperative member. However, the differences were greatest between those answering "Don't Know" and the other two responses, instead of being between those who answered "Yes" or "No." Apparently, farmers who answered "Don't Know" were also less willing to profess knowledge about cooperatives. The mean scores for policy knowledge index were not significantly different.

<center>Attitudes</center>

The mean attitude scores for all respondents, Tables III-3 and III-4, show that Kansas farmers had slightly favorable attitudes toward cooperatives. Attitudes toward cooperatives in general ranged from 54.3 for over-all policy attitude to 56.8 for over-all role attitude. Attitudes toward the local cooperatives ranged from 52.9 for local nature

Table III-3

Comparison of Mean Index Scores Between Demographic Categories for
Indexes of Attitude Toward Local Cooperatives, Kansas, 1977

| | Over-all Local Attitude | Local Nature Attitude | Local Role Attitude | Local Policy Attitude |
|---|---|---|---|---|
| Mean Scores for all Respondents . . . . . | 60.4 | 52.9 | 65.3 | 70.6 |
| **Farm Size** | | | | |
| Under 200 | 57.9 | 48.8 | 62.0 | 67.4 |
| 200-499 | 60.0 | 51.3 | 65.5 | 69.0 |
| 500-999 | 60.6 | 54.4 | 65.2 | 71.3 |
| 1,000 & Over | 62.2 | 55.7 | 67.3 | 73.8 |
| F-ratio | $3.01^a$ | $4.33^a$ | $4.77^a$ | $4.74^a$ |
| **Age of Farm Operator** | | | | |
| Under 35 | 59.5 | 53.2 | 62.7 | 66.2 |
| 35-39 | 59.0 | 50.3 | 65.3 | 69.9 |
| 40-49 | 59.7 | 51.5 | 65.5 | 70.8 |
| 50-59 | 60.9 | 54.3 | 66.0 | 71.8 |
| 60-64 | 60.5 | 51.9 | 64.7 | 72.0 |
| 65 & Older | 62.0 | 54.7 | 66.7 | 71.9 |
| F-ratio | $0.78^b$ | $0.86^b$ | $1.50^b$ | $2.22^a$ |
| **Level of Education** | | | | |
| 8th Grade | 61.7 | 51.6 | 67.0 | 72.1 |
| High School | 59.1 | 50.7 | 64.4 | 69.7 |
| Some College | 61.3 | 55.5 | 65.7 | 70.9 |
| College Degree | 62.9 | 60.5 | 66.1 | 71.8 |
| F-ratio | $3.14^a$ | $6.72^a$ | $1.71^b$ | $0.88^b$ |
| **Cooperative Membership** | | | | |
| None | 52.2 | 44.5 | 55.7 | 60.3 |
| 1 | 55.8 | 46.1 | 60.6 | 66.4 |
| 2 | 60.9 | 52.6 | 65.0 | 70.8 |
| 3 | 63.6 | 57.0 | 69.2 | 73.7 |
| 4 | 65.9 | 59.2 | 71.8 | 76.1 |
| 5 | 62.3 | 57.2 | 68.5 | 73.6 |
| 6 | 67.3 | 65.6 | 69.9 | 77.9 |
| 9 | 67.0 | 63.7 | 74.0 | 83.3 |
| F-ratio | $12.82^a$ | $8.72^a$ | $16.63^a$ | $8.55^a$ |
| **Father a Co-op Member** | | | | |
| Don't Know | 59.7 | 49.9 | 65.0 | 69.3 |
| Yes | 62.0 | 55.0 | 66.9 | 72.4 |
| No | 50.6 | 37.5 | 57.8 | 67.0 |
| F-ratio | $4.76^a$ | $5.38^a$ | $3.15^a$ | $1.33^b$ |

[a]F-ratio is significant at .05 probability level.

[b]F-ratio is not significant at .05 probability level.

Table III-4

Comparison of Mean Index Scores Between Demographic Categories for
Indexes of Attitude Toward Cooperatives in General, Kansas, 1977

| | Over-all National Attitude | Over-all Nature Attitude | Over-all Role Attitude | Over-all Policy Attitude |
|---|---|---|---|---|
| Mean Scores for all Respondents . . . . . | 57.2 | 56.2 | 65.8 | 54.3 |
| **Farm Size** | | | | |
| Under 200 | 54.2 | 52.9 | 62.1 | 51.9 |
| 200-499 | 56.6 | 55.2 | 65.6 | 53.6 |
| 500-999 | 57.9 | 57.0 | 66.2 | 54.7 |
| 1,000 & Over | 59.2 | 58.5 | 68.0 | 56.3 |
| F-ratio | 5.98[a] | 5.52[a] | 6.04[a] | 3.91[a] |
| **Age of Farm Operator** | | | | |
| Under 35 | 56.4 | 55.5 | 63.4 | 53.6 |
| 35-39 | 55.7 | 54.3 | 59.0 | 65.0 |
| 40-49 | 57.2 | 55.4 | 59.7 | 65.9 |
| 50-59 | 58.1 | 57.1 | 66.7 | 55.5 |
| 60-64 | 57.1 | 56.3 | 65.3 | 53.9 |
| 65 & Older | 57.5 | 57.1 | 67.3 | 53.4 |
| F-ratio | 0.72[b] | 0.72[b] | 1.51[b] | 0.71[b] |
| **Level of Education** | | | | |
| 8th Grade | 56.7 | 55.5 | 67.0 | 53.6 |
| High School | 56.4 | 55.2 | 64.6 | 53.9 |
| Some College | 58.9 | 57.3 | 66.9 | 56.5 |
| College Degree | 58.6 | 59.8 | 67.5 | 54.2 |
| F-ratio | 2.43[b] | 3.09[a] | 2.63[b] | 2.51[b] |
| **Cooperative Membership** | | | | |
| None | 48.9 | 48.7 | 55.2 | 47.1 |
| 1 | 53.8 | 51.7 | 60.8 | 52.0 |
| 2 | 57.6 | 56.2 | 65.6 | 54.3 |
| 3 | 59.5 | 59.1 | 69.7 | 55.6 |
| 4 | 61.8 | 60.6 | 72.7 | 58.1 |
| 5 | 59.8 | 58.0 | 69.7 | 57.5 |
| 6 | 60.3 | 63.0 | 71.5 | 62.6 |
| 9 | 56.0 | 58.3 | 74.3 | 53.3 |
| F-ratio | 13.08[a] | 9.63[a] | 20.40[a] | 8.02[a] |
| **Father a Co-op Member** | | | | |
| Don't Know | 55.6 | 54.5 | 65.3 | 51.1 |
| Yes | 58.7 | 57.9 | 67.5 | 55.6 |
| No | 50.9 | 46.9 | 57.9 | 50.4 |
| F-ratio | 4.37[a] | 4.83[a] | 3.84[a] | 3.94[a] |

[a]F-ratio is significant at .05 probability level.

[b]F-ratio is not significant at .05 probability level.

attitude to 70.6 for local policy attitude. Generally, Kansas farmers had more favorable over-all attitudes toward their local cooperatives (60.4) than they did for cooperatives in general (57.2). This was especially noticeable in policy attitude scores, where the local policy attitude score was 70.6 (highly favorable) and policy attitude scores for cooperatives in general average only 54.3 (slightly favorable). Kansas farmers appeared to have less favorable attitudes toward the nature and operation of cooperatives, at both the local and national level, than they do toward the role of cooperatives.

In all eight attitude indexes, the differences in mean scores between the various farm sizes were significant. Larger farmers had more favorable attitudes toward all aspects of both local and national cooperatives, than did smaller farmers. The differences were largest between farmers who farm over 1,000 acres and those farming less than 200 acres. This was highly important to cooperatives, since it indicated that large farmers, who are capable of annually generating large volumes of business, were viewing cooperatives in a favorable manner. However, the less favorable views of the smaller farmers could be of some concern since these farmers are the majority and cooperatives are controlled by the majority through democratic process. It is important to note that farmers who farm under 200 acres even had slightly negative attitudes toward the nature and operation of the local cooperative.

The mean scores for attitudes between the various age groups of farmers showed that only in the local policy attitude index, were the differences significant. The mean scores for all the other attitude indexes were not significantly different between the different age groups. Analysis of variance showed that farmers under 35 years of age

had slightly less favorable attitudes toward public policies affecting the local cooperative than did older farmers. Those cooperatives using special educational programs especially for their young farm members may want to put more emphasis on public policy issues affecting cooperatives.

The mean scores for attitudes between the various educational groups showed that only three of the attitude indexes had significant differences. The over-all local attitude, local nature attitude, and nature attitude toward cooperatives in general all showed significant differences. Farmers with college degrees had slightly more favorable attitudes toward these three aspects of cooperatives. The fact that more education did not seem to help improve policy attitudes should cause cooperative leaders to re-evaluate materials about this aspect of cooperatives used in formal channels.

Differences in mean scores for number of cooperatives that farmers belonged to were significant in all eight attitude equations. Farmers who belonged to none or only one or two cooperatives have less favorable attitudes than farmers who belonged to three or more cooperatives. Farmers who did not belong to any cooperatives had slightly negative attitudes toward the nature and operation of local and national cooperatives, national policy attitude and over-all attitudes toward cooperatives in general.

The analysis of variance showed that differences in mean scores between farmers whose fathers were or were not members of a cooperative were significant in seven of the eight attitude indexes. Only in the local policy attitude index were the differences not great enough to be considered significant. The real differences in mean scores were between those farmers whose father was a member and those farmers whose

father was not. Respondents whose fathers were members had much more favorable attitudes towards cooperatives than those respondents whose fathers were not members. Respondents answering "No" to the father membership question had highly unfavorable attitudes toward the nature and operation of both local cooperatives (37.5) and cooperatives in general (46.9), but had slightly favorable attitudes toward most other aspects of cooperatives.

## Feelings

The average scores measuring strength of feelings for all Kansas farm operators are shown in Tables III-5 and III-6. These scores indicate that generally, farmers did not express particularly strong feelings about cooperatives one way or another. Most respondents checked the attitude questions with "generally agree or disagree" rather than "definitely agree or disagree." While the differences were small, farmers had slightly stronger feelings toward public policies affecting cooperatives (56.6), than they did toward the nature or role of cooperatives (56.6 and 54.8, respectively). Kansas farmers held stronger feelings toward their local cooperatives (55.1) than they did toward cooperatives in general (54.3).

Analysis of variance showed that farmers with larger operations had stronger feelings about their attitudes towards cooperatives than farmers with smaller operations did. The differences between farm sizes were significant in all eight feeling indexes. This indicated that the larger farmers, who had more favorable attitudes also had stronger feelings about those attitudes than did smaller farmers who had less favorable attitudes.

Table III-5

Comparison of Mean Index Scores Between Demographic Categories for
Indexes of Feeling Toward Cooperatives in General, Kansas, 1977

| | Over-all National Feeling | Over-all Nature Feeling | Over-all Role Feeling | Over-all Policy Feeling |
|---|---|---|---|---|
| Mean Scores for all Respondents . . . . . | 54.3 | 56.6 | 54.8 | 56.6 |
| **Farm Size** | | | | |
| Under 200 | 50.0 | 49.9 | 50.0 | 54.8 |
| 200-499 | 53.2 | 55.5 | 53.9 | 54.4 |
| 500-999 | 53.4 | 56.2 | 54.8 | 54.8 |
| 1,000 & Over | 59.7 | 62.7 | 59.1 | 62.1 |
| F-ratio | 12.16[a] | 17.10[a] | 10.03[a] | 7.01[a] |
| **Age of Farm Operator** | | | | |
| Under 35 | 51.3 | 53.6 | 51.1 | 48.0 |
| 35-39 | 52.5 | 54.4 | 53.9 | 53.8 |
| 40-49 | 53.9 | 57.2 | 55.0 | 57.6 |
| 50-59 | 55.3 | 57.8 | 55.6 | 58.4 |
| 60-64 | 57.0 | 59.7 | 57.5 | 59.8 |
| 65 & Older | 55.0 | 54.9 | 55.1 | 58.7 |
| F-ratio | 2.02[b] | 2.22[a] | 2.30[a] | 6.31[a] |
| **Level of Education** | | | | |
| 8th Grade | 55.2 | 55.5 | 56.2 | 60.1 |
| High School | 54.0 | 56.8 | 53.7 | 56.5 |
| Some College | 54.1 | 56.9 | 55.3 | 54.0 |
| College Degree | 55.3 | 56.7 | 56.8 | 55.7 |
| F-ratio | 0.31[b] | 0.22[b] | 1.58[b] | 2.51[b] |
| **Cooperative Membership** | | | | |
| None | 43.7 | 42.1 | 43.8 | 50.3 |
| 1 | 49.4 | 52.2 | 50.7 | 51.9 |
| 2 | 54.9 | 57.6 | 54.8 | 56.0 |
| 3 | 56.1 | 58.6 | 57.2 | 55.6 |
| 4 | 62.2 | 64.1 | 62.6 | 61.8 |
| 5 | 60.7 | 64.7 | 59.7 | 63.2 |
| 6 | 60.1 | 60.9 | 60.7 | 64.3 |
| 9 | 76.3 | 75.6 | 66.7 | 80.0 |
| F-ratio | 13.07[a] | 14.86[a] | 12.59[a] | 4.95[a] |
| **Father a Co-op Member** | | | | |
| Don't Know | 47.8 | 48.2 | 48.7 | 55.6 |
| Yes | 56.4 | 59.3 | 56.8 | 57.5 |
| No | 47.4 | 51.4 | 50.5 | 53.6 |
| F-ratio | 8.53[a] | 11.71[a] | 7.23[a] | 2.15[b] |

[a]F-ratio is significant at .05 probability level.

[b]F-ratio is not significant at .05 probability level.

Table III-6

Comparison of Mean Index Scores Between Demographic Categories for
Indexes of Feeling Toward Local Cooperatives, Kansas, 1977

|  | Over-all Local Feeling | Local Nature Feeling | Local Role Feeling | Local Policy Feeling |
|---|---|---|---|---|
| **Mean Scores for all** | | | | |
| Respondents . . . . . | 55.1 | 53.8 | 56.0 | 55.7 |
| **Farm Size** | | | | |
| Under 200 | 50.1 | 47.6 | 50.7 | 52.1 |
| 200-499 | 53.9 | 52.9 | 54.9 | 53.9 |
| 500-999 | 55.1 | 54.3 | 56.1 | 54.3 |
| 1,000 & Over | 59.9 | 58.7 | 60.8 | 61.9 |
| F-ratio | 12.19[a] | 9.40[a] | 11.46[a] | 5.97[a] |
| **Age of Farm Operator** | | | | |
| Under 35 | 49.4 | 48.1 | 51.7 | 45.2 |
| 35-39 | 53.9 | 51.5 | 55.7 | 53.5 |
| 40-49 | 56.6 | 56.5 | 57.2 | 58.1 |
| 50-59 | 56.4 | 54.9 | 57.2 | 58.8 |
| 60-64 | 58.3 | 58.7 | 58.1 | 58.9 |
| 65 & Older | 54.6 | 51.3 | 54.9 | 56.7 |
| F-ratio | 5.25[a] | 4.92[a] | 2.62[a] | 6.31[a] |
| **Level of Education** | | | | |
| 8th Grade | 56.5 | 53.5 | 56.8 | 58.9 |
| High School | 54.6 | 54.8 | 54.7 | 55.7 |
| Some College | 54.8 | 52.6 | 57.2 | 53.9 |
| College Degree | 55.8 | 52.3 | 58.6 | 54.0 |
| F-ratio | 0.61[b] | 0.76[b] | 1.97[b] | 1.23[b] |
| **Cooperative Membership** | | | | |
| None | 44.0 | 41.7 | 44.1 | 48.2 |
| 1 | 51.6 | 52.1 | 51.7 | 51.0 |
| 2 | 55.0 | 54.2 | 56.0 | 54.7 |
| 3 | 57.6 | 55.3 | 59.3 | 58.0 |
| 4 | 61.4 | 59.7 | 63.4 | 60.3 |
| 5 | 61.2 | 59.4 | 61.0 | 67.6 |
| 6 | 60.7 | 56.6 | 60.4 | 67.8 |
| 9 | 65.7 | 61.3 | 66.7 | 83.0 |
| F-ratio | 11.41[a] | 6.17[a] | 12.40[a] | 4.85[a] |
| **Father a Co-op Member** | | | | |
| Don't Know | 48.9 | 47.6 | 49.4 | 50.3 |
| Yes | 57.0 | 55.8 | 58.1 | 57.1 |
| No | 53.7 | 58.2 | 48.9 | 55.2 |
| F-ratio | 7.06[a] | 4.25[a] | 8.55[a] | 1.76[b] |

[a]F-ratio is significant at .05 probability level.

[b]F-ratio is not significant at .05 probability level.

The mean scores for feeling between age groups showed that the differences were significant in seven of the eight feeling indexes. Only the over-all national feeling index did not have a significant difference. The data showed that farmers under 35 had much milder feelings toward cooperatives than did older farmers. Younger farmers feelings were especially milder toward public policies affecting both local cooperatives and cooperatives in general.

The differences in mean scores between the various educational groups were not significant in any of the eight feeling indexes. Eighth grade educated farmers had relatively the same strength of feelings as college educated farmers.

Farmers who belonged to one or more cooperatives tended to have stronger feelings about their attitudes toward cooperatives than did farmers who were not members of a cooperative. The differences in mean scores between cooperative membership groups were significant in all eight feeling indexes. This type of data was quite important, in that while non-members tend to have slightly unfavorable attitudes, they did not hold as strong of feelings about their attitudes as did cooperative members with more favorable attitudes.

Although farmers whose fathers were members of cooperatives had stronger feelings about their attitudes than did farmers whose fathers were non-members, a greater difference was shown between those farmers who answered "Don't Know" and those who answered "Yes" to the father membership question. The differences in mean scores were not significant for local policy feeling and over-all policy feeling indexes. All of the other six feeling indexes had significant differences.

Opinion

Tables III-7 and III-8 show the mean scores for farmers' willingness to express an opinion to the attitude questions. Most Kansas farmers surveyed were willing to express an opinion to the attitude questions, although they were less willing to express an opinion about questions dealing with local policy topics (79.9 percent), as compared to local nature and local role topics (83.4 and 85.1 percent, respectively). The same was true for questions dealing with over-all policy (82.5) as compared to over-all nature and role (82.9 and 85.5 percent, respectively). Willingness to express an opinion toward the local cooperative (84.1) was the same as for cooperatives in general (84.1).

Larger farmers were more highly opinionated than were smaller farmers. The differences in mean scores between the farm size groups were significant in all eight opinion indexes. This indicated that those with the more favorable attitudes (larger farmers) were also more vocal about those attitudes.

Differences in the mean scores between the various age categories were not significant for any of the opinion indexes, indicating that younger and older farmers were equally willing to express opinions about cooperatives.

Likewise, mean scores between educational categories were not significantly different for any of the opinion indexes. Farmers with eighth grade educations were equally likely to express an opinion as college educated farmers.

The differences in mean scores between the cooperative membership categories, however, were significant in all eight opinion indexes. The data indicated that farmers who were non-members were less likely to

Table III-7

Comparison of Mean Index Scores Between Demographic Categories for
Indexes of Opinion Regarding Cooperatives in General, Kansas, 1977

| | Over-all National Opinion | Over-all Nature Opinion | Over-all Role Opinion | Over-all Policy Opinion |
|---|---|---|---|---|
| Mean Scores for all Respondents . . . . . | 84.1 | 82.9 | 85.5 | 82.5 |
| **Farm Size** | | | | |
| Under 200 | 78.4 | 74.2 | 79.0 | 80.9 |
| 200-499 | 85.1 | 83.6 | 86.4 | 83.6 |
| 500-999 | 83.0 | 83.3 | 86.1 | 79.2 |
| 1,000 & Over | 87.9 | 87.7 | 88.4 | 86.2 |
| F-ratio | 10.80[a] | 17.19[a] | 11.66[a] | 4.88[a] |
| **Age of Farm Operator** | | | | |
| Under 35 | 81.4 | 81.2 | 83.6 | 73.1 |
| 35-39 | 84.0 | 82.1 | 84.9 | 80.4 |
| 40-49 | 84.3 | 84.1 | 86.1 | 84.1 |
| 50-59 | 84.4 | 83.8 | 86.3 | 84.8 |
| 60-64 | 85.9 | 84.5 | 87.1 | 85.6 |
| 65 & Older | 84.2 | 80.6 | 84.6 | 84.7 |
| F-ratio | 4.33[b] | 1.00[b] | 0.91[b] | 7.42[a] |
| **Level of Education** | | | | |
| 8th Grade | 82.5 | 79.7 | 84.1 | 84.7 |
| High School | 83.7 | 82.9 | 84.9 | 82.7 |
| Some College | 85.0 | 84.5 | 86.9 | 80.4 |
| College Degree | 86.7 | 85.8 | 88.6 | 82.3 |
| F-ratio | 1.52[b] | 1.80[b] | 2.24[b] | 1.16[b] |
| **Cooperative Membership** | | | | |
| None | 68.9 | 62.6 | 69.3 | 74.0 |
| 1 | 79.4 | 78.0 | 82.6 | 79.3 |
| 2 | 85.9 | 85.4 | 86.9 | 83.0 |
| 3 | 86.8 | 86.1 | 88.2 | 84.8 |
| 4 | 91.3 | 90.8 | 92.1 | 86.7 |
| 5 | 88.3 | 89.4 | 90.2 | 83.8 |
| 6 | 88.6 | 88.0 | 90.2 | 90.5 |
| 9 | 91.3 | 91.7 | 90.7 | 86.3 |
| F-ratio | 17.59[a] | 23.74[a] | 19.04[a] | 3.75[a] |
| **Father a Co-op Member** | | | | |
| Don't Know | 75.3 | 73.8 | 78.6 | 76.4 |
| Yes | 86.5 | 86.3 | 88.0 | 83.4 |
| No | 83.8 | 81.0 | 85.6 | 89.4 |
| F-ratio | 13.69[a] | 16.01[a] | 11.13[a] | 3.38[a] |

[a]F-ratio is significant at .05 probability level.

[b]F-ratio is not significant at .05 probability level.

Table III-8

Comparison of Mean Index Scores Between Demographic Categories for
Indexes of Opinion Regarding Local Cooperatives, Kansas, 1977

| | Over-all Local Opinion | Local Nature Opinion | Local Role Opinion | Local Policy Opinion |
|---|---|---|---|---|
| **Mean Scores for all** | | | | |
| Respondents . . . . . | 84.1 | 83.4 | 85.1 | 79.9 |
| **Farm Size** | | | | |
| Under 200 | 77.2 | 74.2 | 78.0 | 77.1 |
| 200-499 | 84.7 | 84.3 | 85.3 | 81.5 |
| 500-999 | 84.6 | 84.6 | 86.3 | 77.0 |
| 1,000 & Over | 87.5 | 87.3 | 88.4 | 83.3 |
| F-ratio | 13.64[a] | 10.97[a] | 12.63[a] | 2.71[a] |
| **Age of Farm Operator** | | | | |
| Under 35 | 79.8 | 78.2 | 83.5 | 67.8 |
| 35-39 | 82.1 | 81.1 | 84.0 | 75.2 |
| 40-49 | 85.7 | 86.6 | 85.6 | 82.8 |
| 50-59 | 85.9 | 85.1 | 86.3 | 84.3 |
| 60-64 | 86.1 | 87.1 | 86.3 | 82.4 |
| 65 & Older | 82.4 | 79.0 | 83.4 | 81.5 |
| F-ratio | 3.99[b] | 0.88[b] | 7.42[a] | 0.62[b] |
| **Level of Education** | | | | |
| 8th Grade | 83.0 | 81.4 | 83.3 | 83.0 |
| High School | 83.9 | 84.0 | 84.4 | 80.4 |
| Some College | 84.6 | 83.6 | 86.6 | 77.6 |
| College Degree | 85.9 | 83.7 | 89.0 | 76.8 |
| F-ratio | 0.70[b] | 0.53[b] | 1.97[b] | 1.52[b] |
| **Cooperative Membership** | | | | |
| None | 67.1 | 63.9 | 67.2 | 70.4 |
| 1 | 81.4 | 80.1 | 82.9 | 76.4 |
| 2 | 85.3 | 85.2 | 86.4 | 80.1 |
| 3 | 86.8 | 86.1 | 88.0 | 82.5 |
| 4 | 89.7 | 90.7 | 91.3 | 82.8 |
| 5 | 89.0 | 89.2 | 89.6 | 85.1 |
| 6 | 90.3 | 91.3 | 89.1 | 91.2 |
| 9 | 88.3 | 88.3 | 85.3 | 99.0 |
| F-ratio | 19.92[a] | 12.16[a] | 18.59[a] | 2.86[a] |
| **Father a Co-op Member** | | | | |
| Don't Know | 77.6 | 76.9 | 77.4 | 77.6 |
| Yes | 86.5 | 86.0 | 87.9 | 80.9 |
| No | 86.1 | 89.7 | 83.4 | 88.5 |
| F-ratio | 10.20[a] | 4.67[a] | 12.84[a] | 0.83[b] |

[a] F-ratio is significant at .05 probability level.

[b] F-ratio is not significant at .05 probability level.

express opinions about cooperatives, either for or against, than were farmers who were cooperative members. The differences between members and non-members were greatest in the nature opinion index and least in the policy opinion index.

Differences in mean scores between categories regarding the father's cooperative membership status were significant in seven of the eight opinion indexes. Only the local policy opinion index did not have scores which were significantly different. The greatest differences in mean scores were between those who answered "Don't Know" and those who answered "Yes," and not between those who answered "Yes" or "No" to the father membership question.

## Summary of Mean Scores

Generally, the Kansas farmers surveyed exhibited a good under-standing of cooperatives and were willing to express some degree of knowledge about cooperatives in a high percentage of the questions. The farmers surveyed had slightly favorable attitudes toward cooperatives in general and were even more favorable in their attitudes of local cooper-atives. The farmers exhibited relatively mild feelings, but were willing to express an opinion on a high percent of the questions concerning cooperatives.

Larger farmers tended to have better understanding and were more willing to profess knowledge than were smaller farmers. The larger farmers also had more favorable attitudes toward cooperatives, held stronger feelings, and were more highly opinionated than their smaller counterparts.

Older and younger farmers tended to have less understanding of cooperatives than did middle-aged farmers. The attitudes of younger farmers were not different from other farmers, but they did have milder feelings about their attitudes. All age groups were equally well opinionated about cooperatives.

Farmers with college education tended to have a better understanding of cooperatives but were no more willing to profess this knowledge than were farmers with fewer years of formal education. The farmers with college educations did exhibit more favorable attitudes toward the nature and operation of cooperatives, but showed no differences in attitudes for the other indexes. No major differences in strength of feelings or willingness to express an opinion were detected between the different education groups.

Farmers belonging to cooperatives tended to have better understanding and were willing to express more knowledge about cooperatives than were non-members. Cooperative members also tended to have more favorable attitudes, held stronger feelings about those attitudes and were more highly opinionated than were their non-member counterparts.

Farmers whose fathers had been a cooperative member tended to have slightly more favorable attitudes toward cooperatives than those whose fathers had not been members. Most other indexes did not have significant differences between the membership groups.

## Halo Effect

Analysis of the bias caused by a "halo effect," more commonly known as response bias, was made for five of the attitude indexes and five of the feeling indexes. The indexes analyzed were, over-all local,

over-all nature, over-all role, over-all policy, and the index for over-all cooperatives in general.

Response bias is brought about when the respondents have a tendency to agree with statements as they appear on the questionnaire, whether they are in true or false form. A common way to avoid such bias is to design the questionnaire so that a balance is maintained between questions in positive form and those in negative form. The differences between index scores based on questions in positive form and those based on negative form give a direct measure of the halo effect. Table III-9 shows the magnitude of response bias for each of the indexes.

Table III-9

Comparison of Halo Effects in Responses to
Attitude Questions, Kansas, 1977

| Index | Positive Questions | Negative Questions | Halo Effect |
|---|---|---|---|
| Attitude | | | |
| Over-all | 60.0 | 55.5 | + 4.5 |
| Local | 61.7 | 59.5 | - 2.2 |
| Nature | 71.1 | 53.9 | +17.2 |
| Role | 65.0 | 66.9 | - 1.9 |
| Policy | 57.9 | 48.9 | + 9.0 |
| Feeling | | | |
| Over-all | 55.8 | 53.1 | + 2.7 |
| Local | 55.7 | 54.3 | + 1.4 |
| Nature | 61.4 | 51.8 | + 9.6 |
| Role | 54.4 | 55.4 | - 1.0 |
| Policy | 55.5 | 57.9 | - 2.4 |

Examination of the halo effect showed a slight positive difference for local attitude indexes. The differences for national attitude

indexes were even slightly larger. This tended to indicate that farmers were slightly more willing to agree with positively stated questions than they were to agree with negatively stated questions. There was even greater evidence of response bias for the nature attitude and policy attitude indexes.

There was less of a halo effect for the feeling indexes. Local feeling, national feeling and nature feeling all showed positive differences in the index scores. Farmers tended to express slightly stronger feelings toward the positive questions than they did toward the negative questions. Policy feeling halo effects were slightly negative, indicating that farmers had stronger feelings toward the negatively stated policy questions than toward the positively stated ones. This was in contrast to policy attitude, where the halo effect was positive. The role indexes showed a negative halo effect for both the attitude and feeling indexes, indicating that farmers tended to be more willing to agree with the negatively stated questions than they were to agree with the positively stated questions. They also tended to have stronger feelings toward questions stated in negative form.

## Comparison of 1977 and 1964 Mean Index Scores

One of the purposes of this study was to compare 1977 farmer attitudes and understanding of cooperatives to those which had been found in 1964. The mean scores for the three aspects of cooperation are shown in Table III-10.

Comparison of these scores indicated that farmers had slightly better understanding of cooperatives in 1977 than they had in 1964.

Table III-10

Comparison of Mean Index Scores for 1977 and 1964, Kansas

| Index | 1977 | 1964 |
|---|---|---|
| Understanding | | |
| Nature | 79 | 78 |
| Role | 68 | 67 |
| Policy | 69 | 66 |
| Knowledge | | |
| Nature | 90 | 87 |
| Role | 81 | 77 |
| Policy | 64 | 64 |
| Attitude | | |
| Nature | 56 | 54 |
| Role | 66 | 64 |
| Policy | 54 | 72 |
| Feeling | | |
| Nature | 57 | 78 |
| Role | 55 | 67 |
| Policy | 57 | 66 |
| Opinion | | |
| Nature | 83 | 59 |
| Role | 86 | 58 |
| Policy | 83 | 65 |

*Possible range on all indexes, 0 to 100.

Policy understanding showed the greatest improvement with a three-point rise.

Attitude changes between the two years were mixed in their direction. Attitudes toward the nature and role of cooperatives were more favorable in 1977 than they had been in 1964, but policy attitude was a great deal more unfavorable in 1977.

Farmers were found to have much milder feelings about their attitudes in 1977 than they had in 1964, but they were much more willing to express an opinion than earlier respondents. Farmers were also more willing to profess knowledge to the factual statements regarding cooperatives in 1977 than they had been in the 1964 survey.

## Mean Information Source Scores

In Section V of the questionnaire, respondents were asked to indicate the importance that each of thirty-one sources of information had in informing them about cooperatives. The possible responses were, "of major importance," "of some importance," "of little importance," and "of no importance." The scores given to each response were 8, 4, 2, and 0, respectively. Scores for each source of information were averaged providing an over-all mean score for all respondents. Respondents were then divided up into various demographic categories and mean scores for each information source were computed. These mean scores are given in Table III-11. Analysis of variance was used to test the differences in mean scores between the various demographic categories. The resulting F-ratios were considered to be significant at the .05 probability level or less.

Table III-11

Comparison of Mean Importance Scores Between Demographic
Characteristics for Information Sources Farmers Can
Use to Learn About Cooperatives, Kansas, 1977

| | Talking with Cooperative Mgr., Fieldman, or Employee | Talking with Cooperative Director | Talking with Cooperative Member |
|---|---|---|---|
| Mean Score for all Respondents . . . . | 3.07 | 2.43 | 2.64 |
| Farm Size | | | |
| Under 200 | 2.69 | 2.06 | 2.51 |
| 200-499 | 3.09 | 2.38 | 2.72 |
| 500-999 | 3.11 | 2.53 | 2.66 |
| 1,000 & Over | 3.28 | 2.65 | 2.60 |
| F-ratio | 13.16[a] | 13.95[a] | 2.59[b] |
| Age of Farm Operator | | | |
| Under 35 | 3.05 | 2.40 | 2.77 |
| 35-39 | 3.14 | 2.43 | 2.66 |
| 40-49 | 3.20 | 2.48 | 2.61 |
| 50-59 | 3.14 | 2.54 | 2.65 |
| 60-64 | 2.99 | 2.42 | 2.69 |
| 65 & Older | 2.85 | 2.22 | 2.43 |
| F-ratio | 2.90[a] | 2.19[b] | 2.78[a] |
| Level of Education | | | |
| 8th Grade | 2.91 | 2.23 | 2.54 |
| High School | 2.99 | 2.36 | 2.60 |
| Some College | 3.28 | 2.63 | 2.74 |
| College Degree | 3.36 | 2.72 | 2.78 |
| F-ratio | 9.09[a] | 9.24[a] | 3.24[a] |
| Cooperative Membership | | | |
| None | 2.19 | 1.76 | 2.19 |
| 1 | 2.69 | 2.17 | 2.53 |
| 2 | 3.22 | 2.56 | 2.73 |
| 3 | 3.31 | 2.56 | 2.63 |
| 4 | 3.42 | 2.75 | 2.81 |
| 5 | 3.26 | 2.61 | 2.91 |
| 6 | 3.56 | 2.48 | 2.64 |
| 9 | 4.00 | 2.67 | 3.33 |
| F-ratio | 24.30[a] | 12.02[a] | 6.59[a] |

[a]F-ratio is significant at .05 probability level.

[b]F-ratio is not significant at .05 probability level.

Table III-11--Continued

| | Talking with Neighbors or Friends | Talking with Extension Personnel | Other Personal Contacts | Annual Member Meeting |
|---|---|---|---|---|
| Mean Scores for all Respondents . . . . | 2.65 | 1.90 | 1.16 | 2.81 |
| Farm Size | | | | |
| Under 200 | 2.56 | 1.83 | 1.18 | 2.31 |
| 200-499 | 2.73 | 1.83 | 1.11 | 2.84 |
| 500-999 | 2.61 | 1.94 | 1.15 | 2.97 |
| 1,000 & Over | 2.66 | 2.00 | 1.20 | 2.95 |
| F-ratio | $1.78^b$ | $1.74^b$ | $1.31^b$ | $15.18^a$ |
| Age of Farm Operator | | | | |
| Under 35 | 2.78 | 1.97 | 1.26 | 2.71 |
| 35-39 | 2.89 | 2.03 | 1.19 | 2.74 |
| 40-49 | 2.55 | 1.96 | 1.12 | 2.91 |
| 50-59 | 2.60 | 1.90 | 1.16 | 2.95 |
| 60-64 | 2.70 | 1.88 | 1.13 | 2.88 |
| 65 & Older | 2.52 | 1.71 | 1.18 | 2.54 |
| F-ratio | $3.78^a$ | $1.79^b$ | $1.64^b$ | $3.33^a$ |
| Level of Education | | | | |
| 8th Grade | 2.57 | 1.70 | 1.09 | 2.71 |
| High School | 2.65 | 1.92 | 1.14 | 2.77 |
| Some College | 2.70 | 1.96 | 1.22 | 2.95 |
| College Degree | 2.63 | 2.07 | 1.24 | 2.93 |
| F-ratio | $0.80^b$ | $3.78^a$ | $2.49^b$ | $2.10^b$ |
| Cooperative Membership | | | | |
| None | 2.60 | 2.60 | 1.08 | 1.61 |
| 1 | 2.61 | 1.71 | 1.08 | 2.57 |
| 2 | 2.75 | 1.96 | 1.18 | 2.92 |
| 3 | 2.62 | 1.93 | 1.13 | 3.11 |
| 4 | 2.69 | 2.21 | 1.22 | 3.08 |
| 5 | 2.80 | 2.06 | 1.33 | 3.17 |
| 6 | 2.60 | 2.24 | 1.44 | 3.20 |
| 9 | 2.00 | 2.00 | 1.00 | 4.00 |
| F-ratio | $3.61^a$ | $4.00^a$ | $2.56^b$ | $23.65^a$ |

[a] F-ratio is significant at .05 probability level.

[b] F-ratio is not significant at .05 probability level.

Table III-11--<u>Continued</u>

| | District Member Meeting | Service Club or Church Meeting | Other Meetings | Cooperative Magazine |
|---|---|---|---|---|
| Mean Scores for all Respondents . . . . | 1.73 | 1.58 | 1.13 | 2.92 |
| **Farm Size** | | | | |
| Under 200 | 1.44 | 1.43 | 1.09 | 2.62 |
| 200-499 | 1.64 | 1.59 | 1.12 | 2.94 |
| 500-999 | 1.80 | 1.59 | 1.11 | 3.01 |
| 1,000 & Over | 1.95 | 1.66 | 1.19 | 3.02 |
| F-ratio | 11.20[a] | 3.19[a] | 1.87[b] | 7.79[a] |
| **Age of Farm Operator** | | | | |
| Under 35 | 1.73 | 1.65 | 1.14 | 2.87 |
| 35-39 | 1.87 | 1.79 | 1.09 | 3.02 |
| 40-49 | 1.74 | 1.63 | 1.10 | 2.94 |
| 50-59 | 1.75 | 1.57 | 1.17 | 3.00 |
| 60-64 | 1.72 | 1.49 | 1.01 | 2.97 |
| 65 & Older | 1.61 | 1.41 | 1.22 | 2.69 |
| F-ratio | 0.85[b] | 3.38[a] | 3.04[a] | 2.57[a] |
| **Level of Education** | | | | |
| 8th Grade | 1.55 | 1.50 | 1.10 | 2.83 |
| High School | 1.68 | 1.58 | 1.11 | 2.87 |
| Some College | 1.83 | 1.62 | 1.16 | 3.04 |
| College Degree | 2.05 | 1.60 | 1.20 | 3.10 |
| F-ratio | 6.43[a] | 0.87[b] | 1.29[b] | 3.27[a] |
| **Cooperative Membership** | | | | |
| None | 1.34 | 1.51 | 1.04 | 1.98 |
| 1 | 1.51 | 1.44 | 1.08 | 2.69 |
| 2 | 1.83 | 1.63 | 1.12 | 3.06 |
| 3 | 1.80 | 1.58 | 1.21 | 3.06 |
| 4 | 1.60 | 1.69 | 1.13 | 3.21 |
| 5 | 1.65 | 1.67 | 1.24 | 3.28 |
| 6 | 2.00 | 1.68 | 1.08 | 3.24 |
| 9 | 3.00 | 1.33 | 1.00 | 4.00 |
| F-ratio | 6.15[a] | 1.76[b] | 1.84[b] | 22.27[a] |

[a]F-ratio is significant at .05 probability level.

[b]F-ratio is not significant at .05 probability level.

Table III-11--<u>Continued</u>

|  | Cooperative Newsletter | Special Flyers | Newspaper Articles | Magazine Articles |
|---|---|---|---|---|
| Mean Scores for all Respondents . . . . | 2.63 | 2.31 | 2.46 | 2.52 |
| **Farm Size** | | | | |
| Under 200 | 2.29 | 2.04 | 2.35 | 2.40 |
| 200-499 | 2.63 | 2.25 | 2.44 | 2.52 |
| 500-999 | 2.75 | 2.34 | 2.45 | 2.52 |
| 1,000 & Over | 2.73 | 2.51 | 2.56 | 2.62 |
| F-ratio | $8.42^a$ | $9.70^a$ | $2.31^b$ | $2.36^b$ |
| **Age of Farm Operator** | | | | |
| Under 35 | 2.54 | 2.28 | 2.45 | 2.60 |
| 35-39 | 2.69 | 2.39 | 2.61 | 2.64 |
| 40-49 | 2.59 | 2.38 | 2.45 | 2.59 |
| 50-59 | 2.70 | 2.35 | 2.51 | 2.51 |
| 60-64 | 2.65 | 2.26 | 2.39 | 2.54 |
| 65 & Older | 2.61 | 2.17 | 2.40 | 2.40 |
| F-ratio | $0.62^b$ | $1.18^b$ | $1.09^b$ | $1.08^b$ |
| **Level of Education** | | | | |
| 8th Grade | 2.60 | 2.23 | 2.42 | 2.42 |
| High School | 2.59 | 2.26 | 2.43 | 2.49 |
| Some College | 2.69 | 2.36 | 2.46 | 2.60 |
| College Degree | 2.78 | 2.60 | 2.64 | 2.73 |
| F-ratio | $1.22^b$ | $4.26^a$ | $1.73^b$ | $3.53^a$ |
| **Cooperative Membership** | | | | |
| None | 1.74 | 1.60 | 2.22 | 2.24 |
| 1 | 2.41 | 2.09 | 2.29 | 2.40 |
| 2 | 2.65 | 2.36 | 2.60 | 2.51 |
| 3 | 2.74 | 2.41 | 2.52 | 2.59 |
| 4 | 3.11 | 2.66 | 2.62 | 2.79 |
| 5 | 3.11 | 2.54 | 2.63 | 2.59 |
| 6 | 3.20 | 2.80 | 2.52 | 2.64 |
| 9 | 3.67 | 4.00 | 3.67 | 3.67 |
| F-ratio | $19.24^a$ | $15.36^a$ | $4.17^a$ | $4.94^a$ |

[a] F-ratio is significant at .05 probability level.

[b] F-ratio is not significant at .05 probability level.

Table III-11--<u>Continued</u>

| | Newspaper Advertisements | Cooperative Pamphlets | Business Pamphlets | University Pamphlets |
|---|---|---|---|---|
| Mean Scores for all Respondents . . . . | 2.34 | 2.33 | 1.80 | 1.97 |
| **Farm Size** | | | | |
| Under 200 | 2.20 | 2.12 | 1.69 | 1.82 |
| 200-499 | 2.40 | 2.32 | 1.71 | 1.80 |
| 500-999 | 2.37 | 2.36 | 1.78 | 1.99 |
| 1,000 & Over | 2.38 | 2.45 | 2.00 | 2.34 |
| F-ratio | $2.00^b$ | $4.35^a$ | $6.62^a$ | $11.17^a$ |
| **Age of Farm Operator** | | | | |
| Under 35 | 2.31 | 2.40 | 1.91 | 2.11 |
| 35-39 | 2.35 | 2.43 | 1.87 | 2.11 |
| 40-49 | 2.36 | 2.33 | 1.78 | 2.01 |
| 50-59 | 2.36 | 2.36 | 1.84 | 1.98 |
| 60-64 | 2.31 | 2.39 | 1.83 | 1.92 |
| 65 & Older | 2.33 | 2.07 | 1.55 | 1.70 |
| F-ratio | $0.17^b$ | $2.96^a$ | $3.34^a$ | $3.72^a$ |
| **Level of Education** | | | | |
| 8th Grade | 2.34 | 2.18 | 1.73 | 1.69 |
| High School | 2.29 | 2.29 | 1.76 | 1.94 |
| Some College | 2.37 | 2.42 | 1.85 | 2.10 |
| College Degree | 2.46 | 2.58 | 1.97 | 2.31 |
| F-ratio | $1.31^b$ | $4.96^a$ | $2.32^b$ | $11.15^a$ |
| **Cooperative Membership** | | | | |
| None | 2.10 | 1.73 | 1.53 | 1.66 |
| 1 | 2.12 | 2.22 | 1.61 | 1.75 |
| 2 | 2.43 | 2.35 | 1.87 | 2.01 |
| 3 | 2.44 | 2.40 | 1.85 | 2.03 |
| 4 | 2.50 | 2.65 | 1.93 | 2.17 |
| 5 | 2.33 | 2.48 | 1.87 | 2.28 |
| 6 | 2.40 | 2.56 | 2.12 | 2.20 |
| 9 | 2.67 | 3.33 | 2.00 | 2.67 |
| F-ratio | $5.84^a$ | $9.16^a$ | $4.10^a$ | $4.96^a$ |

[a]F-ratio is significant at .05 probability level.

[b]F-ratio is not significant at .05 probability level.

Table III-11--<u>Continued</u>

| | Govt. (USDA) Pamphlets | Other Printed Material | Radio Programs | Television Programs |
|---|---|---|---|---|
| Mean Scores for all Respondents . . . . | 1.93 | 1.13 | 2.38 | 2.38 |
| **Farm Size** | | | | |
| Under 200 | 1.87 | 1.09 | 2.21 | 2.29 |
| 200-499 | 1.94 | 1.15 | 2.40 | 2.33 |
| 500-999 | 1.86 | 1.14 | 2.38 | 2.38 |
| 1,000 & Over | 2.03 | 1.13 | 2.49 | 2.46 |
| F-ratio | $1.73^b$ | $0.61^b$ | $3.17^a$ | $1.72^b$ |
| **Age of Farm Operator** | | | | |
| Under 35 | 2.01 | 1.19 | 2.34 | 2.46 |
| 35-39 | 1.98 | 1.14 | 2.34 | 2.51 |
| 40-49 | 1.87 | 1.11 | 2.43 | 2.40 |
| 50-59 | 1.94 | 1.12 | 2.42 | 2.39 |
| 60-64 | 1.97 | 1.10 | 2.41 | 2.40 |
| 65 & Older | 1.85 | 1.13 | 2.30 | 2.15 |
| F-ratio | $0.75^b$ | $0.55^b$ | $0.57^b$ | $2.47^a$ |
| **Level of Education** | | | | |
| 8th Grade | 1.82 | 1.12 | 2.30 | 2.33 |
| High School | 1.89 | 1.13 | 2.37 | 2.36 |
| Some College | 1.99 | 1.14 | 2.46 | 2.43 |
| College Degree | 2.18 | 1.13 | 2.40 | 2.40 |
| F-ratio | $4.00^a$ | $0.06^b$ | $1.02^b$ | $0.46^b$ |
| **Cooperative Membership** | | | | |
| None | 1.79 | 1.09 | 2.24 | 2.23 |
| 1 | 1.77 | 1.11 | 2.11 | 2.09 |
| 2 | 1.98 | 1.15 | 2.42 | 2.47 |
| 3 | 1.95 | 1.12 | 2.51 | 2.49 |
| 4 | 2.10 | 1.08 | 2.62 | 2.58 |
| 5 | 1.96 | 1.33 | 2.48 | 2.50 |
| 6 | 1.92 | 1.24 | 2.36 | 2.08 |
| 9 | 2.00 | 1.00 | 1.67 | 1.67 |
| F-ratio | $1.94^b$ | $1.59^b$ | $4.87^a$ | $5.42^a$ |

[a]F-ratio is significant at .05 probability level.

[b]F-ratio is not significant at .05 probability level.

Table III-11--<u>Continued</u>

| | Tours of Cooperative Plants | Speaking or Essay Contests | Vocational Agriculture Classes | College Short Courses |
|---|---|---|---|---|
| Mean Scores for all Respondents . . . . | 2.13 | 1.34 | 1.68 | 1.39 |
| **Farm Size** | | | | |
| Under 200 | 1.72 | 1.24 | 1.63 | 1.25 |
| 200-499 | 2.04 | 1.33 | 1.58 | 1.31 |
| 500-999 | 2.17 | 1.32 | 1.66 | 1.37 |
| 1,000 & Over | 1.45 | 1.84 | 1.84 | 1.60 |
| F-ratio | 15.67[a] | 3.49[a] | 3.70[a] | 9.02[a] |
| **Age of Farm Operator** | | | | |
| Under 35 | 2.18 | 1.46 | 2.04 | 1.58 |
| 35-39 | 2.11 | 1.40 | 1.90 | 1.46 |
| 40-49 | 2.38 | 1.37 | 1.80 | 1.43 |
| 50-59 | 2.17 | 1.34 | 1.58 | 1.37 |
| 60-64 | 1.96 | 1.24 | 1.48 | 1.26 |
| 65 & Older | 1.82 | 1.21 | 1.34 | 1.26 |
| F-ratio | 5.15[a] | 3.01[a] | 12.52[a] | 3.72[b] |
| **Level of Education** | | | | |
| 8th Grade | 1.82 | 1.29 | 1.38 | 1.24 |
| High School | 2.08 | 1.29 | 1.65 | 1.31 |
| Some College | 2.36 | 1.47 | 1.86 | 1.59 |
| College Degree | 2.43 | 1.42 | 1.94 | 1.66 |
| F-ratio | 10.19[a] | 4.45[a] | 11.93[a] | 12.93[a] |
| **Cooperative Membership** | | | | |
| None | 1.62 | 1.25 | 1.63 | 1.28 |
| 1 | 1.75 | 1.18 | 1.49 | 1.19 |
| 2 | 2.22 | 1.39 | 1.69 | 1.39 |
| 3 | 2.26 | 1.32 | 1.74 | 1.42 |
| 4 | 2.46 | 1.52 | 1.77 | 1.59 |
| 5 | 2.46 | 1.46 | 1.76 | 1.61 |
| 6 | 2.44 | 1.40 | 1.84 | 1.68 |
| 9 | 3.00 | 1.00 | 1.00 | 3.67 |
| F-ratio | 9.27[a] | 3.59[a] | 1.84[b] | 7.94[a] |

[a]F-ratio is significant at .05 probability level.

[b]F-ratio is not significant at .05 probability level.

Table III-11--<u>Continued</u>

| | College Regular Courses | F.F.A. Activities | 4-H Club Activities | Other Activities |
|---|---|---|---|---|
| Mean Scores for all Respondents  . . . . | 1.37 | 1.68 | 1.85 | 1.06 |
| **Farm Size** | | | | |
| Under 200 | 1.28 | 1.64 | 1.76 | 1.03 |
| 200-499 | 1.27 | 1.63 | 1.80 | 1.04 |
| 500-999 | 1.34 | 1.67 | 1.88 | 1.08 |
| 1,000 & Over | 1.56 | 1.80 | 1.94 | 1.09 |
| F-ratio | 7.90[a] | 1.74[b] | 1.39[b] | 1.49[b] |
| **Age of Farm Operator** | | | | |
| Under 35 | 1.64 | 1.96 | 2.06 | 1.10 |
| 35-39 | 1.40 | 1.85 | 2.06 | 1.09 |
| 40-49 | 1.42 | 1.78 | 1.94 | 1.05 |
| 50-59 | 1.31 | 1.59 | 1.80 | 1.06 |
| 60-64 | 1.20 | 1.59 | 1.83 | 1.07 |
| 65 & Older | 1.22 | 1.39 | 1.50 | 1.03 |
| F-ratio | 7.20[a] | 7.87[a] | 6.68[a] | 0.70[b] |
| **Level of Education** | | | | |
| 8th Grade | 1.23 | 1.50 | 1.68 | 1.02 |
| High School | 1.25 | 1.64 | 1.80 | 1.07 |
| Some College | 1.50 | 1.83 | 2.00 | 1.09 |
| College Degree | 1.87 | 1.89 | 2.07 | 1.05 |
| F-ratio | 24.12[a] | 6.02[a] | 5.53[a] | 1.39[b] |
| **Cooperative Membership** | | | | |
| None | 1.30 | 1.55 | 1.61 | 1.02 |
| 1 | 1.18 | 1.49 | 1.73 | 1.04 |
| 2 | 1.42 | 1.76 | 1.87 | 1.09 |
| 3 | 1.38 | 1.74 | 1.84 | 1.04 |
| 4 | 1.50 | 1.75 | 2.05 | 1.07 |
| 5 | 1.39 | 1.67 | 2.04 | 1.17 |
| 6 | 1.52 | 1.72 | 2.16 | 1.00 |
| 9 | 2.67 | 2.67 | 2.67 | 1.00 |
| F-ratio | 4.00[a] | 2.44[a] | 2.81[a] | 1.53[b] |

[a]F-ratio is significant at .05 probability level.

[b]F-ratio is not significant at .05 probability level.

*Method for scoring was 8 for "of major importance," 4 for "of some importance," 2 for "of little importance," and 0 for "of no importance."

For comparison purposes, the information sources were divided into four main headings, personal contacts, meetings, press, radio and television, and sponsored activities.

## Personal Contacts

Among the personal contact sources of information, farmers gave the greatest average importance score to talking with a cooperative manager, fieldman or employee. The average score for all respondents was 3.07 (between some and little importance). This was the highest average score given to any of the thirty-one information sources. The differences in mean scores for this information source were significant between the groups of farmers with different sizes of farming operations. Larger farmers gave higher scores to talking to cooperative personnel than did smaller farmers. The differences in mean scores were also significant for the various age groups. Older farmers were less inclined to rely on cooperative personnel for their information about cooperatives than were younger or middle-aged farmers. Farmers with college educations gave significantly higher scores than did farmers with eighth grade or high school educations. Differences in mean scores for cooperative membership were highly significant for this information source. Cooperative members gave much higher importance to talking with cooperative personnel than did non-members. This could be expected since farmers who are not cooperative members would not have as much contact with cooperative personnel.

The personal contact source of information to receive the next highest average score was "talking with neighbors or friends." The over-all average score for this source was 2.65, slightly above "of

little importance." The differences between farmers having different sizes of farming operations were not significant, indicating that large and small farmers were equally inclined to rely on neighbors and friends for information about cooperatives. Younger farmers, however, were more inclined to rely on neighbors and friends for information than were older farmers. Differences in mean scores between education groups were not significant, but the analysis showed that farmers who were not cooperative members gave significantly less importance to this source than did farmers who were cooperative members.

Talking with a cooperative member, as an information source, received an average score of 2.64 for all respondents. The farm size categories showed no significant differences in their mean scores. Older farmers were less inclined to rely on this source of information than were other farmers. The scores for farmers under 35 were not significantly different from middle-aged farmers, however. Farmers with a college degree gave more importance to this source than did farmers with an eighth grade education. Also, cooperative members gave significantly higher scores to talking with other cooperative members than did non-member farmers.

Talking with a cooperative director was given an average importance score of 2.43, slightly above "of little importance." Operators of larger sized farms gave significantly higher scores of cooperative information than did operators of smaller farms. The differences were especially large between farmers who farm over 1,000 acres and those farming under 200. College educated farmers gave higher importance scores to talking with cooperative directors than did high school or eighth grade graduates. Cooperative members also gave significantly

higher importance scores than did non-members. The differences in mean scores between age groups were not significant, however. It is interesting to note the comparative ranking of this information source among all others. The ranking of all thirty-one sources is shown in Table III-11. In a 1976 survey, cooperative managers ranked the cooperative directors as their third most important communication channel to farmers, while farmers in 1977 rated directors ninth in importance to them.

Talking with Extension Service personnel had a average score for all respondents of 1.90, slightly less than "of little importance." The differences in mean scores were not significant in either the farm size or age groups. Farmers with college degrees showed significantly greater reliance on extension personnel for information than did farmers with fewer years of formal education. In contrast to other sources of information, farmers who were not members of a cooperative showed greater reliance on Extension personnel for information than did cooperative members.

Other personal contacts received an average score of 1.16. Differences in mean scores were not significant between farm size, age, education or cooperative membership groups.

## Meetings

The average importance score given to the annual member meeting was 2.81. This rated third highest among farmers and first by cooperative managers in order of importance. The differences in mean scores were significant between farm sizes. Operators of larger farms gave higher importance to the annual meeting than did operators of smaller farms.

Older farmers were less inclined to rely on the annual meeting for information than were farmers in general. Differences between education groups were not significant, however. Cooperative members were more likely to give a higher importance score to the annual member meeting than were non-member farmers.

District member meetings received an average score of 1.73 for all respondents. Larger farmers gave more importance to this source of information than did smaller farmers, while there were no significant differences in mean scores between the various age groups. Farmers with college degrees were significantly more inclined to rate these meetings as being important to them than were the other farmers. Cooperative members also rated district meetings higher than non-members.

Service club or church meetings were given an average score of 1.58 by all farmers. This source of information was ranked twenty-fourth by farmers and nineteenth by cooperative managers. Larger farmers rated this source higher than smaller farmers, also, younger farmers rated these meetings higher than older farmers. The differences in mean scores between education or membership groups were not significant.

The average score given to other meetings was 1.13. This source of information was rated twenty-ninth by farmers and thirtieth by cooperative managers. The differences in mean scores for any of the demographic characteristics were not significant.

Press, Radio and Television

The average score for cooperative magazines was 2.92, which was the highest among the printed material sources. Farmers ranked these magazines second in importance among all information sources, while

cooperative managers ranked their magazines as only their sixteenth most important channel to reach farmers with. Differences in mean scores showed that larger farmers had more reliance on such magazines than did smaller farmers. Farmers over 65 years old had less reliance on cooperative magazines than did other farmers. Those with fewer years of formal education also placed less reliance on these magazines than did farmers with more years of education. Non-member farmers also placed less importance on such magazines than did cooperative members.

Cooperative newsletters scored an average importance of 2.63. Larger farmers relied more on this source than did smaller farmers, while differences between age and educational categories were not significant. Farmers who were cooperative members placed greater importance on these newsletters than did non-member farmers.

Special flyers was scored an average of 2.31 by all survey respondents. Larger farmers, college educated farmers and cooperative members had significantly higher importance scores than did their respective counterparts. Differences in mean scores between the age categories were not significant.

Magazine articles about cooperatives received an average score of 2.52 for all respondents. This means that it averaged slightly more than "of little importance" in informing farmers about cooperatives. The differences in mean scores were not significant in either the farm size or age groups. Farmers with college educations, however, did show significantly higher scores than did farmers with fewer years of formal education. Also, farmers who were cooperative members gave greater importance to magazine articles than did non-member farmers.

Newspaper articles about cooperatives were scored an average of 2.46. This is slightly below the average score for magazine articles. The differences in mean scores between the various demographic categories are the same as for magazine articles, with the exception of the education groups, where there were no significant differences for newspaper articles.

Newspaper advertisements received an average importance score of 2.34. Farmers ranked this source twelfth in importance of informing them about cooperatives, while cooperative managers had ranked it as their fourth most important communication channel to farmers. The differences in mean scores between farm size, age, or education groups were not significant, but farmers who were cooperative members did give significantly more importance to newspaper ads than did non-member farmers.

Cooperative pamphlets received an average score of 2.33, with farmers having over 1,000 acres scoring it significantly higher than farmers having under 200 acres. Farmers over sixty-five years old gave these pamphlets less importance than other age groups, while college educated farmers gave greater importance than did eighth grade graduates. Cooperative members also showed significantly greater reliance on these pamphlets than did non-members.

University pamphlets were scored slightly below "of little importance" at 1.97. Farmers with larger operations, younger farmers, and those with college educations were all significantly higher in their scoring than their respective counterparts. Cooperative members showed a tendency to rate university pamphlets higher also.

Government (USDA) pamphlets were slightly below university pamphlets, with an average score of 1.93. No significant differences were detected in the mean scores between farm size or age groups. Farmers with college degrees did give higher scores than those with fewer years of formal education, but differences in mean scores for membership categories were not significant.

Pamphlets published by business organizations and associations received an average score of 1.80. Larger farmers relied more on these publications than did smaller farmers, but farmers over sixty-five were less inclined to rely on them than other ages of farmers. The mean scores for cooperative members were higher than non-members, but the educational groups showed no significant differences.

Other printed materials were rated last among the printed sources of information with an average score of 1.13. There were no significant differences in mean scores between any of the demographic categories.

Radio programs sponsored by cooperatives received an average score of 2.38. This source of information was ranked tenth in importance by farmers and sixth by cooperative managers. The differences in rankings by the two groups is much like that found in newspaper advertisements and could be the result of the two media being used essentially for the same purposes by cooperatives. Farmers with larger operations rated radio programs higher than did smaller farmers. College educated farmers also rated these programs higher than those farmers with fewer years of formal education. Differences in mean scores between age and membership groups were not significant.

Television programs sponsored by cooperatives received the same average score as radio programs, 2.38. Differences in mean scores for

farms size however, were not significantly different. Younger farmers did feel that these programs had more importance to them than did older farmers, but differences between the education and cooperative membership groups were not significant.

## Sponsored Activities

Tours of cooperative plants received an average score of 2.13. This was the highest rated sponsored activity but it was only rated fifteenth among all information sources in importance. Larger farmers, college educated farmers and cooperative members all placed more importance on these tours than did their respective counterparts. Older farmers, however, placed less importance on these tours than did the other ages of farmers.

Participation in 4-H activities was scored 1.85 by all respondents. This was ranked only nineteenth by farmers and fifth by cooperative managers in importance. The mean scores for farm size showed no significant differences, but younger farmers gave 4-H participation a significantly higher ranking than older farmers. This could be partially due to the greater emphasis on cooperatives in 4-H programs in the last twenty-five years. College educated farmers also rated 4-H participation higher and this could be associated to the age differences, since most college educated farmers are the younger ones. Cooperative members also gave greater importance scores to 4-H activities than did non-members.

Participation in vocational agriculture classes in high school was scored an average of 1.68 by respondents. Larger farmers and college educated farmers rated this participation more importantly than their

respective counterparts. Older farmers were significantly less inclined to rely on such classes than other farmers. This could be due to the same circumstances discussed for 4-H. No significant differences were discovered between the cooperative membership categories.

Participation in F.F.A. activities also received an average importance score of 1.68. There were no differences in scores between farm size categories, but older farmers were less inclined to rely on such activities for their information about cooperatives. College educated farmers and cooperative members gave higher scores to F.F.A. activities than did their counterparts.

College short courses were scored an average of 1.39 by all respondents. Larger farmers, college educated farmers, and cooperative members all gave significantly higher importance scores to these courses than did their respective counterparts. Farmers under thirty-five also gave higher scores than did the other age groups.

College regular courses were scored slightly lower at 1.37. The differences in mean scores followed the same patterns as those discussed in the college short course discussion.

Participation in cooperative speaking and essay contests were scored an average of 1.34 by all respondents. The differences in mean scores also followed the same patterns as in the college course information sources.

Participation in other activities was ranked last among all information sources with an average score of 1.06. None of the mean scores for any of the various demographic categories had any significant differences.

Table III-12

Relative Ranking of Information Sources by Average
Importance Scores, All Respondents, Kansas

| Information Source | 1977 Farmer Attitude Survey | 1964 Farmer Attitude Survey | 1977[a] Cooperative Information Survey |
|---|---|---|---|
| Talking with a cooperative manager, fieldman, or employee | 1 | 1 | 2 |
| Cooperative magazine | 2 | 3 | 16 |
| Annual member meeting | 3 | 2 | 1 |
| Talking with neighbor or friends | 4 | 5 | --[b] |
| Talking with a cooperative member | 5 | 4 | 8 |
| Cooperative newsletter | 6 | 6 | 9 |
| Magazine articles about cooperatives | 7 | 9 | 26 |
| Newspaper articles about cooperatives | 8 | 8 | 11 |
| Talking with a cooperative director | 9 | 7 | 3 |
| Radio programs sponsored by cooperatives | 10 | 10 | 6 |
| Television programs sponsored by cooperatives | 11 | 12 | 17 |
| Newspaper advertisements | 12 | 13 | 4 |
| Cooperative pamphlets | 13 | 11 | 13 |
| Special flyers | 14 | 14 | 12 |
| Tours of cooperative plants | 15 | 15 | 7 |
| University pamphlets | 16 | 20 | --[b] |
| Government pmaphlets | 17 | 16 | --[b] |
| Talking with Extension Service personnel | 18 | 18 | 18 |

Table III-12--<u>Continued</u>

| Information Source | 1977 Farmer Attitude Survey | 1964 Farmer Attitude Survey | 1977[a] Cooperative Information Survey |
|---|---|---|---|
| 4-H Club activities | 19 | 22 | 5 |
| Business organization pamphlets | 20 | 21 | --[b] |
| District member meetings | 21 | 19 | 22 |
| Vocational agricultural classes | 22 | 25 | 14 |
| F.F.A. participation | 23 | 24 | 10 |
| Service club or church meeting | 24 | 23 | 19 |
| College short courses | 25 | 27 | --[b] |
| College regular courses | 26 | 28 | 23 |
| Cooperative public speaking and essay contests | 27 | 26 | 25 |
| Other personal contacts | 28 | 29 | 20 |
| Other meetings | 29 | 30 | 15 |
| Other printed material | 30 | 17 | 24 |
| Other sponsored activities | 31 | 31 | 21 |

[a]Milton L. Manuel, Allen L. Hurley and Richard Phillips, <u>Information Programs Used by Kansas Farmer Cooperatives</u>, forthcoming extension publication, Kansas Agr. Expt. Sta., Kansas State University, Manhattan, Kansas.

[b]These information sources were not included in the survey of cooperative managers and therefore, could not be ranked.

CHAPTER IV

FACTORS ASSOCIATED WITH DIFFERENCES

IN ATTITUDES

One of the primary objectives of this study was to determine those factors which influenced farm operators attitudes toward cooperatives in 1977. Some individual farmers had very favorable attitudes toward cooperatives and some had highly unfavorable attitudes. Certainly, there must be reasons for such varied differences in attitudes among Kansas farm operators. Multiple regression analysis was used to determine those characteristics of individual farmers which can be associated with differences in their attitudes toward cooperatives. Four regression equations were developed using four separate attitude indexes as dependent variables. These indexes were, General Attitude (Index 15); Nature Attitude (Index 14); Policy Attitude (Index 13); Role Attitude (Index 12). Each of these four indexes was taken to be a function of twelve different characteristics about the respondents. The form of the regression equation can be expressed as:

$$Y = f(X_1, X_2, X_3, \dots X_{12})$$

The definitions for each of the variables are shown in Tables IV-1 - IV-4. Note that five of the independent variables are other indexes, each dealing with the same subject category as the dependent variable. The other seven independent variables are demographic characteristics about each respondent.

Table IV-1

Definitions of Variables Used in Combined Attitude
Regression Equation, Kansas, 1977

| Variable | Definition |
|---|---|
| $Y_1$ | Index of attitude toward cooperatives in general |
| $X_1$ | Index of attitude toward local cooperatives |
| $X_2$ | Index of over-all understanding of cooperatives |
| $X_3$ | Index of over-all knowledge of cooperatives |
| $X_4$ | Index of feeling toward cooperatives in general |
| $X_5$ | Index of opinion toward cooperatives in general |
| $X_6$ | Area of state |
| $X_7$ | Size of farming operation |
| $X_8$ | Age of farm operator |
| $X_9$ | Level of education of farm operator |
| $X_{10}$ | Cooperative membership |
| $X_{11}$ | Father a cooperative member |
| $X_{12}$ | Cooperative patronage |

Table IV-2

Definitions of Variables Used in Nature Attitude
Regression Equation, Kansas, 1977

| Variable | Definition |
|---|---|
| $Y_2$ | Index of attitude toward the nature of cooperatives |
| $X_1$ | Index of attitude toward nature of local cooperative |
| $X_2$ | Index of understanding toward nature of cooperatives |
| $X_3$ | Index of knowledge toward nature of cooperatives |
| $X_4$ | Index of feeling toward nature of cooperatives |
| $X_5$ | Index of opinion regarding nature of cooperatives |
| $X_6 - X_{12}$ | Same as in Table IV-1 |

Table IV-3

Definitions of Variables Used in Role Attitude
Regression Equation, Kansas, 1977

| Variable | Definition |
| --- | --- |
| $Y_3$ | Index of attitude toward the role of cooperatives |
| $X_1$ | Index of attitude toward the role of local cooperatives |
| $X_2$ | Index of understanding toward the role of cooperatives |
| $X_3$ | Index of knowledge toward the nature of cooperatives |
| $X_4$ | Index of feeling toward the role of cooperatives |
| $X_5$ | Index of opinion regarding the role of cooperatives |
| $X_6 - X_{12}$ | Same as in Table IV-1 |

Table IV-4

Definitions of Variables Used in Policy Attitude
Regression Equation, Kansas, 1977

| Variable | Definition |
| --- | --- |
| $Y_4$ | Index of attitude toward the public policies of cooperatives |
| $X_1$ | Index of attitude toward policies of local cooperatives |
| $X_2$ | Index of understanding toward policies of cooperatives |
| $X_3$ | Index of knowledge toward policies of cooperatives |
| $X_4$ | Index of feeling toward the policies of cooperatives |
| $X_5$ | Index of opinion regarding policies of cooperatives |
| $X_6 - X_{12}$ | Same as in Table IV-1 |

Table IV-5 shows the regression coefficients for each of the independent variables ($X_1$ - $X_{12}$) in the four regression equations. All of the coefficients are positive, except for those which are preceded by a minus sign, and those are negative. The level of significance for each regression coefficient is indicated by the subscript beside it.[17] The test used to determine if the regression coefficient is significantly different from zero was the two-tail t-statistic, where;

$H_o$:  b = zero

$H_a$:  b ≠ zero

Test statistic is $\qquad t = \dfrac{b}{s_b}$

where: $\quad s_b = \dfrac{s_{y.x}}{\Sigma(X - \overline{X})^2}$ $\quad$ and $\quad s_{y.x} = \sqrt{\left(\dfrac{\Sigma(Y - \hat{Y})^2}{n - 2}\right)}$

and $\quad (Y - \hat{Y})^2 = \Sigma(Y - \overline{Y})^2 - \dfrac{[\Sigma(X - \overline{X}) - (Y - \overline{Y})]^2}{\Sigma(X - \overline{X})^2}$

Decision rule is:

if - $t_{\alpha/2,n - 2} \leq t \leq + t_{\alpha/2,n - 2}$ $\qquad$ Accept $H_o$

$\qquad$ Otherwise $\qquad\qquad\qquad\qquad$ Reject $H_o$

Also shown in Table IV-5 is the coefficient of determination ($R^2$) values for each of the four regression equations. These coefficients indicate the percentage of variation in the dependent variable that is explained by variation in the independent variable.

The correlation coefficients for all variables used in the regression analysis are shown in Appendix Table C-1.

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[17] A level of significance of .01 would indicate that there is a one percent, or less, chance of Type I error. Type I error occurs when it is said that a coefficient is significantly different from zero, while in fact, it is not.

Table IV-5

Regression Coefficients of Relationship Between Attitude Indexes
and Respondent Characteristics, Kansas, 1977

| | | Attitude in General | Attitude toward Nature | Attitude toward Role | Attitude toward Policy |
|---|---|---|---|---|---|
| $X_1$ | Local Attitude | .534[a] | .594[a] | .878[a] | .420[a] |
| $X_2$ | Understanding | .151[a] | .027[d] | -.004[d] | .213[a] |
| $X_3$ | Knowledge | -.002[e] | .058[a] | -.012[c] | .051[a] |
| $X_4$ | Feeling | .034[b] | .038[a] | .069[a] | -.183[a] |
| $X_5$ | Opinion | .006[e] | .012[e] | .010[e] | -.011[e] |
| $X_6$ | Area of the State | .110[e] | .064[e] | .078[d] | .139[d] |
| $X_7$ | Size of Farm Operation | .121[e] | .172[e] | .058[e] | ----[e] |
| $X_8$ | Age of Farm Operator | .052[e] | .137[e] | .189[e] | -.374[d] |
| $X_9$ | Level of Education | .264[e] | -.448[d] | .593[b] | ----[e] |
| $X_{10}$ | Cooperative Membership | .110[e] | -.291[e] | .364[a] | .710[a] |
| $X_{11}$ | Father a Cooperative Mbr | .175[e] | .439[d] | .019[e] | -.567[d] |
| $X_{12}$ | Cooperative Patronage | -.192[e] | -.451[e] | .171[e] | .360[e] |
| a | (Y intercept) | 9.552 | 16.526 | 1.808 | 17.376 |
| | $R^2$ | 52.874 | 73.849 | 89.964 | 51.558 |
| | R | 72.714[a] | 85.935[a] | 94.849[a] | 71.804[a] |

[a]Significant at .01 probability level.

[b]Significant at .05 probability level.

[c]Significant at .10 probability level.

[d]Significant at .20 probability level.

[e]Not significant.

## Discussion of the Relationships Found

Some highly significant relationships were found to exist in 1977 between the attitudes of Kansas farm operators toward cooperatives and the twelve characteristics utilized in this analysis. In terms of explained variation, the twelve independent variables explained 52.9 percent of the variation in combined attitudes toward cooperatives, 73.9 percent of the variation in attitudes toward the nature and operation of cooperatives, 90.0 percent of the variation in attitudes toward the role of cooperatives, and 51.6 percent of the variation in attitudes toward public policies affecting cooperatives.

In each of the four regression equations, nearly all of the total $R^2$ value was accounted for by the first independent variable, local attitude index. In the equation for combined attitudes toward cooperatives, the local attitude index accounted for all but 3.3 percent of the total explained variation in the dependent variable. For the equation concerning nature attitudes, the local nature attitude accounted for all but 1.8 percent of the total explained variation. The local attitude index accounted for all but 1.0 percent of the explained variation for attitudes toward role of cooperatives. In the equation for policy attitudes, the local attitude accounted for all but 12.3 percent of the total explained variation.

The regression coefficients for local attitudes in the four equations were all highly significant and positively correlated with the over-all attitudes. An increase of 10.0 points in the local attitude score would be associated with an increase in attitude scores of 5.34 points for combined attitudes toward cooperatives, 5.54 points for attitudes toward the nature of cooperatives, 8.78 points for attitudes

toward the role of cooperatives, and 4.20 points to attitudes toward
public policies affecting cooperatives. Such strong casual relation-
ships between attitudes toward the local cooperative and attitudes
toward cooperatives in general, indicate that farmers base their judge-
ments about cooperatives mainly upon their experiences with local
cooperatives. This evidence gives emphasis to the need for a strong and
active member relations program built around the local organization.
The regression coefficient for local policy attitude indicated that the
local organizations are not so strongly linked to cooperatives in
general in the public policy area. This may be an area where educa-
tional and promotional programs could be handled more effectively with
some help from regional cooperatives.

The regression coefficients for $X_2$, the index of understanding,
indicated a highly significant relationship between the level of under-
standing farmers have of cooperatives and the attitudes they hold in
only two of the equations. The understanding scores for combined
attitudes and policy attitudes were significant at the .001 level and
were positively related to favorable attitudes. An increase in under-
standing of 10.0 points would cause the combined attitude index to
increase by 1.51 points and the policy attitude index to increase by
2.13 points. The strong relationship between good understanding and
favorable public policy attitude should be of interest to cooperative
leaders. It emphasizes the importance of a strong and effective member
education program in the public policy area. The coefficient for under-
standing in the other two equations, role attitude and nature attitude,
were neither significant, nor stable in their sign. The level of

understanding did not seem to affect farmers attitudes in these two areas concerning cooperatives.

The regression coefficients for $X_3$ indicated that professed knowledge had only a small influence on farmers attitudes toward cooperatives. For the combined attitude equation, the knowledge coefficient was not significant at any level. Profession of knowledge did appear to have a highly significant association to favorable attitudes toward the nature of cooperatives. An increase of 10.0 percent of the factual questions about which some knowledge was professed results in a more favorable nature attitude of 0.58 points. Knowledge appeared to be negatively related to attitudes toward the role of cooperatives. The level of significance at .20 is somewhat questionable, however. The coefficient showed that professing knowledge on 10.0 percent more factual questions would reduce role attitudes by only 0.12 points. The coefficient for knowledge in the policy attitude equation was significant at the .01 level and was positively related to favorable policy attitudes. This supports earlier findings that those who know and understand cooperatives tend to have more favorable attitudes toward public policies affecting them.

The coefficients for $X_4$, strength of feelings, were mixed in their direction, as well as, their significance. However, all can be considered to have a fairly significant influence on attitudes. An increase of 10.0 points in the score for strength of feeling would be associated with an increase in the score for combined attitudes of 0.34 points, a 0.38 point increase in the index of nature attitude, an increase of 0.69 points in the role attitude index, and a decrease of 1.83 points in the policy attitude index. The significant negative

relationship between strength of feelings and policy attitudes would indicate that those farmers with negative attitudes hold strong feelings about their convictions. This could be of some concern to cooperative leaders, in that, unfavorable policies affecting cooperatives could be initiated by a minority of farmers with negative attitudes, who also hold strong feelings about those attitudes.

The coefficients for $X_5$, willingness to express an opinion, were not significant at any level and did not appear to be associated with any change in the four over-all attitude indexes.

In looking at the demographic characteristics concerning Kansas farm operators, we see that the area of the state in which the farmer lives had no, or only questionable, association to his attitudes. The coefficients for area of the state, $X_6$ were not significant in the combined attitude and nature attitude equations. The coefficients were significant in the role and policy attitude equations, but only at the questionable level of .20.

The size of farming operation, $X_7$, also appeared to have no relationship to farmers attitudes towards cooperatives. The coefficients were not statistically significant in any of the equations. This is in spite of the fact that operators of larger farms had significantly more favorable attitudes than operators of smaller farms.

The coefficients for $X_8$, the age of the farm operator, are mixed in their statistical significance. Age did not appear to be in the nature attitude scores. Age was significant at the .10 level and positively correlated to favorable attitudes toward the role of cooperatives. This would indicate that the older the farmer was, the more favorable his attitude toward the role of the cooperative in the community. This can

be justified by the fact the more older farmers may have lived in times before cooperatives were founded in their area and are more aware of the service initiation and increased free-market competition brought on by many cooperatives. Younger farmers are more likely to have grown up taking cooperatives for granted as another business establishment and may be less aware of the cooperatives true role in helping farmers. Increased age seemed to have a negative effect on attitudes toward the public policies affecting cooperatives, although the statistical significance of the coefficient was questionable. If this relationship does exist, it would indicate that younger farmers would be more open to favorable public policies affecting cooperatives.

The coefficients for $X_9$, level of education, indicated that the relationship between education and the combined attitude toward cooperatives was positive, but not statistically significant. Increased education appeared to have a negative relationship with attitudes toward the nature and operation of cooperatives. The coefficient was of questionable significance at the .20 level, but still this factor should be of concern to cooperative leaders and educators involved in the cooperative movement. Increased education appeared to have just the opposite effect on attitudes toward the role of cooperatives. The coefficients in this equation showed there was a positive association and that it was at a fairly high level of significance. Apparently, educators are doing a good job of helping farmers develop positive attitudes toward the nature of cooperatives. Education bore no relationship to attitudes toward public policy affecting cooperatives.

It could be logically expected that membership in cooperatives would have a positive effect on farmers attitudes toward those

cooperatives. However, this was not necessarily the case. The coefficients for $X_{10}$, cooperative membership, showed a highly significant positive relationship in only two of the four regression equations. These were the equations for role attitude and policy attitude, where their coefficients of .364 and .710, respectively, were significant at the .01 level. Membership coefficients were not significant in the other two equations, combined attitudes and nature attitudes. The coefficient for nature attitude even indicated that a negative relationship may have been present. It is probable, that with cooperative membership, the cause and effect works in reverse, or from Y to X. Farmers will join more cooperatives because they already have favorable attitudes toward them and not because the act of joining the cooperative causes attitudes to become more favorable.

While being a cooperative member appeared to have at least some relationship with favorable attitudes toward the role of cooperatives, the coefficients for $X_{11}$ show that the same was not necessarily true when the father of the respondent had been a cooperative member. The coefficient for the father being a member in the role equation was positively correlated but not statistically significant. The coefficient associating the father being a member with combined attitudes was not statistically significant either. The father being a member was positively related to favorable nature attitudes although the level of significance was questionable at the .20 level, but in this case, the two variables were negatively associated. This indicates that fathers may have passed negative attitudes toward policies affecting cooperatives on to their member sons. It might be an important consideration when planning future educational programs.

Cooperative patronage was not a significant factor in helping to explain the attitudes of Kansas farmers in 1977. The coefficients did not exhibit either a statistical significance or a consistent relationship to the various attitudes. Part of this lack of association might be explained by the small percentage of farmers involved in this category, only 9.1 percent of all surveyed who were not already members of a cooperative. The question pertaining to cooperative patronage dealt only with those farmers who were not members of a cooperative.

## Comparison of 1977 and 1964 Regression Analysis

Another important objective of this study is to compare the relationships found between the characteristics of the respondents and their attitudes toward cooperatives in 1977 to those relationships which had been found to exist in 1964. To accomplish this objective, multiple regression analysis was performed on the 1964 survey results. Again, four regression equations were developed using the same attitude indexes for dependent variables as in the 1977 equations. The variables used in the 1964 equations are summarized in Tables IV-6 through IV-9. Note that only nine dependent variables were used in the 1964 equations, as opposed to twelve in 1977. This was due to the fact that questions concerning the farmer's level of education and the father's membership in cooperatives had not been asked in the earlier survey. Also, irregularities in the data concerning cooperative patronage made it unuseable for the 1964 regression equations. All other dependent variables were the same for the two sets of equations. The 1964 regression coefficients and their corresponding level of significance are shown in Table IV-10. All coefficients are positive except those preceded by a

Table IV-6

Definitions of Variables Used in Combined Attitude
Regression Equation, Kansas, 1964

| Variable | Definition |
|---|---|
| $Y_1$ | Index of attitude toward cooperatives in general |
| $X_1$ | Index of attitude toward local cooperative |
| $X_2$ | Index of over-all understanding of cooperatives |
| $X_3$ | Index of over-all knowledge of cooperatives |
| $X_4$ | Index of feeling toward cooperatives in general |
| $X_5$ | Index of opinion regarding cooperatives in general |
| $X_6$ | Area of the state |
| $X_7$ | Size of farming operation |
| $X_8$ | Age of farm operator |
| $X_9$ | Cooperative membership |

Table IV-7

Definitions of Variables Used in Nature Attitude
Regression Equation, Kansas, 1964

| Variable | Definition |
|---|---|
| $Y_2$ | Index of attitude toward the nature of cooperatives |
| $X_1$ | Index of attitude toward nature of local cooperative |
| $X_2$ | Index of understanding toward nature of cooperatives |
| $X_3$ | Index of knowledge toward nature of cooperatives |
| $X_4$ | Index of feeling toward nature of cooperatives |
| $X_5$ | Index of opinion regarding nature of cooperatives |
| $X_6 - X_9$ | Same as in Table IV-6 |

Table IV-8

Definitions of Variables Used in Role Attitude
Regression Equation, Kansas, 1964

| Variable | Definition |
|----------|-----------|
| $Y_3$ | Index of attitude toward the role of cooperatives |
| $X_1$ | Index of attitude toward role of local cooperative |
| $X_2$ | Index of understanding toward role of cooperatives |
| $X_3$ | Index of knowledge toward role of cooperatives |
| $X_4$ | Index of feeling toward role of cooperatives |
| $X_5$ | Index of opinion regarding role of cooperatives |
| $X_6 - X_9$ | Same as in Table IV-6 |

Table IV-9

Definitions of Variables Used in Policy Attitude
Regression Equation, Kansas, 1964

| Variable | Definition |
|----------|-----------|
| $Y_4$ | Index of attitude toward public policies affecting cooperatives |
| $X_1$ | Index of attitude toward policies affecting local cooperatives |
| $X_2$ | Index of understanding of policies affecting cooperatives |
| $X_3$ | Index of knowledge of policies affecting cooperatives |
| $X_4$ | Index of feeling toward policies affecting cooperatives |
| $X_5$ | Index of opinion regarding policies affecting cooperatives |
| $X_6 - X_9$ | Same as in Table IV-6 |

Table IV-10

Regression Coefficients of Relationship Between Attitude Indexes
and Respondent Characteristics, Kansas, 1964

|  |  | Attitude in General | Attitude toward Nature | Attitude toward Role | Attitude toward Policy |
|---|---|---|---|---|---|
| $X_1$ | Local Attitude | .564[a] | .575[a] | .898[a] | .424[a] |
| $X_2$ | Understanding | .140[a] | .038[b] | -.008[e] | .217[a] |
| $X_3$ | Knowledge | -.029[d] | .005[e] | ----[e] | .056[a] |
| $X_4$ | Feeling | .024[b] | .051[b] | .068[a] | -.183[a] |
| $X_5$ | Opinion | .031[d] | .028[a] | -.012[e] | -.051[b] |
| $X_6$ | Area of the State | .121[e] | -.038[e] | .045[e] | .076[e] |
| $X_7$ | Size of Farm Operation | -.298[e] | -.394[e] | .016[e] | -.133[e] |
| $X_8$ | Age of Farm Operator | .802[d] | .340[e] | .562[d] | -.648[e] |
| $X_9$ | Cooperative Membership | 1.088[a] | .692[a] | .430[a] | 1.243[a] |
| a | (Y intercept) | 6.960 | 16.970 | 2.550 | 17.686 |
|  | $R^2$ | 60.298 | 76.293 | 90.668 | 62.262 |
|  | R | 77.652[a] | 87.348[a] | 95.220[a] | 78.906[a] |

[a]Significant at .01 probability level.

[b]Significant at .05 probability level.

[c]Significant at .10 probability level.

[d]Significant at .20 probability level.

[e]Not significant.

minus sign, and those are negative. The coefficients of determination ($R^2$ values) are also shown in Table IV-10. The inter-item correlation coefficients for all variables used in the 1964 analysis are shown in Appendix Table C-2.

## Discussion of the Relationships Found

Significant relationships were found to have existed in 1964 between the characteristics utilized in the analysis and the attitudes of farm operators toward cooperatives. Some similarities, and a few important dissimilarities were found to exist in the factors which had influenced attitudes in 1964 as compared to 1977.

The first comparison was how well the regression equations perform in explaining variation in the dependent variable. Even though the 1964 equations had contained three fewer independent variables, the $R^2$ values in all four equations were higher than those generated in 1977. For combined attitudes, 60.3 percent of the variation had been explained in 1964 as opposed to 52.9 percent in 1977. In the nature attitude equation, 76.3 percent of the variation had been explained in 1964; and only 73.9 percent in 1977. Explained variation was nearly the same for the two years for role attitude, 90.7 percent in 1964 and 90.0 percent in 1977. The policy attitude equation for 1964 had provided a much better explanation at 62.3 percent than did the 1977 equation with 51.6 percent of the variation explained.

Most of the higher $R^2$ values for 1964 had been caused by higher $R^2$ values for the first independent variable, local attitude index. While nearly all of the total explained variation in the 1977 equations was contributed by the local attitude index, an even greater share of the

total explained variation was contributed by the local attitude in 1964.
In the combined attitude equation, local attitude accounted for all but
3.2 percent of total explained variation. For nature attitude, the
local attitude accounted for all but 2.9 percent of total explained
variation. The local attitude accounted for all but 0.7 percent of
total explained variation on role attitude. For policy attitude the
local attitude accounted for all but 15.6 percent of the total $R^2$ value.
The regression coefficients for local attitudes in the 1964 equations
were all significant and positively correlated with over-all attitudes.
The coefficients were also slightly larger than those found in the 1977
equations. This information seems to indicate that while farmers were
still basing their judgements on cooperatives primarily from experiences
with their local cooperatives, the relationship had been slightly
stronger in 1964.

The coefficients for $X_2$ showed that the level of understanding had
about the same influence on attitudes for both years. The coefficients
were highly significant and positively correlated in two of the 1964
equations, combined attitudes and policy attitude. The coefficient of
understanding in the nature attitude equation lost some significance as
we went from 1964 to 1977. The level of understanding did not appear to
have a significant influence on attitudes toward the role of coopera-
tives in either year. In general, it appears that increasing the
farmer's level of understanding did not have as much impact on his
attitudes in 1977 as it would have in 1964.

The coefficients for $X_3$, profession of knowledge, were mixed in the
direction of their association, as well as, in their statistical signifi-
cance for the two years. Knowledge did not have a significant

association to the combined attitude index for 1977, but it had shown a negative relationship in 1964, although the significance was questionable at the .20 level. In the equation for nature attitude, the knowledge coefficient indicated a highly significant positive relationship in the 1977 study, but no significant relationship in the 1964 study. Knowledge also provided no significant relationship to role attitudes in the 1964 equation, but it did have a negative association that was significant at the .20 level in 1977. The coefficients for knowledge associated with policy attitudes were highly significant and positively correlated in both years. The 1964 knowledge coefficient had been significant at the .001 level while the 1977 coefficient was significant at the .01 level. This information seems to indicate that the profession of knowledge did have a limited effect on certain aspects of attitudes toward cooperatives, but its effects and change from 1964 to 1977 was inconsistent.

The coefficients for $X_4$, strength of feelings, indicated a highly consistent relationship for this variable between the two studies. The feeling coefficients in all eight equations showed a high level of significance. The strength of respondents feelings were positively associated with combined attitudes, nature attitudes, and role attitude. Role attitude showed the greatest association between the two variables for both years. An increase in the strength of feeling of 10.0 points would cause an increase in role attitude of 0.69 points in 1977 and 0.68 points in 1964. The coefficients generated for feeling in the policy attitude equation were exactly the same for the two years. Both coefficients were highly significant and negatively correlated. This indicated that those farmers with negative attitudes toward cooperatives

held stronger feelings about those attitudes in 1964 and still do in 1977. It may take very specialized public relations programs to help neutralize such strong feelings for those with negative attitudes.

The coefficients for $X_5$, willingness to express an opinion, were not statistically significant in any of the four 1977 equations. The coefficients for this variable had been, however, highly significant in two of the 1964 equations. Those were the nature attitude and the policy attitude equations. The coefficient in the combined attitude equation was significant, but only at the questionable level of .20. The association between willingness to express an opinion and policy attitude had been negative for 1964, indicating that those with unfavorable attitudes were more vocal about their opinions. Even though a similar negative relationship was found for 1977, it was not great enough to be significant.

Comparing the demographic characteristics for farmers in 1964 and 1977 we see that coefficients for $X_6$, area of the state, and $X_7$, size of farming operation were not significantly related to any of the over-all attitudes studied in either year.

Age of the farm operator, $X_8$, appeared to be only questionably related to any of the four attitudes studied for both years.

Cooperative membership was the only demographic characteristic to vary in its relationship to the attitudes between the two studies. For 1977, cooperative membership did not have a significant influence on the combined attitude or the nature attitude indexes. In 1964, however, cooperative membership had shown a highly significant relationship. The coefficients for role and policy attitude were significant in both year's equations, at .001 level in 1964 and .01 level in 1977. There

appeared to be a reduction in the values of the regression coefficients

for this variable between the two years in all four equations.  The

impact of those reduced regression coefficients was partially neutral-

ized by the greater percentages of farmers who belonged to cooperatives

in 1977 as compared to 1964.  It still should be taken as an important

point that even membership in the cooperative does not guarantee

favorable attitudes and that continued active member relations programs

are a must.

## Information Sources Associated with Changes in Attitudes

Kansas farm operators were asked to indicate how important each of

thirty-one different sources of information about cooperatives were to

them.  The mean scores for these information sources, as well as a

discussion of their differences, are presented in Chapter III.

Farmers indicated a fairly heavy reliance on many of the informa-

tion sources for their information about cooperatives, but without

additional analysis, it is difficult to determine how much influence

those sources had on farmers' attitudes.  Multiple regression analysis

was used to estimate the relationships between the attitudes of Kansas

farmers and their reliance on various sources of information about

cooperatives.  The formulation of the regression equations used in the

analysis was similar to that of the equations used comparing respondent

characteristics to attitudes, earlier in this chapter.  Four equations

were developed with the same dependent variables as before; combined

attitude index, nature attitude index, role attitude index, and policy

attitude index.  The independent variables in this analysis were the

thirty-one sources of information from Section IV of the questionnaire. All four regression equations used the same information sources as independent variable. The four dependent variables were taken to be a joint function of the thirty-one information sources. The equation can be expressed as;

$$Y = f(X_1, X_2, X_3, \ldots X_{31})$$

Definitions for sources of information, as well as partial regression coefficients for each source, are shown in Table IV-11. The level of significance for each coefficient is shown by the subscript beside it. Those coefficients preceded by a minus sign indicate a negative relationship between the information source and the attitude index. Those coefficients without a minus sign indicate a positive relationship.

The coefficient of determination ($R^2$) values are also shown in Table IV-11. Note that the explained variation was quite small and much lower than in the earlier regression analysis. Total explained variation was 29.3 percent for the combined attitude equation, 25.3 percent for the nature attitude equation, 32.4 percent of the variation in the role attitude index and only 19.3 percent for the policy attitude index. Over half of the total explained variation in the combined, nature, and role attitude equations was explained by variation in reliance upon the cooperative manager and employees for information. In the policy attitude equation, over half of the total explained variation was explained by variation in reliance upon the annual member meeting for information about cooperatives.

Table IV-11

Regression Coefficients of Relationship Between Attitude Indexes
and Information Sources, 1977

| | | Attitude in General | Attitude toward Nature | Attitude toward Role | Attitude toward Policy |
|---|---|---|---|---|---|
| $X_1$ | Talking with cooperative manager and employees | 1.93[a] | 2.30[a] | 3.21[a] | 1.06[a] |
| $X_2$ | Talking with cooperative director | 0.72[d] | 0.94[c] | -0.14[e] | 1.19[a] |
| $X_3$ | Talking with cooperative member | 0.70[d] | 1.45[a] | 0.62[e] | 0.85[d] |
| $X_4$ | Talking with neighbors or friends | -1.89[a] | -2.16[b] | -1.74[b] | -1.44[c] |
| $X_5$ | Talking with Extension Service personnel | 0.54[d] | 0.14[e] | 0.89[c] | 0.08[e] |
| $X_6$ | Talking with other personal contacts | 0.62[e] | 0.43[e] | -0.39[e] | 1.71[b] |
| $X_7$ | Annual member meeting | 1.02[a] | 0.61[e] | 1.30[a] | 1.70[a] |
| $X_8$ | District member meeting | 0.88[c] | 1.58[a] | 0.61[e] | 0.13[e] |
| $X_9$ | Service club or church meeting | -0.53[e] | -0.41[e] | -0.48[e] | 0.17[e] |
| $X_{10}$ | Other meetings | 1.34[a] | 1.72[c] | 2.03[b] | 0.45[e] |
| $X_{11}$ | Cooperative magazine | 1.34[b] | 1.04[b] | 1.79[a] | 0.97[b] |
| $X_{12}$ | Cooperative newsletter | 1.37[a] | 1.72[a] | 1.91[a] | 0.65[d] |
| $X_{13}$ | Special flyers | 0.14[e] | -0.43[e] | -0.53[e] | ----[e] |
| $X_{14}$ | Newspaper articles | 1.19[d] | -0.44[e] | -0.87[d] | 0.07[e] |
| $X_{15}$ | Magazine articles | 0.93[d] | ----[e] | 1.63[b] | ----[e] |
| $X_{16}$ | Newspaper advertisements | -0.23[e] | -0.41[e] | -0.15[e] | ----[e] |
| $X_{17}$ | Pamphlets published by cooperatives | 2.04[a] | 1.72[a] | 1.14[b] | 1.87[a] |
| $X_{18}$ | Pamphlets published by business organizations | ----[e] | -0.12[e] | 0.56[e] | -0.07[e] |

Table IV-11--<u>Continued</u>

| | | Attitude in General | Attitude toward Nature | Attitude toward Role | Attitude toward Policy |
|---|---|---|---|---|---|
| $X_{19}$ | University pamphlets | $-0.84^d$ | $-0.42^e$ | $-0.27^e$ | $-0.70^e$ |
| $X_{20}$ | Government (USDA) pamph. | $0.28^e$ | $-0.14^e$ | $-0.16^e$ | $0.71^e$ |
| $X_{21}$ | Other printed material | $-1.66^a$ | $-2.81^a$ | $-1.86^b$ | $-0.36^e$ |
| $X_{22}$ | Radio programs sponsored by a cooperative | $0.82^b$ | $-0.40^e$ | $0.74^e$ | $-0.26^e$ |
| $X_{23}$ | Television program sponsored by a coop. | $0.38^e$ | $1.07^d$ | $0.45^b$ | $1.07^d$ |
| $X_{24}$ | Tours of cooperative facilities | $0.86^a$ | $2.81^a$ | $1.00^b$ | $0.46^e$ |
| $X_{25}$ | Participation in cooperative speaking or essay contest | $-1.20^d$ | $-1.15^d$ | $-0.72^e$ | $-0.27^e$ |
| $X_{26}$ | Participation in Vo-ag classes | $0.67^e$ | $0.08^e$ | $----^e$ | $-0.07^e$ |
| $X_{27}$ | College short courses | $-1.66^b$ | $-2.28^a$ | $-0.34^e$ | $1.18^b$ |
| $X_{28}$ | College regular courses | $0.38^e$ | $1.32^e$ | $-1.20^b$ | $-0.19^e$ |
| $X_{29}$ | Participation in F.F.A. activities | $-0.36^e$ | $-0.30^e$ | $0.44^e$ | $-0.10^e$ |
| $X_{30}$ | Participation/4-H activ. | $----^e$ | $-0.29^e$ | $-0.15^e$ | $0.09^e$ |
| $X_{31}$ | Other activities | $-0.45^e$ | $-1.33^e$ | $-0.59^e$ | $-0.20^e$ |
| a | (Y intercept) | 36.05 | 37.12 | 38.63 | 33.01 |
| | $R^2$ | 29.33 | 25.26 | 32.42 | 19.28 |
| | R | $54.16^a$ | $50.26^a$ | $56.94^a$ | $43.91^a$ |

[a]Significant at .01 probability level.
[b]Significant at .05 probability level.
[c]Significant at .10 probability level.
[d]Significant at .20 probability level.
[e]Not significant.

Information Sources Associated with
Favorable Attitudes

## Talking with a Cooperative
## Manager or Employee

Talking with a cooperative manager, fieldman, or employee had a
definite positive influence on the attitudes of farmers. The coeffi-
cients for this information source were significant at the .001 level.
Relying on the cooperative manager and employees for information had the
greatest effect on role attitude, where a one point increase in the
importance score caused an increase in the role attitude index by 3.2
points. Talking with the cooperative manager had the least influence on
policy attitude, but the coefficient was still highly significant.

## Annual Member Meeting

Those farmers relying on the annual member meeting for information
about cooperatives had significantly better attitudes. The annual
meeting had a significant influence on three of the four regression
equations. It was not a significant factor in the attitude toward
nature and operation of cooperatives. This may be of some concern since
one of the main purposes of the annual meeting is to inform members of
the operational results of their cooperative. The regression coeffi-
cients for annual member meeting were largest for policy attitude, where
a one point increase in importance caused a 1.7 point increase in policy
attitude.

## Cooperative Newsletter

Reliance on the cooperative newsletter for information about
cooperatives was associated with favorable attitudes. This was

especially true for the nature attitude and role attitude equations, where a one point increase in importance caused a 1.7 point and 1.9 point increase, respectively, in those attitude scores. Reliance upon the cooperative newsletter for information was not associated so highly with favorable attitudes toward policies affecting cooperatives. The coefficient was positive, but of questionable significance.

## Pamphlets Published by Cooperatives

The coefficients for this source of information were positive and significant in all four equations. A one point increase in importance of these pamphlets to farmers resulted in a 2.0 point increase for combined attitudes, 1.7 point increase for nature attitude, 1.1 point increase for role attitude and a 1.9 point increase for policy attitude. Apparently, cooperative pamphlets are doing a good job of informing farmers of policy issues affecting cooperatives when farmers read them. Getting farmers to read them may be a problem, however, since this source ranked only thirteenth in importance to farmers as a whole.

## Tours of Cooperative Facilities

Tours of cooperative facilities were positively associated with favorable attitudes toward cooperatives. The coefficients were significant in the combined attitude, nature attitude, and role attitude equations. The coefficient was especially large for nature attitude equation where a one point increase in importance caused a 2.8 point increase in nature attitude. It appears that local cooperatives are already taking advantage of this relationship through their increased touring of regional cooperatives. The regression coefficient for policy attitude was not significant even though it was positive.

## Talking with a Cooperative Director

Talking with a cooperative director had a significant influence on
the policy attitude equation. An increase in the importance score of
one point was associated with an increase in policy attitude of 1.2
points. This indicated that cooperative directors can be highly useful
in creating favorable attitudes toward policy issues affecting coopera-
tives. The coefficient for this source was also positively related to
nature attitude and was significant at the .10 level. The coefficients
were not significant in the combined attitude or the role attitude
equations.

## Talking with a Cooperative Member

Talking with a cooperative member had a significant positive
influence on nature attitudes. A one point increase in importance
caused a 1.45 point increase in nature attitude. The regression
coefficients in the other three equations were either not significant,
or were of questionable significance.

## Talking with Other Personal Contacts

Other personal contacts did have a significant positive association
to policy attitudes toward cooperatives, but the coefficients were of no
significance in the other three equations.

## Cooperative Magazine

Reliance upon the cooperative magazine for information was signifi-
cantly and positively related to favorable attitudes in all four
equations. The coefficients were largest in the role attitude equation,
where a one point increase in importance caused a 1.8 point increase in

that attitude. The coefficient was lowest in the policy attitude
equation, where a one point increase in importance caused exactly a
one point increase in policy attitude.

## Television Programs Sponsored by Cooperatives

Television programs which cooperatives sponsored had a significant
influence on attitudes of farmers toward the role of cooperatives and
public policies affecting them. They did not have a significant
influence on the combined attitudes and only a questionable influence on
nature attitude.

## Other Meetings

Other meetings had a significant influence on combined attitudes
and role attitudes, but in terms of total importance to farmers, this
source was ranked twenty-ninth out of thirty-one information sources.
Those farmers which do use these meetings are apparently receiving
favorable information about cooperatives. The coefficient for nature
attitude was also positive, but was only significant at the .10 level.
The other meetings had no significant influence on attitudes toward
public policies affecting cooperatives.

### Information Sources Associated with Negative Attitudes

## Talking with Neighbors or Friends

Talking with neighbors or friends had the largest negative coeffi-
cients of any of the information sources. The coefficients showed that
a one point increase in the importance of neighbors or friends in
providing information about cooperatives results in a deterioration of

combined attitude index of 1.9 points, 2.2 points in nature attitude, 1.7 points in role attitude, and 1.4 points in policy attitude. This is highly significant, in that farmers indicated a heavy reliance on this source for their information about cooperatives. It ranked fourth out of the thirty-one sources in order of importance. The main problem concerning cooperatives with this finding is that it is an information source over which their organization can exert little direct control. It is interesting to note that nearly 91.0 percent of all Kansas farmers were members of farmer cooperatives and that cooperative members, as sources of information, were related to favorable attitudes, while neighbors and friends (90.0 percent of whom were probably cooperative members) were related to unfavorable attitudes.

## Other Printed Material

Other printed material as an information source, had a significant negative influence in all equations except policy attitude. The coefficient for nature attitude indicated that the relationship was especially significant.

## College Short Courses

College short courses showed a significant negative relationship with the combined attitude and nature attitude indexes. The coefficient for nature attitude showed a particularly strong negative influence, where a one point increase in importance of these courses caused a 2.3 point decrease in nature attitude. There was, however, a significant positive relationship between college short courses and policy attitude. The coefficient was significant at the .05 level.

Sources of Information Not Associated
with Changes in Attitudes

## Talking with Extension
## Service Personnel

While the regression coefficients for this source of information were all positive, they had only questionable or no significant influence on the attitudes studied. Farmers ranked this source *eighteenth* out of thirty-one in importance to them.

## Service Club or Church Meeting

Farmers ranked this source as having very little importance in informing them of cooperatives. Likewise, the regression coefficients show that this source of information bears *no* relationship to their attitudes. The coefficients were inconsistent in their sign and were of no statistical significance.

## Special Flyers

The coefficients for special flyers were not significant in any of *the four* equations. They were not consistent in their signs, either. Farmers ranked this source fourteenth in order of importance to them.

## Magazine Articles About Cooperatives

While magazine articles were ranked fairly highly by farmers (seventh out of thirty-one), they showed no significant influence on combined attitudes, attitudes toward nature, and attitudes toward policy. They did show a slight positive relationship to the role attitude, but the statistical significance was somewhat questionable.

## Newspaper Articles About Cooperatives

Newspaper articles were also highly ranked in importance to farmers

(eighth), but had no influence on attitudes. The coefficients were neither stable in their sign, nor statistically significant.

## Pamphlets Published by
## Business Organizations

It might be expected that pamphlets published by competitive business organizations could be linked with negative attitudes toward cooperatives. This was not the case, as none of the regression coefficients were significant or consistent in their direction. Farmers did not rank this information source as being very important to them.

## U.S.D.A. Pamphlets

Such government pamphlets were ranked sixteenth in order of importance of informing them of cooperatives. Furthermore, none of the regression coefficients carried any statistical significance.

## Radio Programs

While television programs sponsored by cooperatives were associated with favorable attitudes in three of the four equations, radio programs apparently have little or no effect on attitudes. Radio programs were ranked fairly highly by farmers (tenth), but the coefficients were generally neither significant nor consistent in their sign. Cooperatives need to carefully evaluate the content of such radio programs, if their main purpose is to affect attitudes, since the lack of association to attitudes may not justify the high cost of this form of media.

## Public Speaking and Essay
## Contest Participation

This source of information is generally not utilized by Kansas marketing and farm supply cooperatives, and its use by other

cooperatives seems to be declining. All of the coefficients for this source of information were negative, but were only of questionable or no significance. Likewise, farmers tended to rate this source of information as having very little importance to them.

### Regular College Courses

Such college courses were ranked fairly low in importance to farmers. The regression coefficients for this information source were of no statistical significance in three of the equations. The coefficient for role attitude was significant at the .05 level and was associated with negative attitudes.

### Participation in F.F.A. Activities

This source of information was ranked very low by farmers and none of the regression coefficients were statistically significant.

### Participation in 4-H Club Activities

While this activity was rated slightly higher in importance than F.F.A. activities, it was still far down the list. Also, the regression coefficients indicate that there was no significant relationship between 4-H activities and farmer attitudes.

### Participation in Vocational Agriculture Classes

This source of information was ranked last among the various sources in informing farmers of cooperatives. The regression coefficients were not stable in their sign and were not statistically significant.

CHAPTER V

SUMMARY

The main objectives of this farmer attitude study were:

1. To determine Kansas farmers' current attitudes and under-standing toward their local cooperatives and cooperatives in general.

2. To compare current Kansas farmers' attitudes and understanding of cooperatives to those determined in 1964 and to analyze any changes that have taken place.

3. To identify those factors which influence Kansas farmers' attitudes toward cooperatives.

To accomplish these objectives, an attitude survey of Kansas farm operators was conducted. Kansas farm operators were randomly selected in 1964 from areas designated by the Master Sample of Agriculture. The farmers living within the sample areas had been surveyed in 1964 and were surveyed again in 1977, so that any attitude changes could be detected. The farmers were surveyed on a personal interview basis and 1,041 useable questionnaires were completed for the 1977 study.

Respondents were asked to respond to twenty-six attitude statements and eleven factual statements concerning cooperatives. They were also asked to indicate the importance that each of thirty-one sources of information had in informing them of cooperatives.

Responses to the attitude statements were used to compute indexes measuring attitudes, intensity of feelings and willingness to express an

opinion for each respondent. Responses to the factual statements were used to compute indexes measuring understanding and willingness to profess knowledge about farmer cooperatives. Separate indexes were computed in three categories: (1) The nature and operation of cooperatives, (2) The economic role of cooperatives, and (3) Public policies affecting cooperatives. A further distinction was made between attitudes toward the respondent's local cooperative and attitudes toward cooperatives in general. In addition, indexes designed to measure any response bias on the part of the respondent were computed. A total of fifty-four separate indexes were computed for each respondent.

Average index scores were tabulated for all respondents, as well as for respondents broken down into various demographic categories. Analysis of variance was used to test the differences in mean scores between the various categories. The same procedure was followed for the thirty-one information sources. The chi-square proportional difference test was used to test differences among the demographic categories themselves. The demographic categories consisted of four farm size groups, six age groups, four education groups, eight cooperative membership groups, and three father membership groups.

Multiple regression analysis was used to determine those characteristics about respondents which were associated with differences in their attitudes. This was done for both the 1977 and 1964 survey results. Regression analysis was also used to determine those sources of information about cooperatives which were associated with differences in attitudes. The t-statistic was used to test for significance in the regression coefficients.

## General Patterns in Attitudes and Understanding

Kansas farmers were found to have a good over-all understanding of cooperatives. They were also found to have slightly favorable over-all attitudes and relatively mild feelings about those attitudes.

Patterns of attitudes and understanding were found to vary by aspect of cooperation. The nature and operation of cooperatives was characterized by relatively good understanding, mild feelings and slightly favorable attitudes. The economic role of cooperatives was characterized by somewhat less understanding, milder feelings, but more favorable attitudes. Public policies affecting cooperatives were characterized by a level of understanding slightly higher than that for the role of cooperatives, stronger feelings, but somewhat less favorable attitudes. Farmers were also less willing to express an opinion to the attitude statements and knowledge to the factual statements concerning public policies than they were for the other two aspects of cooperation.

Farmers generally held more favorable attitudes toward their local cooperative than they did toward cooperatives in general. This was especially true for attitudes toward public policies affecting coopera-tives. One exception was for attitudes toward the nature and operation of the cooperative, where local attitudes were less favorable than over-all nature attitudes. Farmers also expressed slightly stronger feelings toward their local cooperative than they did toward coopera-tives in general.

Operators of larger sized farms tended to have better understanding, more favorable attitudes, and stronger feelings about those attitudes than did operators of smaller sized farms. Older and younger farmers tended to have less understanding of cooperatives than did middle-aged

farmers. The attitudes of younger farmers were not significantly different from other farmers, but they did tend to have milder feelings about their attitudes. College educated farmers had slightly better understanding and more favorable attitudes than did farmers with fewer years of formal education. Cooperative members also had slightly better understanding, more favorable attitudes and stronger feelings than did farmers who were not cooperative members.

Comparison of the mean index scores for farmers in 1977 and 1964 showed that farmers in 1977 had slightly better understanding of all aspects of cooperation. They also had more favorable attitudes toward the nature and operation of cooperatives and their economic role, but were somewhat less favorable in 1977 toward public policies affecting cooperatives. Farmers exhibited milder feelings in 1977 than has been shown in 1964 for all aspects of cooperation. However, farmers were more willing to express an opinion regarding cooperatives in 1977. The same relationship holds true for willingness to express knowledge about cooperatives.

## Information Sources

Kansas farmers indicated some reliance on a variety of sources of information about cooperatives. Personal contacts were the most frequently used types of information sources. These were followed by meetings, printed materials, radio and television, and sponsored activities. General patterns in reliance on the information sources were found to exist between the various demographic categories. Farmers of larger operations, college educated farmers and cooperative members all showed greater reliance on most sources of information than did

their respective counterparts. Older farmers exhibited less reliance on most information sources than did other age groups.

Talking with the cooperative manager or employees was given the highest average score by all farmers, followed closely by cooperative magazines and the annual member meeting. Talking with neighbors and friends, talking with cooperative members, and the cooperative newsletter were also highly ranked sources. Radio and television programs sponsored by cooperatives ranked in the upper one-third of the sources, while tours of cooperative plants were ranked slightly lower. Participation in activities other than tours were generally ranked quite low in importance to farmers.

## Factors Associated with Differences in Attitudes

The factor found to have the greatest positive influence on farmers' attitudes toward cooperatives in general was their attitude toward the local cooperative in their area. This variable was highly significant for all aspects of cooperation. Understanding had a strong positive association to combined attitudes and attitudes toward policies affecting cooperatives. Strength of feelings was associated positively combined attitudes and attitudes toward nature of cooperatives and their role. However, strong feelings were negatively associated with attitudes toward public policies affecting cooperatives. Willingness to express an opinion was not associated with differences in attitude toward any of the three aspects of cooperation.

Few significant relationships were found to exist between the demographic characteristics of the respondents and differences in their

attitudes toward cooperatives. Increased formal education had a significant positive effect on attitudes toward the economic role of cooperatives. Increased membership in cooperatives was associated positively with attitudes toward the role of cooperatives and public policies affecting them, as well.

Comparison of the relationships that were found in 1977 and those which had been found in 1964 showed that the local attitude had an even greater influence on attitudes in general in 1964. Also, the regression coefficients for cooperative membership had been larger in 1964 than they were in 1977. No important differences in the other variables were found to exist between the two years.

Regression analysis was also used to determine the information sources that were associated with positive or negative attitudes. The information sources significantly associated with positive attitudes were; talking with cooperative personnel for all aspects of cooperation, talking with cooperative directors for attitudes toward policies affecting cooperatives, and talking with cooperative members for attitudes toward the nature and operation of cooperatives. The annual member meeting was strongly associated with all aspects of cooperation, except the nature and operation. Cooperative magazines, newsletters, and pamphlets were positively associated to all aspects of cooperation, while tours of cooperative plants were positively associated to all but the attitudes toward public policy aspects of cooperation.

Talking with neighbors and friends showed the most significant negative relationship with attitudes among all thirty-one information sources. This is important because farmers showed a great deal of reliance on this source for their information about cooperatives.

College short courses and other printed material also had negative associations to attitudes, especially for attitudes toward the nature and operation of cooperatives.

Some of the sources given the highest scores of importance were found to have little or no association to the indexes of attitude. Among these were; special flyers, newspaper advertisements, newspaper stories, magazine stories, university and government pamphlets, radio and television programs, Extension personnel, vocational agriculture, F.F.A., and 4-H club activities. The remaining sources of information were neither highly ranked nor statistically significant in their association to attitudes.

## Conclusions

The importance of an effective member relations program is emphasized by the strong positive relationship between good understanding and favorable attitudes toward cooperatives. The results of this study also indicate that member relations programs at the local level appear to have the greatest potential in improving farmers' attitudes, since attitudes toward cooperatives in general are developed mainly through experiences with the local cooperative.

Farmers generally have favorable attitudes toward cooperatives, but their feelings are not particularly strong about those attitudes. This would indicate that farmers' views might be easily swayed from favorable to unfavorable when confronted by strong opposing viewpoints. To counter this threat, cooperatives need to develop programs which will instill more pride and satisfaction in their owner-patrons.

Information sources found to be highly associated with favorable attitudes were also the ones over which cooperatives have the greatest control. In contrast, those information sources which were associated with negative attitudes were subject to little or no control by cooperatives. Cooperative member relations programs should take full advantage of these positively associated information sources.

APPENDICES

APPENDIX A

Instruments Used in the Survey

Appendix Fig. 1.  Questionnaire

    (A) General Information

    (B) Attitudes Toward Local Cooperatives

    (C) Attitudes Toward Cooperatives in General

    (D) Understanding of Farmer Cooperatives

    (E) Sources of Information About Cooperatives

Appendix Fig. 2.  Index Computation Method

    (A) Indexes of Understanding and Knowledge

    (B) Indexes of Attitude

    (C) Indexes of Feeling

    (D) Indexes of Opinion

    (E) Indexes for Halo Effect

Views of Farmer Cooperatives

Held by Farmers in Kansas

I. GENERAL INFORMATION

1. Are you a farm operator?   Yes____   No____

   If "yes," how many acres do you farm?

       Under 200____   200 to 499____   500 to 999____   1,000 or more____

2. Are you a member of one or more cooperatives?

       Yes____   No____   Don't know____

   If "yes"... a. How many?____(number)
           b. What kind? (check each kind)

           Marketing only ____      PCA
           Supply only ____        Marketing and supply ____
           REC ____        Insurance ____
           FLBA ____        Others ____

           (Please specify others)_____

   If "no"... a. Do you patronize one or more cooperatives?

           Yes____   No____   Don't know____

           b. How many? _____ (number)
           c. What kind? (Check each kind patronized)

           Marketing only ____      Marketing and supply ____
           Supply only ____        Others ____

           (Please specify others) _____

3. What was your age as of your last birthday? _____

4. What is the highest level of education you have achieved?

           a. 8th grade or less ____    c. Some college ____
           b. High school ____        d. College degree ____

5. Was your father a member of at least one of the kinds of farmer cooperatives as listed below?

           Yes ____   No ____   Don't know ____

   If "yes"... a. What kind? (Check each kind)

           Marketing only ____      PCA
           Supply only ____        Marketing and supply ____
           REC ____        Insurance ____
           FLBA ____        Others ____

           (Please specify others) _____

APPENDIX FIG. 1. A

## II. FARMER COOPERATIVES IN YOUR PART OF KANSAS

INSTRUCTIONS: In this section we would like to have your reactions to a series of statements about farmer cooperatives. Each statement is formed by completing the sentence started by the phrase in capital letters at the top of the page. The interviewer will record your reaction to each statement by placing an "X" under (1) Agree definitely, (2) Agree generally, (3) No opinion, (4) Disagree generally, or (5) Disagree definitely, whichever most nearly describes your reaction to the statement.

For example, if you were to definitely agree with the statement, "MOST OF THE FARMER COOPERATIVES WHICH OPERATE IN YOUR PART OF KANSAS---are controlled by large organizations in cities like Kansas City, Topeka, Hutchinson, Manhattan, rather than by local farmers," the first statement should be checked "Agree definitely."

| FARMER COOPERATIVES WHICH OPERATE IN YOUR PART OF KANSAS--- | | Agree defin- itely | Agree gener- ally | No Opinion | Disagree gener- ally | Disagree defin- itely |
|---|---|---|---|---|---|---|
| are controlled by large organizations in cities like Kansas City, Topeka, Hutchinson, Manhattan, rather than by local farmers. | 1. | ___ | ___ | ___ | ___ | ___ |
| have helped in the economic development of this community. | 2. | ___ | ___ | ___ | ___ | ___ |
| have hurt private businesses in this area because of the tax exemptions and special treatment they receive. | 3. | ___ | ___ | ___ | ___ | ___ |
| sell feed, fertilizer and other farm supplies at prices below those charged by private dealers. | 4. | ___ | ___ | ___ | ___ | ___ |
| have been more concerned with their own expansion than with the needs of their farmer members. | 5. | ___ | ___ | ___ | ___ | ___ |
| have helped to teach farmers the value of working together. | 6. | ___ | ___ | ___ | ___ | ___ |

APPENDIX FIG. 1. B.   ATTITUDES TOWARD RESPONDENTS' LOCAL COOPERATIVE

## II. (Continued)

| FARMER COOPERATIVES WHICH OPERATE IN YOUR PART OF KANSAS--- | Agree defin- itely | Agree gener- ally | No Opinion | Disagree gener- ally | Disagree defin- itely |
|---|---|---|---|---|---|
| are gradually destroying the spirit of free enterprise and moving in the direction of socialism. 7. | ____ | ____ | ____ | ____ | ____ |
| have been pace-setters in introducing new technology and increasing operating efficiency in marketing farm products and supplies. 8. | ____ | ____ | ____ | ____ | ____ |
| have lacked the leadership and management needed to be effective in setting the competitive pace. 9. | ____ | ____ | ____ | ____ | ____ |
| must pay all local property taxes at the same rate as any other type of busi- ness. 10. | ____ | ____ | ____ | ____ | ____ |
| provide better service than private enter- prise. 11. | ____ | ____ | ____ | ____ | ____ |
| return too low a portion of earnings in cash. 12. | ____ | ____ | ____ | ____ | ____ |
| need to become larger (possibly merge or consolidate with other co-ops) in order to improve services and net savings for farmer members. 13. | ____ | ____ | ____ | ____ | ____ |
| could strengthen their marketing position (and in return increase profits to farmers) by encouraging members to make firm commit- ments to market their products cooperatively. 14. | ____ | ____ | ____ | ____ | ____ |
| tend to weaken their position by being too active politically and should adhere more to the early cooperative principle of neutrality regarding politics. 15. | ____ | ____ | ____ | ____ | ____ |

APPENDIX FIG. 1. B. (cont'd)

-4-

### III.  FARMER COOPERATIVES IN GENERAL

INSTRUCTIONS:   In the preceding section you gave us your views concerning farmer cooperatives in your part of Kansas.  Please indicate now your reactions to the following statements concerning farmer cooperatives generally.

| FARMER COOPERATIVES-- | Agree definitely | Agree generally | No Opinion | Disagree generally | Disagree definitely |
|---|---|---|---|---|---|
| are helping to preserve the family farm by increasing farmers' incomes. 1. | ___ | ___ | ___ | ___ | ___ |
| benefit farmers at the expense of private businesses and consumers. 2. | ___ | ___ | ___ | ___ | ___ |
| are an important factor in helping to preserve our free enterprise economy. 3. | ___ | ___ | ___ | ___ | ___ |
| should be taxed differently than other kinds of businesses. 4. | ___ | ___ | ___ | ___ | ___ |
| should be subject to every tax that other businesses must pay. 5. | ___ | ___ | ___ | ___ | ___ |
| have been successful because of good mangement rather than because of tax advantages and special privileges. 6. | ___ | ___ | ___ | ___ | ___ |
| rarely succeed in selecting directors who are competent to give effective leadership to large commercial operations. 7. | ___ | ___ | ___ | ___ | ___ |
| have lost touch with the farmers whose interests they are supposed to serve. 8. | ___ | ___ | ___ | ___ | ___ |

APPENDIX FIG. 1. C.  ATTITUDES TOWARD FARMER COOPERATIVES IN GENERAL

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III.  (Continued)

| FARMER COOPERATIVES--- | | Agree definitely | Agree generally | No Opinion | Disagree generally | Disagree definitely |
|---|---|---|---|---|---|---|
| serve both large farmers and small farmers, without subsidizing either group at the expense of the other. | 9. | ___ | ___ | ___ | ___ | ___ |
| are outliving their usefulness as farms are continuing to become larger and more commercialized. | 10. | ___ | ___ | ___ | ___ | ___ |
| should limit the number of consecutive terms a board member can serve. | 11. | ___ | ___ | ___ | ___ | ___ |

APPENDIX FIG. 1. C.  (cont'd)

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## IV. HOW FARMER COOPERATIVES OPERATE

INSTRUCTIONS: Below are several statements about the way cooperatives operate today. Please indicate whether you think each statement is correct or incorrect, or if you are uncertain.

| FARMER COOPERATIVES--- | | Correct | Incorrect | No Opinion |
|---|---|---|---|---|
| hold annual membership meetings to report to those who own and use them and to review and establish basic policies. | 1. | _____ | _____ | _____ |
| are controlled by members on a one-member one-vote basis regardless of money invested or volume of business in the co-op. | 2. | _____ | _____ | _____ |
| are directed by a board which is elected by the members from their own number. | 3. | _____ | _____ | _____ |
| depend upon Government loans for at least 50 percent of their capital. | 4. | _____ | _____ | _____ |
| distribute earnings to members in proportion to the volume of business each has done with the co-op. | 5. | _____ | _____ | _____ |
| pay employees too much | 6. | _____ | _____ | _____ |
| are totally exempt from many taxes which must be paid by private businesses. | 7. | _____ | _____ | _____ |
| do not pay out earnings in cash. | 8. | _____ | _____ | _____ |
| have formed federated cooperatives whose members are other cooperatives rather than individual farmers. | 9. | _____ | _____ | _____ |
| are owned jointly by their employees and their farmer customers. | 10. | _____ | _____ | _____ |
| are incorporated under special state laws rather than the general laws for corporations. | 11. | _____ | _____ | _____ |

APPENDIX FIG. 1. D. UNDERSTANDING OF FARMER COOPERATIVES

### V. IMPORTANT SOURCES OF INFORMATION ABOUT COOPERATIVES

INSTRUCTIONS: In this section we would like to have you indicate the relative importance of various sources of information which have helped and are helping to keep you informed about farmer cooperatives and their place in the economy. The interviewer will check Major, Some, Little, or None---whichever most nearly describes the importance of each source of information to you.

For example, if personal contacts with cooperative employees represent a major source of information about farmer cooperatives for you, the first type of personal contact in the following list should be checked "Major."

| Source of Information | Relative Importance to You as a Source of Information | | | |
|---|---|---|---|---|
| | Major | Some | Little | None |
| **A. Personal contacts** | | | | |
| 1. Talking with a cooperative manager, fieldman or other employee | ___ | ___ | ___ | ___ |
| 2. Talking with a cooperative director | ___ | ___ | ___ | ___ |
| 3. Talking with a cooperative member | ___ | ___ | ___ | ___ |
| 4. Talking with neighbors or friends | ___ | ___ | ___ | ___ |
| 5. Talking with a county agent or other Extension Service representative | ___ | ___ | ___ | ___ |
| 6. Other personal contacts (describe) | ___ | ___ | ___ | ___ |
| **B. Meetings and speeches** | | | | |
| 1. The annual member meeting | ___ | ___ | ___ | ___ |
| 2. District member meeting | ___ | ___ | ___ | ___ |
| 3. Service club, church, or other meetings at which cooperatives are discussed | ___ | ___ | ___ | ___ |
| 4. Other meetings (describe) | ___ | ___ | ___ | ___ |

APPENDIX FIG. 1. E.  SOURCES OF INFORMATION ABOUT COOPERATIVES

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## V. (Continued)

| Source of Information | Relative Importance to You as a Source of Information | | | |
|---|---|---|---|---|
| | Major | Some | Little | None |
| C. Press, radio and TV | | | | |
| 1. A cooperative magazine | ___ | ___ | ___ | ___ |
| 2. Cooperative newsletter | ___ | ___ | ___ | ___ |
| 3. Special flyers, newsletters, notices, etc. | ___ | ___ | ___ | ___ |
| 4. Newspaper articles | ___ | ___ | ___ | ___ |
| 5. Magazine articles | ___ | ___ | ___ | ___ |
| 6. Newspaper advertisements | ___ | ___ | ___ | ___ |
| 7. Pamphlets published by cooperatives | ___ | ___ | ___ | ___ |
| 8. Pamphlets published by business organizations and associations | ___ | ___ | ___ | ___ |
| 9. University pamphlets | ___ | ___ | ___ | ___ |
| 10. Government (USDA) pamphlets | ___ | ___ | ___ | ___ |
| 11. Other printed material (describe) | ___ | ___ | ___ | ___ |
| 12. Radio programs sponsored by a cooperative | ___ | ___ | ___ | ___ |
| 13. TV programs sponsored by a cooperative | ___ | ___ | ___ | ___ |
| D. Other sources of cooperative information | | | | |
| 1. Tours of cooperative plants | ___ | ___ | ___ | ___ |
| 2. Participation in cooperative speaking or essay contests | ___ | ___ | ___ | ___ |
| 3. High school vocational agricultural classes | ___ | ___ | ___ | ___ |
| 4. College short courses | ___ | ___ | ___ | ___ |
| 5. College class-(regular program) | ___ | ___ | ___ | ___ |
| 6. Participation in FFA activities | ___ | ___ | ___ | ___ |
| 7. Participation in 4-H Club activities | ___ | ___ | ___ | ___ |
| 8. Other (describe) | ___ | ___ | ___ | ___ |

APPENDIX FIG. 1. E. (cont'd)

| Kind of index | Source on schedule Section | Questions | Summation Method | Score | Conversion Method | Index |
|---|---|---|---|---|---|---|
| **1. OVER-ALL UNDERSTANDING** | | | | | | |
| a. Negative questions | IV | 4, 7, 8, 10 | Add: x(-1) | ____ | + 4: x 12.5 | ____ |
| b. Positive questions | IV | 1, 2, 3, 5, 9, 11 | Add | ____ | + 6: x 8.33 | ____ |
| c. All questions | IV | 1-5, 7-11 | a + b | | ÷10: x 5.0 | ____ |
| **2. NATURE UNDERSTANDING** | | | | | | |
| a. Negative questions | II:IV | 1:10 | Add: x(-1) | ____ | | |
| b. Positive questions | IV | 1, 2, 3, 5 | Add | ____ | | |
| c. All questions | I: II: III | 1: 1, 2, 3, 5, 10 | a + b | | + 6: x 8.33 | ____ |
| **3. ROLE UNDERSTANDING** | | | | | | |
| a. Negative questions | II: IV | 4:8 | Add: x(-1) | ____ | | |
| b. Positive questions | IV | 9 | Add | ____ | | |
| c. All questions | II: IV | 4: 8, 9 | a + b | | + 3: x 16.67 | ____ |
| **4. POLICY UNDERSTANDING** | | | | | | |
| a. Negative questions | IV | 4, 7 | Add: x(-1) | ____ | | |
| b. Positive questions | II:III:IV | 10: 6: 11 | Add | ____ | | |
| c. All questions | I: II: III | 10:6: 4, 7, 11 | a + b | | + 5: x 10.0 | ____ |
| **5. OVER-ALL KNOWLEDGE** | | | | | | |
| All questions | IV | 1-5, 7-11 | count 0's: - from 10 | ____ | x 10.0 | ____ |
| **6. NATURE KNOWLEDGE** | | | | | | |
| All questions | II: IV | 1: 1, 2, 3, 5, 10 | count 0's: - from 6 | ____ | x 16.67 | ____ |
| **7. ROLE KNOWLEDGE** | | | | | | |
| All questions | II:IV | 4: 8, 9 | count 0's: - from 3 | ____ | x 33.33 | ____ |
| **8. POLICY KNOWLEDGE** | | | | | | |
| All questions | II:III:IV | 10:6: 4, 7, 11 | count 0's: - from 5 | ____ | x 20.0 | ____ |

Appendix Fig. 2. A. Understanding and Knowledge

| | | Source on schedule | | Summation | | Conversion | |
|---|---|---|---|---|---|---|---|
| Kind of index | Section | Questions | Method | Score | Method | | Index |

9. LOCAL ATTITUDE

| | | Section | Questions | Method | Score | Method | Index |
|---|---|---|---|---|---|---|---|
| a. | Negative questions | II | 1, 3, 5, 7, 9, 12 | Add: x(-1) | _____ | | |
| b. | Positive questions | II | 2, 4, 6, 8, 10, 11 | Add | _____ | | |
| c. | All questions | II | 1 - 12 | a + b | _____ | + 24: x 2.08 | _____ |

10. ROLE ATTITUDE

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| a. | Negative questions | II:III | 4, 7, 9:2, 10 | Add: x(-1) | _____ | | |
| b. | Positive questions | II:III | 2, 6, 8, 11:1, 3 | Add | _____ | | |
| c. | All questions | II:III | 2, 4, 6, 7, 8, 9, 11: 1, 2, 3, 10 | a + b | _____ | ÷ 22: x 2.27 | _____ |

11. POLICY ATTITUDE

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| a. | Negative questions | II:III | 3:5 | Add: x(-1) | _____ | | |
| b. | Positive questions | II:III | 10:4, 6 | Add | _____ | | |
| c. | All questions | II:III | 3, 10: 4, 5, 6 | a ÷ b | _____ | + 10: x 5.0 | _____ |

12. NATURE ATTITUDE

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| a. | Negative questions | II:III:IV | 1, 5, 12: 7, 8, 11:6 | Add: x(-1) | _____ | | |
| b. | Positive questions | III | 9 | Add | _____ | | |
| c. | All questions | II:III:IV | 1, 5, 12:7, 8, 9, 11:6 | a + b | _____ | + 16: x 3.125 | _____ |

13. NATIONAL ATTITUDE

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| a. | Negative questions | III:IV | 2, 5, 7, 8, 10, 11:6 | Add: x(-1) | _____ | | |
| b. | Positive questions | III | 1, 3, 4, 6, 9 | Add | _____ | | |
| c. | All questions | III | 1-11: 6 | a ÷ b | _____ | ÷ 24: x 2.08 | _____ |

14. LOCAL NATURE ATTITUDE

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| c. | All questions | II | 1, 5, 12 | Add: x(-1) | _____ | + 6: x 8.33 | _____ |

15. LOCAL ROLE ATTITUDE

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| c. | All questions | II | 2, 6, 4, 7, 8, 9, 11 | (sum 2, 6, 8, 11) -1(sum 4, 7, 9) | _____ | + 14 x 3.57 | _____ |

16. LOCAL POLICY ATTITUDE

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| c. | All questions | II | 3, 10 | 10 - 3 | _____ | + 4: x 12.5 | _____ |

Appendix Fig. 2. B. Attitude

| Kind of index | Source on schedule | | Summation | | Conversion | |
|---|---|---|---|---|---|---|
| | Section | Questions | Method | Score | Method | Index |
| **17. LOCAL FEELING** | | | | | | |
| a. Negative questions | II | 1, 3, 5, 7, 9, 12 | $\sum$ abslt. | _____ | | |
| b. Positive questions | II | 2, 4, 6, 8, 10, 11 | $\sum$ abslt. | _____ | | |
| c. All questions | II | 1 - 12 | a + b | _____ | x 4.17 | _____ |
| **18. ROLE FEELING** | | | | | | |
| a. Negative questions | II:III | 4, 7, 9:2, 10 | $\sum$ abslt. | _____ | | |
| b. Positive questions | II:III | 2, 6, 8, 11:1, 3 | $\sum$ abslt | _____ | | |
| c. All questions | II:III | 2, 4, 6, 7, 3, 9, 11: 1, 2, 3, 10 | a + b | _____ | x 4.54 | _____ |
| **19. POLICY FEELING** | | | | | | |
| a. Negative questions | II:III | 3:5 | $\sum$ abslt. | _____ | | |
| b. Positive questions | II:III | 10:4, 6 | $\sum$ abslt. | _____ | | |
| c. All questions | II:III | 3, 10: 4, 5, 6 | a + b | _____ | x 10.0 | _____ |
| **20. NATURE FEELING** | | | | | | |
| a. Negative questions | II:III:IV | 1, 5, 12:7, 3, 11:6 | $\sum$ abslt. | _____ | | |
| b. Positive questions | II | 9 | $\sum$ abslt. | _____ | | |
| c. All questions | II:III:IV | 1, 5, 12:7, 8, 9, 11 | a + b | _____ | x 6.67 | |
| **21. NATIONAL FEELING** | | | | | | |
| a. Negative questions | III:IV | 2, 5, 7, 3, 10, 11:6 | $\sum$ abslt. | _____ | | |
| b. Positive questions | II | 1, 3, 4, 6, 9 | $\sum$ abslt. | _____ | | |
| c. All questions | III:IV | 1 - 11:6 | a + b | _____ | x 4.17 | _____ |

Appendix Fig. 2. C Feeling

| Kind of index | Source on schedule | | Summation | | Conversion | |
|---|---|---|---|---|---|---|
| | Section | Questions | Method | Score | Method | Index |
| 22. LOCAL NATURE FEELING | | | | | | |
|    c. All questions | II | 1, 5, 12 | $\sum$ abslt. | _____ | x 16.67 | _____ |
| 23. LOCAL ROLE FEELING | | | | | | |
|    c. All questions | II | 2, 4, 7, 8, 9, 11 | $\sum$ abslt. | _____ | x 8.33 | _____ |
| 24. LOCAL POLICY FEELING | | | | | | |
|    c. All questions | II | 3, 10 | $\sum$ abslt. | _____ | x 25.0 | _____ |

Appendix Fig. 2. C Feeling   (cont'd)

| Kind of index | Source on schedule | | Summation | | Conversion | |
|---|---|---|---|---|---|---|
| | Section | Questions | Method | Score | Method | Index |
| 25. LOCAL OPINION | | | | | | |
| All questions | II | 1 - 12 | count 0's: - from 12 | ____ | x 8.33 | ____ |
| 26. ROLE OPINION | | | | | | |
| All questions | II:III | 2, 4, 6, 7, 8, 9, 11:1, 2, 3, 10 | count 0's: - from 11 | ____ | x 9.09 | ____ |
| 27. POLICY OPINION | | | | | | |
| All questions | II:III | 3, 10:4, 5, 6 | count 0's: - from 5 | ____ | x 20.0 | ____ |
| 28. NATURE OPINION | | | | | | |
| All questions | II:III:IV | 1, 5, 12:7, 8, 9, 11:6 | count 0's: - from 8 | ____ | x 12.5 | ____ |
| 29. NATIONAL OPINION | | | | | | |
| All questions | III:IV | 1 - 11:6 | count 0's: - from 12 | ____ | x 8.33 | ____ |
| 30. LOCAL NATURE OPINION | | | | | | |
| All questions | II | 1, 5, 12 | count 0's: - from 3 | ____ | x 33.33 | ____ |
| 31. LOCAL ROLE OPINION | | | | | | |
| All questions | II | 2, 4, 6, 7, 8, 9, 11 | count 0's: - from 7 | ____ | x 14.29 | ____ |
| 32. LOCAL POLICY OPINION | | | | | | |
| All questions | II | 3, 10 | count 0's: - from 2 | ____ | x 50.0 | ____ |

Appendix Fig. 2. D Opinion

| Kind of index | Source on schedule | | Summation | | Conversion | |
|---|---|---|---|---|---|---|
| | Section | Questions | Method | Score | Method | Index |

33. LOCAL ATTITUDE

    a.  Negative questions                                      from 9a \_\_\_\_    ÷ 12: x 4.17  \_\_\_\_
    b.  Positive questions                                        from 9b \_\_\_\_    ÷ 12: x 4.17  \_\_\_\_

34. ROLE ATTITUDE

    a.  Negative questions                                        from 10a \_\_\_\_   ÷ 10: x 5.0  \_\_\_\_
    b.  Positive questions                                        from 10b \_\_\_\_   ÷ 12: x 4.17  \_\_\_\_

35. POLICY ATTITUDE

    a.  Negative questions                                        from 11a \_\_\_\_   ÷ 4: x 12.5  \_\_\_\_
    b.  Positive questions                                        from 11b \_\_\_\_   ÷ 6: x 8.33  \_\_\_\_

36. NATURE ATTITUDE

    a.  Negative questions                                        from 12a \_\_\_\_   ÷ 14: x 3.57  \_\_\_\_
    b.  Positive questions                                        from 12b \_\_\_\_   ÷ 2: x 25.0  \_\_\_\_

37. NATIONAL ATTITUDE

    a.  Negative questions                                        from 13a \_\_\_\_   ÷ 14: x 3.57  \_\_\_\_
    b.  Positive questions                                        from 13b \_\_\_\_   ÷ 10: x 5.0  \_\_\_\_

38. LOCAL FEELING

    a.  Negative questions                                        from 17a \_\_\_\_        x 8.33  \_\_\_\_
    b.  Positive questions                                          from 17b \_\_\_\_        x 8.33  \_\_\_\_

39. ROLE FEELING

    a.  Negative questions                                        from 18a \_\_\_\_        x 10.0  \_\_\_\_
    b.  Positive questions                                          from 18b \_\_\_\_        x 8.33  \_\_\_\_

40. POLICY FEELING

    a.  Negative questions                                        from 19a \_\_\_\_        x 25.0  \_\_\_\_
    b.  Positive questions                                          from 19b \_\_\_\_        x 16.67  \_\_\_\_

41. NATURE FEELING

    a.  Negative questions                                        from 20a \_\_\_\_        x 7.14  \_\_\_\_
    b.  Positive questions                                          from 20b \_\_\_\_        x 50.0  \_\_\_\_

42. NATIONAL FEELING

    a.  Negative questions                                        from 21a \_\_\_\_        x 7.14  \_\_\_\_
    b.  Positive questions                                          from 21b \_\_\_\_        x 10.0  \_\_\_\_

Appendix Fig. 2. 3. Halo Effect

APPENDIX B


Demographic Characteristics and Frequency Responses of
1,041 Respondents to an Attitude Survey of Kansas
Farmers, Kansas, 1977

Appendix Table B-1

Selected Demographic Characteristics of Survey Respondents,
Farmer Attitude Study, Kansas, 1977

| Demographic Characteristic | N | % | Demographic Characteristic | N | % |
|---|---|---|---|---|---|
| Farm Size | | | Cooperative Membership | | |
| Under 200 acres | 180 | 17.3 | None | 95 | 9.1 |
| 200-499 acres | 303 | 29.1 | 1 | 205 | 19.7 |
| 500-999 acres | 295 | 28.3 | 2 | 317 | 30.5 |
| 1,000 & over acres | 263 | 25.3 | 3 | 229 | 22.0 |
| | | | 4 | 121 | 11.6 |
| Total | 1,041 | 100.0 | 5 | 46 | 4.4 |
| | | | 6 | 25 | 2.4 |
| Age of Farm Operator | | | 9 | 3 | 0.3 |
| Under 35 years | 164 | 15.8 | | | |
| 35-39 years | 89 | 8.5 | Total | 1,041 | 100.0 |
| 40-49 years | 212 | 20.4 | | | |
| 50-59 years | 274 | 26.3 | Type of Cooperative Membership[a] | | |
| 60-64 years | 145 | 13.9 | Rural Electric | 517 | 49.7 |
| 65 years & older | 157 | 15.1 | Federal Land Bank | 207 | 19.9 |
| | | | Prod. Credit Assoc. | 125 | 12.0 |
| Total | 1,041 | 100.0 | Insurance | 136 | 13.1 |
| | | | Marketing Only | 126 | 12.2 |
| Level of Education | | | Supply Only | 143 | 13.7 |
| 8th grade or less | 187 | 18.0 | Marketing & Supply | 701 | 67.3 |
| High School | 529 | 50.8 | Other | 86 | 8.3 |
| Some college | 223 | 21.4 | | | |
| College degree | 102 | 9.8 | Father of Respondent a Cooperative Member | | |
| Total | 1,041 | 100.0 | Don't Know | 341 | 32.8 |
| | | | Yes | 686 | 56.9 |
| | | | No | 14 | 1.3 |
| | | | Total | 1,041 | 100.0 |

[a]No totals are given for responses to these items because of some members belonging to more than one type of cooperative.

Appendix Table B-2

Frequency Responses of Survey Respondents to Attitude Statements
Concerning Local Farmer Cooperatives, Kansas, 1977

| Farmer Cooperatives in Your Part of Kansas: | | Definitely Agree | Generally Agree | No Opinion | Generally Disagree | Definitely Disagree |
|---|---|---|---|---|---|---|
| are controlled by large organizations in cities like Kansas City, Topeka, Hutchinson, Manhattan, rather than by local farmers. | N | 122 | 262 | 118 | 356 | 182 |
| | % | 11.7 | 25.2 | 11.3 | 34.2 | 17.5 |
| have helped in the economic development of this community. | N | 408 | 491 | 70 | 54 | 17 |
| | % | 39.2 | 47.2 | 6.7 | 5.2 | 1.6 |
| have hurt private businesses in this area because of the tax exemption and special treatment they receive. | N | 50 | 127 | 160 | 464 | 240 |
| | % | 4.8 | 12.2 | 15.4 | 44.6 | 23.1 |
| sell feed, fertilizer and other farm supplies at prices below those charged by private dealers. | N | 47 | 196 | 115 | 433 | 249 |
| | % | 4.5 | 18.8 | 11.0 | 41.6 | 23.9 |
| have been more concerned with their own expansion than with the needs of their farmer members. | N | 83 | 235 | 160 | 417 | 146 |
| | % | 8.0 | 22.6 | 15.4 | 40.1 | 14.0 |
| have helped to teach farmers the value of working together. | N | 160 | 481 | 187 | 171 | 41 |
| | % | 15.4 | 46.2 | 18.0 | 16.4 | 3.9 |
| are gradually destroying the spirit of free enterprise and moving in the direction of socialism. | N | 25 | 103 | 177 | 426 | 309 |
| | % | 2.4 | 9.9 | 17.0 | 40.9 | 29.7 |

Appendix Table B-2--Continued

| Farmer Cooperatives in Your Part of Kansas: | | Definitely Agree | Generally Agree | No Opinion | Generally Disagree | Definitely Disagree |
|---|---|---|---|---|---|---|
| have been pace-setters in introducing new technology and increasing operating efficiency in marketing farm products and supplies. | N | 170 | 486 | 181 | 170 | 31 |
| | % | 16.3 | 46.7 | 17.4 | 16.3 | 3.0 |
| have lacked the leadership and management needed to be effective in setting the competitive pace. | N | 45 | 246 | 170 | 447 | 132 |
| | % | 4.3 | 23.6 | 16.3 | 42.9 | 12.7 |
| must pay all local property taxes at the same rate as any other type of business. | N | 348 | 379 | 242 | 58 | 12 |
| | % | 33.4 | 36.4 | 23.2 | 5.6 | 1.2 |
| provide better service than private enterprise. | N | 123 | 380 | 145 | 334 | 56 |
| | % | 11.8 | 36.5 | 13.9 | 32.1 | 5.4 |
| return too low a portion of earnings in cash. | N | 145 | 306 | 218 | 306 | 63 |
| | % | 13.9 | 29.4 | 20.9 | 29.4 | 6.1 |
| need to become larger (possibly merge or consolidate with other co-ops) in order to improve services and net savings to farmer members. | N | 110 | 255 | 142 | 358 | 174 |
| | % | 10.6 | 24.5 | 13.6 | 34.4 | 16.7 |
| could strengthen their marketing position (and in return increase profits to farmers) by encouraging members to make firm commitments to market their products cooperatively. | N | 199 | 423 | 186 | 185 | 46 |
| | % | 19.1 | 40.6 | 17.9 | 17.8 | 4.4 |

Appendix Table B-2--Continued

| Farmer Cooperatives in Your Part of Kansas: | | Definitely Agree | Generally Agree | No Opinion | Generally Disagree | Definitely Disagree |
|---|---|---|---|---|---|---|
| tend to weaken their position by being too active politically and should adhere more to the early cooperative principle of neutrality regarding politics. | N | 57 | 153 | 292 | 377 | 161 |
| | % | 5.5 | 14.7 | 28.0 | 36.2 | 15.5 |

Appendix Table B-3

Frequency Responses of Survey Respondents to Attitude Statements
Concerning Farmer Cooperatives in General, Kansas, 1977

| Farmer Cooperatives: | | Definitely Agree | Generally Agree | No Opinion | Generally Disagree | Definitely Disagree |
|---|---|---|---|---|---|---|
| are helping to preserve the family farm by increasing farmer's incomes. | N | 164 | 490 | 121 | 219 | 42 |
| | % | 15.8 | 47.1 | 11.6 | 21.0 | 4.0 |
| benefit farmers at the expense of private businesses and consumers | N | 30 | 153 | 140 | 544 | 170 |
| | % | 2.9 | 14.7 | 13.4 | 53.2 | 16.3 |
| are an important factor in helping to preserve our free enterprise economy. | N | 200 | 485 | 179 | 140 | 35 |
| | % | 19.2 | 46.6 | 17.2 | 13.4 | 3.4 |
| should be taxed differently than other kinds of businesses. | N | 29 | 126 | 163 | 468 | 251 |
| | % | 2.8 | 12.1 | 15.7 | 45.0 | 24.1 |
| should be subject to every tax that other businesses must pay. | N | 294 | 444 | 129 | 131 | 41 |
| | % | 28.2 | 42.7 | 12.4 | 12.6 | 3.9 |
| have been successful because of good management rather than because of tax advantages and special treatment. | N | 266 | 442 | 176 | 117 | 35 |
| | % | 25.6 | 42.5 | 16.9 | 11.2 | 3.4 |
| rarely succeed in selecting directors who are competent to give effective leadership to large commercial operations. | N | 46 | 180 | 226 | 451 | 136 |
| | % | 4.4 | 17.3 | 21.7 | 43.3 | 13.1 |
| have lost touch with the farmers whose interests they are supposed to serve. | N | 50 | 202 | 95 | 491 | 201 |
| | % | 4.8 | 19.4 | 9.1 | 47.2 | 19.3 |

Appendix Table B-3--Continued

| Farmer Cooperatives: | | Definitely Agree | Generally Agree | No Opinion | Generally Disagree | Definitely Disagree |
|---|---|---|---|---|---|---|
| serve both large farmers and small farmers, without subsidizing either group at the expense of the other. | N | 297 | 494 | 91 | 115 | 41 |
| | % | 28.3 | 47.5 | 8.7 | 11.0 | 3.9 |
| are outliving their usefulness as farms are continuing to become larger and more commercialized. | N | 22 | 83 | 119 | 548 | 267 |
| | % | 2.1 | 8.0 | 11.4 | 52.6 | 25.6 |
| should limit the number of consecutive terms a board member can serve. | N | 362 | 339 | 162 | 138 | 38 |
| | % | 34.5 | 32.6 | 15.6 | 13.3 | 3.7 |

Appendix Table B-4

Frequency Responses of Survey Respondents to Factual Statements
Concerning Farmer Cooperatives, Kansas, 1977

| Farmer Cooperatives: | | Correct | Incorrect | No Opinion |
|---|---|---|---|---|
| hold annual membership meetings to report to those who own and use them and to review and establish basis policies. | N<br>% | 968<br>93.0 | 10<br>1.0 | 61<br>5.9 |
| are controlled by members on a one-member one-vote basis regardless of money invested or volume of business in the co-op. | N<br>% | 858<br>82.4 | 66<br>6.3 | 115<br>11.0 |
| are directed by a board which is elected by the members from their own number. | N<br>% | 948<br>91.1 | 25<br>2.4 | 66<br>6.3 |
| depend on government loans for at least 50 percent of their capital. | N<br>% | 91<br>8.7 | 460<br>44.2 | 484<br>46.5 |
| distribute earnings to members in proportion to the volume of business each has done with the co-op. | N<br>% | 940<br>90.3 | 37<br>3.6 | 61<br>5.9 |
| pay their employees too much. | N<br>% | 67<br>6.4 | 647<br>62.2 | 322<br>30.9 |
| are totally exempt from many taxes which must be paid by private businesses. | N<br>% | 154<br>14.8 | 509<br>48.9 | 364<br>35.0 |
| do not pay out earnings in cash. | N<br>% | 183<br>17.6 | 755<br>72.5 | 89<br>8.5 |
| have formed federated cooperatives whose members are other cooperatives rather than individual farmers. | N<br>% | 397<br>38.1 | 267<br>25.6 | 370<br>35.5 |
| are owned jointly by their employees and their farmer customers. | N<br>% | 504<br>48.4 | 393<br>37.8 | 139<br>13.5 |
| are incorporated under special state laws rather than the general laws for corporations. | N<br>% | 272<br>26.1 | 219<br>21.0 | 542<br>52.1 |

Appendix Table B-5

Frequency Responses of Survey Respondents for Importance of Information
Sources in Informing Them of Cooperatives, Kansas, 1977

| Source of Information: | | Major Importance | Some Importance | Little Importance | None Importance |
|---|---|---|---|---|---|
| Talking with a cooperative manager, fieldman or other employee | N | 446 | 334 | 148 | 111 |
| | % | 42.9 | 32.1 | 14.2 | 10.7 |
| Talking with a cooperative director | N | 144 | 409 | 237 | 249 |
| | % | 13.9 | 39.4 | 22.8 | 24.0 |
| Talking with a cooperative member | N | 132 | 517 | 269 | 121 |
| | % | 12.7 | 49.8 | 25.9 | 11.6 |
| Talking with neighbors or friends | N | 154 | 477 | 295 | 113 |
| | % | 14.8 | 45.9 | 28.4 | 10.9 |
| Talking with a county agent or other Extension Service representative | N | 79 | 219 | 263 | 478 |
| | % | 7.6 | 21.1 | 25.3 | 46.0 |
| Other personal contacts | N | 28 | 26 | 26 | 959 |
| | % | 2.7 | 2.5 | 2.5 | 92.3 |
| The annual member meeting | N | 389 | 299 | 120 | 231 |
| | % | 37.4 | 28.8 | 11.5 | 22.2 |
| District member meeting | N | 75 | 184 | 162 | 618 |
| | % | 7.2 | 17.7 | 15.6 | 59.5 |
| Service club, church, or other meetings at which cooperatives are discussed | N | 19 | 141 | 261 | 618 |
| | % | 1.8 | 13.6 | 25.2 | 59.5 |

Appendix Table B-5--Continued

| Source of Information: | | Major Importance | Some Importance | Little Importance | None Importance |
|---|---|---|---|---|---|
| Other meetings | N | 13 | 33 | 29 | 963 |
| | % | 1.3 | 3.2 | 2.8 | 92.8 |
| Cooperative magazine | N | 311 | 466 | 129 | 132 |
| | % | 30.0 | 44.9 | 12.4 | 12.7 |
| Cooperative newsletter | N | 244 | 387 | 186 | 222 |
| | % | 23.5 | 37.2 | 17.9 | 21.4 |
| Special flyers, newsletters, notices, etc. | N | 101 | 386 | 283 | 268 |
| | % | 9.7 | 37.2 | 27.3 | 25.8 |
| Newspaper articles | N | 95 | 451 | 326 | 166 |
| | % | 9.2 | 43.4 | 31.4 | 16.0 |
| Magazine articles | N | 108 | 481 | 296 | 153 |
| | % | 10.4 | 46.3 | 28.5 | 14.7 |
| Newspaper advertisements | N | 64 | 425 | 348 | 202 |
| | % | 6.2 | 40.9 | 33.5 | 19.5 |
| Pamphlets published by cooperatives | N | 86 | 430 | 259 | 263 |
| | % | 8.3 | 41.4 | 25.0 | 25.3 |
| Pamphlets published by business organizations and associations | N | 35 | 207 | 310 | 487 |
| | % | 3.4 | 19.9 | 29.8 | 46.9 |
| University pamphlets | N | 70 | 266 | 264 | 439 |
| | % | 6.7 | 25.6 | 25.4 | 42.3 |

Appendix Table B-5--Continued

| Source of Information: | | Major Importance | Some Importance | Little Importance | None Importance |
|---|---|---|---|---|---|
| Government (U.S.D.A.) pamphlets | N | 54 | 252 | 298 | 435 |
| | % | 5.2 | 24.3 | 28.7 | 41.9 |
| Other printed material | N | 13 | 32 | 32 | 962 |
| | % | 1.3 | 3.1 | 3.1 | 92.6 |
| Radio programs sponsored by cooperatives | N | 11 | 407 | 290 | 231 |
| | % | 10.7 | 39.2 | 27.9 | 22.2 |
| Television programs sponsored by cooperatives | N | 106 | 420 | 273 | 240 |
| | % | 10.2 | 40.4 | 26.3 | 23.1 |
| Tours of cooperative plants | N | 168 | 275 | 118 | 478 |
| | % | 16.2 | 26.5 | 11.4 | 46.0 |
| Participation in cooperative speaking or essay contests | N | 17 | 83 | 134 | 805 |
| | % | .16 | 8.0 | 12.9 | 77.5 |
| High school vocational agriculture classes | N | 61 | 180 | 159 | 639 |
| | % | 5.9 | 17.3 | 15.3 | 61.5 |
| College short courses | N | 33 | 113 | 81 | 812 |
| | % | 3.2 | 10.9 | 7.8 | 78.2 |
| College regular courses | N | 31 | 101 | 84 | 823 |
| | % | 3.0 | 9.7 | 8.1 | 79.2 |
| Participation in F.F.A. activities | N | 60 | 186 | 156 | 637 |
| | % | 5.8 | 17.9 | 15.0 | 61.3 |

Appendix Table B-5--Continued

| Source of Information: | | Major Importance | Some Importance | Little Importance | None Importance |
|---|---|---|---|---|---|
| Participation in 4-H club activities | N | 70 | 242 | 190 | 537 |
| | % | 6.7 | 23.3 | 18.3 | 51.7 |
| Other activities | N | 8 | 15 | 10 | 1,006 |
| | % | 0.8 | 1.4 | 1.0 | 96.8 |

APPENDIX C

Inter-Item Correlation Matrices for Variables Used
in Regression Analysis, 1977 and 1964, Kansas

Appendix Table C-1

Inter-Item Correlation Matrix of Variables Used in Regression Analysis, Farmer Attitudes Toward Cooperatives, Kansas, 1977

| Item [a] | Farm Size | Cooperative Membership | Age | Education | Father Member | Index 3 | Index 4 | Index 5 | Index 6 | Index 7 |
|---|---|---|---|---|---|---|---|---|---|---|
| Farm Size | X | | | | | | | | | |
| Cooperative Membership | .358 | X | | | | | | | | |
| Age | -.140 | -.007 | X | | | | | | | |
| Education | .194 | .109 | -.435 | X | | | | | | |
| Father Member | .235 | .326 | -.253 | .219 | X | | | | | |
| Index 3 | .259 | .309 | .012 | .141 | .227 | X | | | | |
| Index 4 | .214 | .322 | -.229 | .023 | .142 | .227 | X | | | |
| Index 5 | .176 | .153 | .008 | .128 | .101 | .508 | .181 | X | | |
| Index 6 | .135 | .223 | .088 | .025 | .151 | .617 | .386 | .107 | X | |
| Index 7 | .167 | .265 | .056 | .225 | .541 | .423 | .236 | .052 | .410 | X |
| Index 8 | .166 | .294 | .019 | .071 | .265 | .504 | .463 | .226 | .295 | .796 |
| Index 9 | .163 | .218 | .101 | .022 | .135 | .405 | .316 | .247 | .272 | .706 |
| Index 10 | .096 | .153 | .095 | .030 | .126 | .390 | .264 | .157 | .459 | .794 |
| Index 11 | .091 | .263 | .054 | .037 | .123 | .340 | .462 | -.080 | .512 | .260 |
| Index 12 | .125 | .319 | .070 | .028 | .151 | .400 | .430 | .137 | .499 | .318 |
| Index 13 | .105 | .209 | .008 | .049 | .114 | .321 | .326 | .052 | .566 | .229 |
| Index 14 | .125 | .221 | .044 | .081 | .132 | .329 | .492 | .054 | .425 | .244 |
| Index 15 | .128 | .253 | .036 | .065 | .144 | .407 | .506 | .016 | .355 | .162 |
| Index 16 | .110 | .225 | .027 | .118 | .010 | .321 | .425 | .074 | .515 | .282 |
| Index 17 | .104 | .291 | .065 | -.004 | .140 | .357 | .365 | .142 | .438 | .301 |
| Index 18 | .116 | .213 | .089 | .003 | .126 | .394 | .362 | .122 | .577 | .286 |
| Index 20 | .162 | .261 | .084 | .016 | .136 | .309 | .287 | .116 | .345 | .425 |
| Index 21 | .109 | .177 | .145 | -.068 | .014 | .210 | .191 | .117 | .331 | .431 |
| Index 22 | .207 | .271 | .050 | .077 | .170 | .300 | .283 | .168 | .299 | .489 |
| Index 23 | .169 | .267 | .085 | -.001 | .127 | .285 | .273 | .139 | .332 | .479 |
| Index 28 | .152 | .275 | .032 | -.078 | .184 | .379 | .333 | .151 | .363 | .523 |
| Index 29 | .048 | .137 | .152 | -.045 | .055 | .229 | .186 | .112 | .356 | .482 |
| Index 30 | .194 | .303 | .007 | .087 | .210 | .435 | .382 | .206 | .338 | .593 |
| Index 31 | .130 | .273 | .052 | .066 | .166 | .388 | .337 | .163 | .387 | .610 |

Appendix Table C-1--Continued

| Item[a] | Index 8 | Index 9 | Index 10 | Index 11 | Index 12 | Index 13 | Index 14 | Index 15 | Index 16 | Index 17 |
|---|---|---|---|---|---|---|---|---|---|---|
| Farm Size | | | | | | | | | | |
| Cooperative Membership | | | | | | | | | | |
| Age | | | | | | | | | | |
| Education | | | | | | | | | | |
| Father Member | | | | | | | | | | |
| Index 3 | | | | | | | | | | |
| Index 4 | | | | | | | | | | |
| Index 5 | | | | | | | | | | |
| Index 6 | | | | | | | | | | |
| Index 7 | | | | | | | | | | |
| Index 8 | X | | | | | | | | | |
| Index 9 | .532 | X | | | | | | | | |
| Index 10 | .447 | .429 | X | | | | | | | |
| Index 11 | .219 | .164 | .251 | X | | | | | | |
| Index 12 | .296 | .226 | .259 | .851 | X | | | | | |
| Index 13 | .175 | .152 | .259 | .580 | .551 | X | | | | |
| Index 14 | .213 | .153 | .220 | .790 | .658 | .492 | X | | | |
| Index 15 | .258 | .183 | .231 | .705 | .789 | .742 | .808 | X | | |
| Index 16 | .720 | .095 | .168 | .794 | .576 | .478 | .859 | .651 | X | |
| Index 17 | .276 | .221 | .253 | .840 | .943 | .493 | .607 | .659 | .539 | X |
| Index 18 | .235 | .206 | .338 | .617 | .541 | .627 | .441 | .443 | .390 | .488 |
| Index 20 | .410 | .404 | .364 | .439 | .535 | .289 | .350 | .407 | .262 | .491 |
| Index 21 | .432 | .324 | .544 | .286 | .294 | .150 | .188 | .140 | .141 | .279 |
| Index 22 | .509 | .427 | .399 | .258 | .347 | .174 | .225 | .254 | .148 | .315 |
| Index 23 | .455 | .399 | .444 | .355 | .449 | .207 | .229 | .334 | .207 | .393 |
| Index 28 | .558 | .525 | .407 | .343 | .400 | .240 | .306 | .367 | .229 | .363 |
| Index 29 | .404 | .362 | .648 | .202 | .188 | .151 | .130 | .101 | .094 | .186 |
| Index 30 | .564 | .522 | .544 | .201 | .310 | .202 | .335 | .274 | .174 | .287 |
| Index 31 | .615 | .511 | .546 | .302 | .356 | .222 | .273 | .299 | .196 | .321 |

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Appendix Table C-1--Continued

| Item[a] | Index 18 | Index 20 | Index 21 | Index 22 | Index 23 | Index 28 | Index 29 | Index 30 | Index 31 |
|---|---|---|---|---|---|---|---|---|---|
| Farm Size | | | | | | | | | |
| Cooperative Membership | | | | | | | | | |
| Age | | | | | | | | | |
| Education | | | | | | | | | |
| Father Member | | | | | | | | | |
| Index 3 | | | | | | | | | |
| Index 4 | | | | | | | | | |
| Index 5 | | | | | | | | | |
| Index 6 | | | | | | | | | |
| Index 7 | | | | | | | | | |
| Index 8 | | | | | | | | | |
| Index 9 | | | | | | | | | |
| Index 10 | | | | | | | | | |
| Index 11 | | | | | | | | | |
| Index 12 | | | | | | | | | |
| Index 13 | | | | | | | | | |
| Index 14 | | | | | | | | | |
| Index 15 | | | | | | | | | |
| Index 16 | | | | | | | | | |
| Index 17 | | | | | | | | | |
| Index 18 | X | | | | | | | | |
| Index 20 | .451 | X | | | | | | | |
| Index 21 | .527 | .648 | X | | | | | | |
| Index 22 | .345 | .738 | .617 | X | | | | | |
| Index 23 | .436 | .853 | .802 | .865 | X | | | | |
| Index 28 | .342 | .746 | .417 | .561 | .612 | X | | | |
| Index 29 | .397 | .402 | .765 | .409 | .548 | .465 | X | | |
| Index 30 | .207 | .536 | .415 | .792 | .644 | .666 | .453 | X | |
| Index 31 | .342 | .623 | .570 | .680 | .750 | .786 | .705 | .833 | X |

[a]Definitions for the specific indexes are given in Appendix A, Fig. 2 (Index Computation Method).

Appendix Table C-2

Inter-Item Correlation Matrix of Variables Used in Regression Analysis, Farmer Attitudes Toward Cooperatives, Kansas, 1964

| Item[a] | Farm Size | Cooperative Membership | Age | Index 3 | Index 4 | Index 5 | Index 6 | Index 7 | Index 8 | Index 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| Farm Size | X | | | | | | | | | |
| Cooperative Membership | .365 | X | | | | | | | | |
| Age | -.046 | .021 | X | | | | | | | |
| Index 3 | .168 | .274 | -.010 | X | | | | | | |
| Index 4 | .189 | .287 | -.006 | .729 | X | | | | | |
| Index 5 | .095 | .109 | .064 | .529 | .203 | X | | | | |
| Index 6 | .097 | .254 | .069 | .665 | .422 | .199 | X | | | |
| Index 7 | .252 | .339 | .008 | .519 | .492 | .247 | .354 | X | | |
| Index 8 | .243 | .334 | .009 | .512 | .554 | .215 | .340 | .833 | X | |
| Index 9 | .126 | .302 | -.040 | .395 | .344 | .276 | .230 | .761 | .484 | X |
| Index 10 | .213 | .263 | .023 | .384 | .299 | .192 | .371 | .805 | .516 | .512 |
| Index 11 | .114 | .293 | .050 | .414 | .521 | .006 | .551 | .315 | .322 | .179 |
| Index 12 | .149 | .349 | .078 | .459 | .487 | .193 | .571 | .395 | .377 | .286 |
| Index 13 | .091 | .301 | .589 | .363 | .383 | .107 | .604 | .239 | .235 | .147 |
| Index 14 | .099 | .231 | .054 | .389 | .528 | .101 | .439 | .261 | .282 | .160 |
| Index 15 | .127 | .333 | .059 | .439 | .474 | .115 | .306 | .330 | .209 | .187 |
| Index 16 | .079 | .168 | .054 | .352 | .541 | .084 | .406 | .230 | .223 | .108 |
| Index 17 | .127 | .325 | .067 | .412 | .439 | .206 | .529 | .319 | .336 | .243 |
| Index 18 | .140 | .255 | .088 | .398 | .417 | .170 | .588 | .297 | .309 | .198 |
| Index 20 | .267 | .306 | .040 | .341 | .298 | .186 | .328 | .515 | .299 | .478 |
| Index 21 | .226 | .170 | .014 | .262 | .239 | .161 | .278 | .409 | .388 | .315 |
| Index 22 | .256 | .348 | .008 | .388 | .361 | .220 | .329 | .539 | .554 | .477 |
| Index 23 | .258 | .298 | .022 | .374 | .344 | .198 | .351 | .523 | .509 | .430 |
| Index 28 | .250 | .298 | .016 | .377 | .287 | .211 | .303 | .631 | .592 | .542 |
| Index 29 | .209 | .201 | -.039 | .292 | .286 | .168 | .307 | .529 | .518 | .410 |
| Index 30 | .263 | .393 | -.001 | .426 | .415 | .227 | .347 | .612 | .662 | .544 |
| Index 31 | .247 | .323 | -.005 | .416 | .411 | .205 | .356 | .630 | .643 | .528 |

Appendix Table C-2--Continued

| Item[a] | Index 10 | Index 11 | Index 12 | Index 13 | Index 14 | Index 15 | Index 16 | Index 17 | Index 18 |
|---|---|---|---|---|---|---|---|---|---|
| Farm Size | | | | | | | | | |
| Cooperative Membership | | | | | | | | | |
| Age | | | | | | | | | |
| Index 3 | | | | | | | | | |
| Index 4 | | | | | | | | | |
| Index 5 | | | | | | | | | |
| Index 6 | | | | | | | | | |
| Index 7 | | | | | | | | | |
| Index 8 | | | | | | | | | |
| Index 9 | | | | | | | | | |
| Index 10 | X | | | | | | | | |
| Index 11 | .290 | X | | | | | | | |
| Index 12 | .301 | .876 | X | | | | | | |
| Index 13 | .244 | .628 | .599 | X | | | | | |
| Index 14 | .209 | .801 | .702 | .464 | X | | | | |
| Index 15 | .244 | .755 | .834 | .709 | .833 | X | | | |
| Index 16 | .203 | .804 | .612 | .433 | .863 | .612 | X | | |
| Index 17 | .269 | .858 | .949 | .548 | .647 | .717 | .570 | X | |
| Index 18 | .328 | .640 | .592 | .691 | .474 | .511 | .447 | .533 | X |
| Index 20 | .478 | .427 | .499 | .274 | .307 | .409 | .291 | .462 | .410 |
| Index 21 | .514 | .285 | .294 | .091 | .234 | .155 | .209 | .268 | .298 |
| Index 22 | .484 | .395 | .463 | .275 | .343 | .389 | .266 | .433 | .375 |
| Index 23 | .513 | .433 | .497 | .229 | .395 | .405 | .316 | .442 | .427 |
| Index 28 | .296 | .367 | .193 | .267 | .308 | .189 | .339 | .304 | .789 |
| Index 29 | .638 | .226 | .236 | .105 | .173 | .133 | .145 | .229 | .362 |
| Index 30 | .522 | .355 | .247 | .276 | .315 | .383 | .231 | .395 | .329 |
| Index 31 | .577 | .349 | .413 | .215 | .324 | .356 | .246 | .373 | .338 |

Appendix Table C-2--Continued

| Item[a] | Index 20 | Index 21 | Index 22 | Index 23 | Index 28 | Index 29 | Index 30 | Index 31 |
|---|---|---|---|---|---|---|---|---|
| Farm Size | | | | | | | | |
| Cooperative Membership | | | | | | | | |
| Age | | | | | | | | |
| Index 3 | | | | | | | | |
| Index 4 | | | | | | | | |
| Index 5 | | | | | | | | |
| Index 6 | | | | | | | | |
| Index 7 | | | | | | | | |
| Index 8 | | | | | | | | |
| Index 9 | | | | | | | | |
| Index 10 | | | | | | | | |
| Index 11 | | | | | | | | |
| Index 12 | | | | | | | | |
| Index 13 | | | | | | | | |
| Index 14 | | | | | | | | |
| Index 15 | | | | | | | | |
| Index 16 | | | | | | | | |
| Index 17 | | | | | | | | |
| Index 18 | | | | | | | | |
| Index 20 | X | | | | | | | |
| Index 21 | .658 | X | | | | | | |
| Index 22 | .783 | .603 | X | | | | | |
| Index 23 | .875 | .788 | .870 | X | | | | |
| Index 28 | .507 | .646 | .698 | .308 | X | | | |
| Index 29 | .494 | .762 | .484 | .599 | .619 | X | | |
| Index 30 | .628 | .449 | .842 | .703 | .739 | .559 | X | |
| Index 31 | .684 | .576 | .733 | .790 | .851 | .733 | .871 | X |

[a]Definitions for the specific indexes are given in Appendix A, Fig. 2 (Index Computation Method).

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KANSAS FARMERS' ATTITUDES TOWARD COOPERATIVES

by

ALLEN LEWIS HURLEY

B.S., Kansas State University, 1976

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AN ABSTRACT OF A MASTER'S THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Agricultural Economics

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1977

# ABSTRACT

This study was designed to determine the levels of attitudes and understanding of cooperatives held by Kansas farmers and the relationships between those attitudes and (1) respondent characteristics and (2) information sources concerning cooperatives.

Data were collected by a personal survey of 1,041, randomly selected, Kansas farmers. The questionnaire was designed to collect information in five areas: (1) demographic characteristics, (2) attitudes toward local cooperatives, (3) attitudes toward cooperatives in general, (4) understanding of cooperatives, and (5) information sources used to inform farmers of cooperatives. Mean scores for fifty-four indexes were computed from the responses to each statement on the questionnaire. Statistical tools employed in the analysis were, chi-square test, analysis of variance, and t-test. Multiple regression analysis was used to identify those variables associated with differences in attitudes.

Farmers generally had favorable attitudes toward cooperatives. Those attitudes were slightly more favorable toward the local cooperative than they were toward cooperatives in general. The strength of feelings about those attitudes, however, was relatively mild. Farmers also showed a good understanding of cooperatives, with the best understanding toward the nature and operation aspect of cooperation.

Farmers of larger operations, college educated farmers, and cooperative members all tended to have better understanding and more favorable attitudes toward cooperatives than did their respective counterparts.

‐The information sources about cooperatives which were given the greatest importance by farmers were also those sources over which cooperatives can exert the greatest control. Those ranked highest were; talking with cooperative personnel, annual meetings, and cooperative magazines. Sources relied on least by farmers included materials published by organizations other than cooperatives and sponsored activities at which cooperatives were discussed.

Regression analysis showed that farmers' views toward cooperatives in general are based mainly from their experiences with local cooperatives. The local attitude index had the greatest association of any of the variables to over‐all attitude scores. Increased understanding of cooperatives was positively associated with combined attitudes toward cooperatives and attitudes toward public policies affecting them. Strong feelings were negatively associated with attitudes toward public policies affecting cooperatives. No significant relationships were detected between attitudes toward cooperatives and area of the state, farm size or age of the farm operator. Education had a positive association with role attitudes only, while cooperative membership was related to positive attitudes for both the role of cooperatives and public policies affecting them.

Attitudes toward local cooperatives and cooperative‐membership were found to have even stronger relationships in 1964 than they had in 1977. No important differences in the other variables were found to exist between the two studies.

Talking with cooperative personnel was found to have a significant positive effect on attitudes toward all aspects of cooperation. The same relationship was true for cooperative magazines, newsletters, and

pamphlets. Annual member meetings were associated to favorable attitudes in all aspects except nature and operation of cooperatives, while tours of cooperative plants were associated to favorable attitudes in all but the public policy aspect of cooperation. Talking to cooperative directors was highly associated to favorable attitudes toward public policies affecting cooperatives.

Talking with neighbors and friends about cooperatives was considered a highly important source of information, but was associated with negative attitudes toward cooperatives. Many of the other information sources given high importance by farmers and cooperative managers were found to have little or no association to differences in attitudes.