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**WORKING RELATIONSHIPS OF COUNTY EXTENSION AGENTS AND
TEACHERS OF VOCATIONAL AGRICULTURE IN MICHIGAN**

By

Ahmed Mohamed Mohamed Omar

AN ABSTRACT OF A THESIS

**Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of**

DOCTOR OF PHILOSOPHY

College of Education

1963

ABSTRACT

WORKING RELATIONSHIPS OF COUNTY EXTENSION AGENTS AND TEACHERS OF VOCATIONAL AGRICULTURE IN MICHIGAN

By Ahmed Mohamed Mohamed Omar

Purpose: To investigate activities and factors in working relationships of county extension agents and teachers of vocational agriculture and to determine differences in opinions regarding these working relationships.

Methods: A mail survey checklist was prepared and used to collect data from county extension agents and teachers of vocational agriculture in the 61 counties in Michigan where both teachers and agents were employed. Returns were received from 122 (94.6%) of the 129 agents and 180 (88.2%) of the 204 teachers contacted. Responses were recorded on IBM cards and MISTIC was used for calculating chi-square values to determine differences in opinions and association of background characteristics with responses of the two professional groups.

Findings: The extent to which activities in working relationships were carried out varied among the agents and the teachers. The respondents also varied in their opinions with regard to the degree of involvement of the factors in their working relationships.

The study indicated that opinions of the teachers and the agents did not differ significantly with regard to the

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desirability of carrying out 28 activities, but did differ with respect to two others. These were: working out a program of cooperation between 4-H club and FFA, and arranging for educational meetings for farmers.

The teachers and the agents did not differ significantly in opinions with respect to 23 factors affecting their working relationships. Opinions differed significantly with regard to the following factors:

1. The other's personality.
2. Degrees of academic education.
3. Similarity of educational specialization.
4. Similarity of in-service training in technical subject matter.
5. Difference of in-service training in technical subject matter.
6. Similarity of in-service training in teaching methods.
7. The other's experience in working with rural people.
8. The other's experience in the field of agriculture.
9. One's experience in the field of agriculture.
10. Relationships between school administrators and county extension staff.

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Responses of the agents and the teachers tended to indicate positive or neutral effects of all the factors except for the intraorganizational factors which were viewed mostly to have a negative effect.

No relationship was found between age, college degrees achieved, and length of experience of the teachers and their opinions regarding the desirability of carrying out activities for implementing educational programs in agriculture. However, among the agents a significant relationship was found to exist between background characteristics and opinions regarding one of the activities of implementing educational programs--having teachers and agents serve on each other's advisory committees. The older agents, those who had achieved higher college degrees, and those with more experience, seemed in favor of the activity to a greater degree than the other agents.

No relationship was found between the three background characteristics of the teachers and their opinions with regard to the effect of the intraorganizational factors. However, among the agents there was a significant relationship between the age and opinions regarding the effect of one of the intraorganizational factors--clarity of functions as specified by the Smith-Lever and the Smith-Hughes acts. The younger agents seemed to have less consensus than the older agents in formulating an opinion of the effect of the

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factor. A significant relationship was also found between college degrees achieved by the agents and their opinions regarding the effect of another factor--the difficulty of scheduling. Those with higher college degrees, compared with the remaining agents, viewed the factor as having a negative effect on educational programs in agriculture.

Twenty implications were drawn from the findings, all of which encourage and support close working relationships between the two professional groups.

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CHAPTER I

INTRODUCTION

Statement of the Problem

The problem of this study consists of two parts:

- 1. Identifying activities in the working relationships of county extension agents and teachers of vocational agriculture and the desirability of carrying out these activities for effective educational programs in agriculture.**
- 2. Discerning the factors involved in the working relationships of the two professional groups and the factors which promote or which hamper effective educational programs in agriculture.**

Rationale

Education in the second half of the twentieth century has come to include more than the specialized function of the school. Educative efforts of other institutions and agencies are now also regarded and considered.

The outcome of this development is that all institutions and agencies which devote their efforts to education now have inclusive responsibility to individuals, communities and the nation in which they serve.

Apparently during the last 50 years one educational agency was not enough to carry the expanding responsibility

of educational programs in agriculture alone. Therefore, several agencies were authorized by society to share this responsibility.

At present, the phenomena of rapid change, industrialization and technological development are having tremendous impact on agriculture and agricultural careers as well as on education in agriculture. Efficient agriculture and the solution of its problems is now "the" challenge--not only to educators, but also to producers and consumers as well.

County extension agents and teachers of vocational agriculture are the first line faced with "the" challenge directly and indirectly. They are among the top reference groups to whom local people turn for effective educational programs in agriculture and agricultural businesses. Many times they work with the same clientele, in the same communities with emphasis in the same area of the subject field.

To meet the great challenge operating relationships have rarely been questioned. On the contrary, cooperation and harmonious working relationships have been encouraged by state and national leaders of both groups.

Extension Leaders' Point of View

The Joint Committee Report on Extension Programs, Policies, and Goals chaired by President John A. Hannah of Michigan State University made it clear that:¹

¹Joint Committee Report on Extension Program, Policies

Close and harmonious operating relationships between extension workers and local teachers of vocational agriculture and home economics are particularly essential. Vocational education in these fields under the Smith-Hughes Act was inaugurated 3 years after the establishment of Smith-Lever extension work. Workers in both fields are public servants engaged in educational work many times both with the same individuals. And both services are maintained by public tax monies.

In 1959, seventy-five leaders from across the country supported by the insight of the Extension Committee on Organization and Policy, and Federal Extension Service wrote what is known by extension professionals as the "Scope Report." Under the heading of "Looking at ourselves in the light of these challenges" the following is quoted:²

Cooperating public agencies will always have an important role to perform in Extension work, and as the educational arm of the U.S.D.A. and Land Grant system Extension itself has specific responsibilities to these agencies. Other public agencies serve Extension's clientele in a variety of ways. Some offer sources of credit, some provide health services. Others provide individual technical services. Still others develop and administer regulations affecting farming or agricultural marketing. Others offer grants and aids to stimulate improved farm methods.

In relation to such groups Extension has four responsibilities:

and Goals, U.S. Dept. of Agriculture, and Association of Land Grant Colleges and Universities (Washington: U.S. Government Printing Office, 1948), p. 21.

²B. E. Kearl and O. B. Copeland (eds.), A Guide to Extension Programs for the Future... (Raleigh: The Agricultural Extension Service, North Carolina State College, 1959), p. 48.

1. To make sure its own people know the personnel and understand the mission of other agencies, and also fully understand their own educational responsibilities in connection with the work of other agencies.
2. To offer other agencies the opportunities to become familiar with Extension personnel and programs.
3. To provide research information and other specialized help needed by other agencies.
4. To ask freely for appropriate help and advice and service from other agencies in connection with extension projects.

The report continued:

Extension is one of the oldest public agencies in agriculture, and at first it was often alone in its field. But today Extension must recognize that its work is mutually supporting and supported by the excellent work of these other agencies. Other public agencies have not been mentioned individually in this report, but there is an awareness throughout the Extension Service that its work is made more fruitful and more satisfying by the excellent cooperative relationship it enjoys with such agencies as SCS, PCA, FHA, ASC, REA, Forest Service, state departments of agriculture, state conservation department, and teaching programs in vocational agriculture, health, education, conservation and the like.*

A question may be raised whether the statement, specifically or the "Scope Report" as a whole would be considered as a reliable document of particular value or importance to use as a reference or a guide to extension programs for the future. H. L. Ahlgren of Wisconsin, and C. B. Ratchford

*Underlining is added by the present writer for pointing out significance relevant to this study.

of North Carolina stated in the introduction of the "Scope Report":³

This "Scope Report" represents the best thinking of 'leading Extension' workers on how, where, what and with whom the Cooperative Extension Service will be working for many years to come.

These quoted statements should make it clear that a tremendously important segment of the work of Cooperative Extension professionals is working relationships with others with whom they share a destiny.

One year before this Scope Report was published, the Extension Committee on Organization and Policy wrote a publication⁴ called, "The Cooperative Extension Service Today. A Statement of Scope and Responsibility" from which the following was quoted:⁴

Extension can and should cooperate with local people, other public agencies, and lay organizations in efforts to improve agriculture, promote non-farm employment opportunities, strengthen community services and institutions, and in other ways encourage the optimum development and utilization of all local resources.*

³Ibid., p. 3.

⁴The Cooperative Extension Service Today. A Statement of Scope and Responsibility, Extension Committee on Organization and Policy, (publisher unlisted), 1957, p. 12.

*Underlining is added by the present writer for pointing out significance relevant to this study.

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As related to the study Kelsey⁵ and Hearne indicated that since there have been many other acts passed after the Smith-Lever Act which bear close similarity to extension work and often duplicate or overlap with it, their functions would depend upon the personalities who head these programs. To ensure "good" relationships, Kelsey and Hearne⁶ believed that the following were important:

1. Re-examination and interpretation of provisions of the laws involved.
2. Full understanding of objectives and unity of purpose at all levels.
3. Public interest should be the core of their working relationships.

They also encouraged frequent administrative meetings of concerned agencies for evaluation and correcting misunderstanding. This is from the national and experts' point of view.

For the state of Michigan, the Cooperative Extension Service at Michigan State University stated:⁷

⁵L. D. Kelsey and C. C. Hearne, Cooperative Extension Work. (Ithaca, New York: Comstock Publishing Associates, A Division of Cornell University Press, 1955), pp. 78-85.

⁶Ibid., p. 84.

⁷Your Appointment, Policies of the Cooperative Extension Service. Prepared by John Stone, Former Chairman, Institute for Extension Personnel Development (East Lansing: Coop. Ext. Serv., M.S.U., 1959), p. 11.

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Extension agents in rural communities live and work with other public employees. It is important that harmonious working relationships exist--that they work together for the welfare of agriculture and the people. Each has a job to do which, if done well in a spirit of cooperation, will complement the work of the others.

A general understanding between the Cooperative Extension Service and the Department of Vocational Education stresses the importance of cooperation between Smith-Hughes teachers and extension agents. To avoid duplication and to promote unity of effort, it has been agreed that the same projects should not be carried both as an FFA or FHA and as a 4-H club project, although a boy or a girl may carry different projects at the same time in 4-H and FFA or FHA. Both types of training have a place in teaching rural youth.*

Now, it is safe to say that the national professionals of extension as well as state leaders place great importance on working relationships between county extension agents and teachers of vocational agriculture and see much promise in these working relationships for future directions and the welfare of the people served.

Vocational Agriculture Leaders' Point of View

Leaders of vocational education in agriculture have no less enthusiasm in their views concerning working relationships between teachers of vocational agriculture and all related agencies, especially county extension agents. Hamlin⁸

⁸H. M. Hamlin, Agricultural Education In Community Schools (Danville, Illinois: Interstate Printing Company, 1950), pp. 115-117.

*Underlining is added by the present writer for pointing out significance relevant to this study.

wrote:

Only a part of the agricultural education of a community is done by the school. In a typical community there are in addition, extension work with adults, 4-H club work, the program of soil conservation district, a rural electrification program, and other efforts in agricultural education. There are also agricultural organizations and institutions whose activities should be correlated with those of the school. The school has a unique advantage in correlating these activities because the school belongs to all the people, all useful agencies have the right to expect that the school will work with them, and all groups may meet at the school.*

There have been many attempts to correlate the work of agricultural education agencies at county, state, and national levels. Most of them have not been successful. It is at the level of the community that correlation can and must take place. The same farmers may be working with several agricultural education agencies. They expect each of these agencies to make its appropriate contribution to the solution of their problems and to cooperate with other agencies in helping them to solve problems if one agency alone can not give all the help needed.*

Concerning the desirability of harmonious working relationships of teachers of vocational agriculture and related agencies, he wrote:⁹

Any legitimate agency of adult education in agriculture should be helped, not hindered, by the school's efforts. There is much more work to do than all together can do. Teachers of adult farmers may well talk over in

⁹ Ibid., pp. 281-282.

*Underlining is added by the present writer for pointing out significance relevant to this study.

advance with their county agricultural agents the courses they hope to teach and the procedure they expect to use. Cooperation and assistance can usually be secured and working at cross-purposes can be avoided.*

Hamlin, in a recent book, continued with these pertinent views regarding interorganizational relationships of agencies concerned with agricultural education in this country.¹⁰

The organizational structure of agricultural education at the national level is complicated by separate organizations for vocational education in agriculture, conducted through the public schools, and extension education in agriculture, conducted outside them. Both work in the same states and communities, often with the same people. The Cooperative Extension Service is located in the U.S. Department of Agriculture. A National agreement suggesting procedures for voluntary cooperation between the two services and indicating dividing lines was adopted in 1928. This agreement is unknown in many parts of the country, and it is inoperative in many parts where it is known. There is some collaboration between the two services at Washington. Relationships in the states and communities have been worked out which are reasonably satisfactory, but the machinery to facilitate cooperation between the two services does not result in enough cooperation projects which would be mutually advantageous and useful to the public, which supports both services financially.

Working relationships with county extension agents is

¹⁰H. M. Hamlin, Public School Education in Agriculture (A Guide to Policy and Policy Making) (Danville, Illinois: The Interstate Printing Co., 1962), pp. 151-152.

*Underlining is added by the present writer for pointing out significance relevant to this study.

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an interdependent kind of relationship, yet because of its importance it has become a criterion in measuring teachers' professional growth through seeking information and assistance from qualified sources, both within and outside the school community.¹¹ This emphasized the point that school teachers of vocational agriculture should be familiar¹² with the work of the county extension staff, what they do in terms of teaching agriculture and related fields as well as the possible assistance and cooperation in implementing educational programs of mutual concern. Along this line Deyoe¹³ wrote under a subheading of "Developing effective relationships with agencies available to farmers":

The teacher of vocational agriculture in working with various members of farm families represented in high school boys, young farmers and adult farmers classes need [sic] to recognize that other agencies are rendering educational services to farmers. Not only can teachers proceed more intelligently if they are aware of the contributions which each agency may make, but frequently efforts may be coordinated and thereby even greater service rendered to the individual farm or farm family.

Periodicals and magazines of extension, agricultural

¹¹V. R. Cardozier, In-service Education of Teachers of Vocational Agriculture, Criteria for Evaluating State-Wide Programs, U.S. Department of Health, Education and Welfare (Washington, D.C.: U.S. Government Printing Office, 1959), p. 51, items 27 and 28.

¹²Hammonds, Teaching Agriculture (New York: McGraw Hill Publishing Co., 1950), Chapter 14, pp. 304-315.

¹³J. Deyoe, Farming Programs in Vocational Agriculture (Danville, Illinois: Interstate Printing Co., 1953), pp. 589-590.

education, adult education, and sociology are full of a number of articles by experts who realize the need and value of working relationships of those who are engaged in educational programs for rural development. In recent years the pressures of industrialization, the need for fewer farms and farm operators, the increase of part-time farming and the rapid turn to urbanization have contributed to an unattractive public image of agriculture and to disinclination by many to be concerned with its development. Consequently, the enthusiasm in working relationships between related educational agencies in the field may have softened. To those people who argue or question the need for education in agriculture and the need for more intensive working relationships than ever before between the agencies involved, a report on the President's Panel on Vocational Education may help correct their misconception.¹⁴ Dr. Floyd Johnson, a member of this panel, wrote:¹⁵

¹⁴Education for the Changing World of Work: Challenge to a Free Society, Report of the Panel of Consultants on Vocational Education, U.S. Department of Health, Education and Welfare (Washington: U.S. Government Printing Office, 1962).

¹⁵F. Johnson, "The President's Panel Looks at Vocational Agriculture," Agricultural Education Magazine, Vol. 7, February 1963, pp. 162-163.

Even though the manpower requirements in farming are decreasing, a special study made for the panel (Manpower in Farming and Related Occupations) states:¹⁶

It is clear that the nation will need more, not fewer, highly trained efficient farmers in the future. The growth of efficient family farms is very pronounced. The increased complexity of farming operations associated with improvements in technology and the increased investment per farm accompanied by greater specialization in production can be expected to continue. These developments emphasize the premium which will be placed upon managerial ability during the next decade. Knowledge and flexibility will become even more important than they have been in the past.

This means that farmers must have access to adequate education and training experiences. Intensity of educational experiences in the field is more required now than ever before.

Consequently, it seems very logical to conclude that if working relationships between county extension agents are seen very desirable by the leaders concerned, then it is safe to say that the increasing pressures and demands may increase the need for these working relationships for effective educational programs in agriculture. Recently the area of extension and agricultural education has been included in lists of needed high priority research.¹⁷

¹⁶C. E. Bishop and G. S. Tolley, Manpower in Farming and Related Occupations, A Study prepared for the panel of Consultants on Vocational Education, Dept. of Agricultural Economics, North Carolina State College, Raleigh, North Carolina, 1962. Quoting, Ibid.

¹⁷D. Nielson, High Priority Research Needed in Agricul-

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On the basis of this rationale this study has been approached.

Importance of the Study

To understand the need for the study, it is important to know, in addition to the above rationale, the circumstances of Michigan agriculture and the educational opportunities that might require a need for close working relationships between county extension agents and teachers of vocational agriculture.

The State of Michigan has had phenomenal changes. Those related to the study are summarized as follows:¹⁸

1. Agriculture is developing from a self-sufficient industry to the second largest industry in the state.
2. Few farmers and fewer acres are producing a variety of agricultural products for the people of Michigan, the nation and the world.
3. Part-time farming is increasing where farmers are taking advantage of two income opportunities, one

tural Education, Highlights of a speech delivered on August 8, 1962, at the 16th Annual Research Conference on Agricultural Education at Ames, Iowa. Report on the conference published by Iowa State University, Ames, Iowa, p. 7.

¹⁸1962 State Program Plan, Community Resource Development and Public Affairs, 1961 Annual Report (E.Lansing: Mich. Co-operative Extension Service, Michigan State University), p. 9.

from agriculture and the other from industry.

4. Industry, improved transportation, expansion of recreation and urbanization, are increasing the pressures on natural resources.

The increasing complexities and demands, particularly in the unprepared and unequipped rural areas, are challenging the organizations and educational agencies to make people understand the social and economic adjustments within agriculture and between it and other segments of society.

Extension agents and teachers of vocational agriculture have been aware of the challenge. Many of both professional groups redoubled their efforts and worked individually to meet the challenge. Others coordinated and cooperated in their efforts to meet it. Some changed, neither their pattern of work nor their subject matter. Yet there are many worthy examples of working relationships between the two educational groups which the writer has observed personally. In several counties both professional groups work harmoniously through county professional agricultural councils. In other counties they communicate with each other individually for consultation, planning and implementation of their programs. People in those counties appear to be stimulated by this movement of liberal cooperation of both groups. A survey was conducted last summer (1962) in Huron County to investigate how the people felt about cooperation between county agents and teachers of vocational agriculture

in conducting training classes in farm machinery. Over 90% of the farmer members of the classes indicated that this type of undertaking proved very successful. The result of this survey was encouragement to the county's teachers of vocational agriculture and county extension agents to continue cooperative endeavors in the future.¹⁹

The intensity of working relationships, the kind of activities carried out and the desirability of carrying out these activities for effective educational programs in agriculture seem to vary from person to person and from county to county across the state. Factors involved and the degree to which they hamper or promote effective educational programs in agriculture appear not to be well recognized or perceived. These cooperative activities and the factors included in them have rarely been studied in other states. The state of Michigan is one of the states where these activities and factors have never been studied on a state-wide basis or at local levels.

The study was launched with the aim that clear knowledge of present working relationships between the two professional groups as well as identification of the desirable working relationship activities--as they view it--should contribute to the development of effective educational pro-

¹⁹J. Fuller, "Michigan Teachers Work With County Agents on Adult Farmer Courses," Agriculture Education Magazine, Vol. 35, December 1962, No. 5, pp. 114-115.

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grams for local communities. Identifying factors involved should be of great value for wise planning of programs to meet the increasing challenges to education in agriculture.

In addition, the information gained from the study should be of interest to leaders of the Cooperative Extension Service and vocational agriculture who have as their responsibility the preparation of pre-service training as well as in-service cooperative training projects for county extension agents and teachers of vocational agriculture.

Basic Assumptions

The present study was founded on the following assumptions:

1. Education in agriculture must involve several agencies.
2. Improving communications between agencies involved in educational programs in agriculture increases their effectiveness.
3. Awareness of the need for effective working relationships varies among county extension agents and among teachers of vocational agriculture as well as between the two professional groups.
4. Close working relationships between county extension agents and teachers of vocational agriculture contribute to effective educational programs in agriculture.

Objectives of the Study

This study was prepared and conducted to accomplish the following objectives:

- 1. To discern among county extension agents and teachers of vocational agriculture:**
 - a. Certain activities which are carried out in their working relationships.**
 - b. Certain factors which are involved in their working relationships.**
- 2. To determine differences in opinions held by county extension agents and teachers of vocational agriculture regarding:**
 - a. The desirability of carrying out certain activities in their working relationships for effective educational programs in agriculture.**
 - b. The effect of certain factors involved in their working relationships on educational programs in agriculture.**
- 3. To determine among county extension agents and among teachers of vocational agriculture the relationship between selected background characteristics such as age, college degrees achieved, and length of experience, and their opinions regarding:**
 - a. The desirability of carrying out cooperatively certain activities for implementing effective**

tive educational programs in agriculture.

- b. The effect of certain intraorganizational factors on educational programs in agriculture.

Null Hypotheses:

- 1. There are no differences in opinions held by county extension agents and teachers of vocational agriculture regarding:
 - a. The desirability of carrying out certain activities in their working relationships for effective educational programs in agriculture.
 - b. The effect of certain factors involved in their working relationships on educational programs in agriculture.
- 2. There is no relationship between selected background characteristics such as age, college degrees achieved and length of experience, and opinions held by county extension agents and by teachers of vocational agriculture regarding:
 - a. The desirability of carrying out cooperatively certain activities for implementing effective educational programs in agriculture.
 - b. The effect of certain intraorganizational factors on educational programs in agriculture.

Alternative hypotheses:

1. There are differences in opinions held by county extension agents and teachers of vocational agriculture regarding:
 - a. The desirability of carrying out certain activities in their working relationships for effective educational programs in agriculture.
 - b. The effect of certain factors involved in their working relationships on educational programs in agriculture.
2. There is a relationship between selected background characteristics such as age, college degrees achieved and length of experience and opinions held by county extension agents and by teachers of vocational agriculture regarding:
 - a. The desirability of carrying out cooperatively certain activities for implementing effective educational programs in agriculture.
 - b. The effect of certain intraorganizational factors on educational programs in agriculture.

Limitation and Scope

The study encompasses only working relationships between extension agents and teachers of vocational agriculture in the counties where both professional groups are employed. These working relationships include just

those concerned with educational programs in agriculture.

Activities of working relationships in the instrument are those which were believed the most important as was drawn from the review of literature and personal interviews with reliable consultants. These activities are compound activities which contain simpler ones. Also they are not mutually exclusive.

County extension agents selected to participate in the study are county extension directors, county extension agents for agriculture and county extension agents for 4-H club work. Other county extension agents at the county level are excluded either because of the difference in the nature of their subject matter and clientele and/or because of undefined functions of some of the recently developed positions. Agents excluded from the population of the study are:

1. County extension agents for community services (2 in the state, at the time of conducting the study, were in-service).
2. County extension agents for consumer marketing information (6 in the state, at the time of conducting the study were in-service).
3. County extension agents for home making (59 in the state, at the time of conducting the study were in-service).

Concerning the factors involved in working relationships, it was taken into consideration that some other factors might be involved too. From consultants and from the literature and in line with theories of interaction and communication, the factors listed in the instrument were believed the most important.

Information collected from respondents was assumed to represent truthful opinions of what they do or should do as part of their professional work and the study is limited to their perceptual frame of reference.

Working relationships between the two professional groups are assumed to be relationships between groups who are essentially coordinate with but slight status difference.

Definition of Terms

The following definitions of terms are assumed to be relevant for the purposes of this study:

Activities of Working Relationship: Actions performed by county extension agents and teachers of vocational agriculture. These actions are regulated and motivated by the anticipation of effectiveness of their educational programs.²⁰

Program: Sum total of all educational activities and

²⁰ Modified from: C. P. Loomis, Social Systems, Essays on Their Persistence and Change, (Princeton, New Jersey; Toronto; London; New York: D. Van Nostrand Company, Inc., 1960), p. 1.

events. The courses of action carried out by a county agent or by a teacher of vocational agriculture.²¹

Program Management: Refers to a related series of decisions in planning and implementing programs in such a way as to achieve the greatest possible output for an optimum input.²²

Planning: The processes of studying the past and the present in order to forecast the future, and in light of the forecast to determine goals to be achieved, alternative courses of action and the appropriate one.²³

Investigating: Collecting, assembling and evaluating facts with insight into the way they fit together to develop educational programs in agriculture.

Needs: Lack of something necessary or desirable on which educators in agriculture base objectives of their educational programs in agriculture.²⁴

²¹Modified from a definition constructed by F. H. Axinn and S. Thorat in a mimeographed material by the title: The Strategy and Tactics of Extension Program Management (Condensed and abridged tentative version) (East Lansing, Mich.: Cooperative Extension Service, Michigan State University, February 1961), p. 2. (Mimeographed)

²²Modified from a definition constructed by Axinn and Thorat. In Ibid.

²³Modified from a definition constructed by Axinn and Thorat. In Ibid.

²⁴Modified from Funk & Wagnalls Dictionary (New York: Funk & Wagnalls Co., 1959), p. 1659.

Objectives: Long-range goals.

Local Potential: Human and natural resources in the community which have the possibility of development.

Community: Moe's²⁵ definition was found pertinent for the study. "A group of people who have a sense of common identification through their development and/or joint use of some institutions and physical environment." For this study the community is the people of the county.

Launching Educational Programs: To start them or set in operation.²⁶

Action: A process of doing which lasts through some time, involves more than one step and usually implies a single accomplishment, complete in itself.²⁷

Effective: Adapted to produce proper results for a destined purpose.²⁸

Supportive Roles: To act with, to uphold by aid or countenance.²⁹

²⁵Ed. Moe, "Nature of Today's Community" (East Lansing, Michigan: Department of Sociology and Anthropology, Michigan State University, 1961), p. 4 (Mimeographed)

²⁶Modified from Webster's New College Dictionary, 2nd edition (Springfield 2, Mass.: G. C. Merriam & Co., 1953), p. 476.

²⁷Ibid., p. 9.

²⁸Funk & Wagnalls Dictionary, op. cit., p. 791.

²⁹Modified from Webster, op. cit., p. 853.

Share Responsibility: Take a part of it by active participation.

Advisory Councils or Committees: Groups of citizens who voluntarily offer information and aid to county extension agents or teachers of vocational agriculture.

Crediting: Giving recognition.

Teachers of Vocational Agriculture: Persons employed by public school systems to conduct educational programs in agriculture for all day students, young farmers and adult farmers under the specifications and objectives of vocational education acts.

County Extension Agents: Persons employed cooperatively by local governments and the Cooperative Extension Service in the state. Their responsibility is to develop and apply educational programs in a particular subject-matter area³⁰ for the people of the county. For this study the term refers to county extension directors, county extension agents for agriculture, and county extension agents for 4-H club work.

Implementation: Execution of what is planned or putting it into practice.

Personality: Behavioral tendencies of the individual which are consistent for him no matter what the situ-

³⁰N. P. Ralston, "To the staff from the director's desk," Communicator, Vol. 1, No. 22 (East Lansing, Michigan: Cooperative Extension Service, Michigan State University, December 5, 1962), p. 2.

ation is.³¹

Social Characteristics: Those traits which put an individual in a special social communication level such as age, friendship, initiative, and knowledge.

Interorganizational Relationships: Formal or informal reciprocal dealings between Cooperative Extension and vocational agriculture institutions.

Intraorganizational Requirements: Regulations and responsibilities built in and prescribed within the Cooperative Extension Service or within the school system in connection with vocational agricultural programs.

Perceive: Apprehend with the mind the knowledge attained through the senses.³²

³¹Modified from Webster, op. cit., p. 628, and A. P. Hare, Handbook of Small Group Research (Illinois: The Free Press of Glencoe, 1962), p. 9.

³²Modified from Webster, op. cit., p. 623.

CHAPTER II

REVIEW OF LITERATURE

An Historical Perspective

Education in agriculture in rural areas in Michigan, like that in the rest of the U.S.A., has been a major responsibility of both the Cooperative Extension Service and the public schools, authorized by Federal laws: Smith-Lever of 1914 and Smith-Hughes of 1917, respectively.

Provisions of the Smith-Lever Act as they relate to the study are to aid in diffusing useful and practical information on subjects relating to agriculture to persons not attending or resident in land grant colleges, through demonstration, publications, and otherwise.¹ The terms used in this act are broad enough to allow wide interpretations as will be presented a little later. Provisions of the Smith-Hughes Act² also permit similar interpretations as it appears from its title:

An Act to provide for the promotion of vocational education; to provide for cooperation with the

¹Laws relating to Vocational Education and Agricultural Extension Work, Compiled by Gilman G. Udell, (Washington, D.C.: U.S. Government Printing Office, 1962), p. 1.

²Administration of Vocational Education, Rules and Regulations, Bulletin No. 1, General Series No. 1, Revised 1958, United States Department of Health, Education and Welfare, Office of Education (Washington 25, D.C.: U.S. Government Printing Office, 1958), p. 23.

states in the promotion of such education in agriculture and the trades and industries; to provide for cooperation with the states in the preparation of teachers of vocational subjects; and to appropriate money and regulate its expenditure.

Even though vocational education was not defined at the time when the act was passed, yet regarding the use of Federal money,³ the Smith-Hughes Act was more specific in its provisions than the Smith-Lever Act.

As a part of Smith-Hughes Act, vocational education in agriculture has a general controlling purpose: "To fit for useful employment."⁴

The instruction made available under the provisions of this act, as was indicated in section 10:

...shall be of less than college grade and be designed to meet the needs of persons over 14 years of age who have entered upon, or are preparing to enter upon, the work of the farm or farm home.

and the educational experiences in agriculture are to be:

...either on a farm provided for by the school, or other farm, for at least six months per year.

³L. S. Hawkins, C. A. Prosser and J. C. Wright, Development of Vocational Education (Chicago: American Technical Society, 1951), p. 122.

⁴Administration of Vocational Education, Rules and Regulations, op. cit., p. 27.

Looking at the two acts, it is evident that they overlap in their legal provisions.

Lemons⁵ reported that the purposes of the two acts are very similar. The purpose of the Smith-Lever Act is to diffuse useful and practical agricultural information, while the purpose of the Smith-Hughes Act is to promote vocational education in agriculture. As related to this study, Lemons' major points in his analysis are:⁶

1. Hence both acts provide for agencies whose functions are to disseminate agricultural information. These agencies usually operate in the same community.
2. These agencies are not only dealing with the same subject matter, in the same community, but they are also dealing largely with the same people.
3. The Smith-Hughes provisions are for education of less than college grade, and designed to meet the need of persons over 14 years of age, while the Smith-Lever provisions do not limit the grade of instruction or age of those to be instructed.
4. As a result of the lack of definite specifications, adult farmer education has been developed under the Smith-Hughes program to the extent that in many states, it is an expected part of each vocational agriculture teacher's program of work.
5. As provided for under the Smith-Hughes Act, the instruction is to be systematic, while

⁵J. R. Lemons, A Study of the Working Relationships of the Agricultural Extension Service and the Vocational Agriculture Program in East Tennessee (Unpublished Master's Thesis, University of Tennessee, Knoxville, Tennessee, 1958), p. 20.

⁶Ibid., pp. 17-23.

under the Smith-Lever Act, the instruction is to be in the nature of practical demonstration or 'otherwise.' The teacher of vocational agriculture may need to use practical demonstration to amplify his organized classroom instruction, while the agricultural extension worker under the term 'otherwise' could very well include systematic instruction.

6. Smith-Hughes Act provides that agricultural instruction be given through the public school system, and that 'such schools shall provide for directed or supervised practice in agriculture.' This has led to project work, or productive enterprise carried out on the home farm. This necessitates visits, supervision, instruction, and often practical demonstration at the home farm by the teacher of vocational agriculture if the projects are to be effectively and efficiently carried out. The Smith-Lever workers, in the organization of their agricultural 4-H clubs, have projects which are very similar to the vocational agriculture program. They, too, call for an on-the-farm supervision. Hence conflicts and overlappings may easily occur in project work.

Hammonds⁷ wrote that teaching agriculture in the American High School started with its birth in 1821 and gradually grew until 1900 when a decided movement developed for teaching agriculture. He stated that home projects have been used in teaching agriculture since 1908. At that time legislation was before Congress which would authorize Federal funds for agricultural education. But difficulties delayed passing the legislation.

⁷C. Hammonds, Teaching Agriculture (New York: McGraw Hill, 1950), Chapter 14, pp. 304-315.

So in 1914, a part of the provisions of this legislation was split off and passed as the Smith-Lever Act, which provided funds for Agricultural Extension. In 1917 the remaining provisions were included in the Smith-Hughes Act for the teaching of vocational agriculture in public schools below college level. Both laws provide for the matching of Federal funds by the states and local units. Students of agricultural education should know that Senator Smith was senior author of both acts. Both acts were supported by about the same people, passed by the sessions of Congress having about the same personnel, and signed by the same President. The two acts were intended to supplement each other.⁸

Hammonds also emphasized that to avoid duplication of efforts and to promote good relationships between workers in both fields of work, clarity on certain differences in the two programs as well as on the differences in administration should be always recognized. Because of the overlap in legal provisions and some of the non-specificity in the acts some misunderstanding between workers in both fields may be expected.

Lemons⁹ stated that just one year after the Smith-Hughes Act was passed, representatives of both agencies got together and formed an agreement in an attempt to determine the relationships that should exist between the two agencies.

Stimson and Lathrop¹⁰ reported and discussed the

⁸ Ibid., p. 307.

⁹ Lemons, op. cit., p. 69.

¹⁰ R. W. Stimson and F. W. Lathrop, History of Agricultural Education of Less than College Grade in the United

relationship between the activities carried on by those engaged in vocational education in agriculture and those engaged in agricultural extension work since 1918. They indicated that a joint committee on relationships consisting largely of state directors of vocational education and state directors of agricultural extension helped to clarify vocational agriculture and extension activities during most of the period.

Through the years representatives of the Washington office of both agencies have met frequently. Usually also, state directors of vocational education and of agricultural extension have met annually in the endeavor to develop a more complete understanding between the two groups and to make plans for their cooperation.

As a result of the efforts made by vocational agriculture and agricultural extension agencies to reach a common understanding in regard to their respective activities the following memoranda have been issued from time to time:

A memorandum, dated February 21, 1918 (Misc. 36); Report of Joint Committees on Relationships Between Extension and Vocational Education Forces in the Various States, dated May 9-10, 1921 (Misc. 522); Memoranda of Understanding Relative to Smith-Hughes and Smith-Lever Relationships in Agriculture, dated December 20, 1928; Memoranda of Meeting of Joint Committee on Relationships, Representing the Committee on Agricultural Extension Organization and policy and the Association of State Directors of Vocational Education dated April 21, 1931; and a Special Memorandum to Directors

States, Vocational Division Bulletin No. 217, Agricultural Series No. 55, Reprint, 1954, United States Department of Health, Education and Welfare, Office of Education (Washington, D.C.: U.S. Govt. Press, 1954), pp. 618-620.

of Extension Work Regarding Cooperation of Vocational Teachers with Extension in Agricultural Adjustment Administration Production Control Work, dated January 5, 1934.

On September 29, 1938, the Joint Committee on Relationships Between Extension and Vocational Education Forces approved that the 1928 Memorandum of understanding remain effective until a report on their meeting was completed and released for guidance of workers in both fields.¹¹

Lemons reported in his study that Rogers¹² conducted a survey of memoranda of understanding issued between Cooperative Extension in agriculture and State Departments of vocational education, Division of vocational agriculture to study the nature of these memoranda. He contacted directors of Extension Service in each state by mail to obtain copies of the memoranda if there was any available. He was able to obtain seventeen memoranda. In reviewing them, the following was reported:

1. Fourteen out of seventeen states were in agreement that separate projects be carried out by members belonging to both programs. Two states stated that the decision should be left up to the boy and his parents.

¹¹Ibid., p. 619.

¹²A. N. Rogers, The Extent and Nature of Memorandums of Understandings Between State Departments of Education and the State Agricultural Cooperative Extension Service Regarding Their Agricultural and Youth Activities. (Mimeographed Summary of Unpublished Seminar Report). Quoting, Lemons, op. cit., p. 14.

2. In regard to activities conducted jointly by the 4-H club and FFA, twelve states felt that exhibits, fairs, and shows participated in by boys and girls enrolled in vocational agriculture and 4-H club work would be separate. Two states felt that exhibits, fairs, and shows should be held jointly.
3. Concerning the Question of whether or not to belong to both the 4-H club and the FFA, six states felt that eligible youths could be members of both a 4-H club and FFA chapter or of either group. Five states felt that every effort possible to prevent duplication of membership should be exercised.

All these memoranda were designed to clarify the differences, overlap, and the non-specificity of legal provisions of the acts and to encourage harmonious working relationships for the welfare of the people.

Hamlin¹³ wrote:

Because we have no coordination of national legislation affecting education, we have a dual system of nationally aided agricultural education, one part of it conducted through the public schools and one part conducted outside them through the extension services of the land-grant universities.

But regardless of the overlap in legal provisions, the non-specificity in the acts and some of the resulting misunderstandings, there were evidences of effective working relationships between workers of both fields all along.

¹³H. M. Hamlin, Public School Education in Agriculture, A Guide to Policy and Policy Making (Danville, Illinois: The Interstate Printing Company, 1962), pp. 27-28.

Stimson and Lathrop,¹⁴ through their study of the history of agricultural education in the United States, reported several examples of relationships between vocational agriculture and agricultural extension. Their study indicated that, in many communities, relationships of teachers and county agents have become close and effective. They met periodically and worked together in county planning, exhibits, fairs, and livestock shows. In many instances, county agents participated in part-time and evening schools and teachers participated in meetings called by county agents.

The teamwork trend between the two professional groups has been primarily qualitative rather than quantitative.¹⁵ Teachers have engaged in activities for which they were fitted and which strengthened their programs. The activities with which agents cooperated were similar.

Of the many examples of cooperation reported by Stimson and Lathrop, the following are briefed:

In 1932-33, in Salt River, Gila, and Yuma Valleys in Arizona,¹⁶ teachers of vocational agriculture assisted the Agricultural Extension Service with the cotton acreage control program.

¹⁴Stimson and Lathrop, op. cit., pp. 619-620.

¹⁵Ibid., p. 620.

¹⁶Ibid., p. 25.

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In Arkansas¹⁷ in 1934, teachers participated in farm meetings for discussing farm enterprises.

In California,¹⁸ teachers assisted in organizing and supervising 4-H club work and were paid by extension funds prior to 1925-26.

In the state of Kentucky,¹⁹ representatives of the State agricultural extension service have cooperated in supplying extension specialists to help teachers of vocational agriculture with their evening and all-day classes. They also helped in supplying teachers with free subject-matter bulletins and circulars.

Working relationships between vocational agriculture and 4-H club work in Kentucky was set forth in a series of ten articles. The closing paragraph of those articles is as follows:²⁰

Cooperation and mutual help should be the watchword in all vocational agriculture and home economics and 4-H club relationships. This means that representatives of each branch of work will

¹⁷ Ibid., p. 31.

¹⁸ Ibid., p. 42.

¹⁹ Ibid., p. 158.

²⁰ Carsie, Hammonds and L. J. Horlacher, History of Agricultural Education in Kentucky, 1892-1940. Combined State Education Department and College of Agriculture Story. An unpublished manuscript, 48 pages, prepared by authority of R. H. Woods, Director of Vocational Education, and President Frank L. McVey, University of Kentucky. Quoting, Ibid., p. 158.

go beyond the letter of the law to be helpful and cooperative. Both these lines of work are intended for the benefit of all the farm boys and girls. The representatives of each group --vocational teachers and county extension agents--should lose no opportunity to promote in all practical ways, the work of the other. With this spirit animating both forces, good feeling will prevail and will result in the maximum accomplished in both lines of work.

In 1937, the Louisiana²¹ Farm Council was established. Membership of the Council consisted of various agricultural agencies, including the Cooperative Extension Service and personnel from the vocational teaching force.

In 1916-1917:

An arrangement was made between the local school boards and the extension division of the Maryland State College of Agriculture whereby they jointly paid the salaries of agricultural teachers who assisted in developing 4-H club work.²²

Teamwork between Extension Service and vocational agriculture started in Massachusetts²³ in September, 1926. Supportive roles have taken place under no formal memorandum of agreement. As new problems have been met, cooperative agreements have been adopted. On county levels, county

²¹Stimson and Lathrop, op. cit., p. 164.

²²H. F. Cotterman, Paul R. Poffenberger, and Arthur M. Ahalt, A combined manuscript, 22 pages, prepared by authority of President H. C. Byrd, University of Maryland, and Albert S. Cook, State Superintendent of Schools. Quoting Ibid., p. 174.

²³Stimson and Lathrop, op. cit., p. 206.

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extension agents and teachers of vocational agriculture worked very closely to overcome problems aroused during the depression years.

In Michigan²⁴ programs of education in agriculture were strengthened by harmonious working relationships between the agricultural extension service of Michigan State College and the vocational agriculture force. "Conferences, consultation, and both formal and informal meetings have served to bring these desirable working relationships into effect."

In Montana,²⁵ there has been good teamwork between agricultural education and agricultural extension. The extension specialists have assisted the vocational agriculture teachers, and the teachers have helped the extension service at meetings, carrying on demonstrations and with the entire program.

In New Jersey,²⁶ cooperation between county agents and teachers of vocational agriculture has always been "excellent."

In New York,²⁷ Stimson and Lathrop reported:

When the Smith-Lever Act was passed by Congress

²⁴Ibid., p. 230.

²⁵Ibid., p. 273.

²⁶Ibid., p. 309.

²⁷Ibid., p. 343.

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in 1914 and the extension service was established at New York State College of Agriculture, considerable experience had already been gained in the teaching of agriculture in the elementary, secondary, and special schools of agriculture in the state. It soon became apparent to those responsible for the extension service at the college of agriculture and those responsible for the administration of instruction in agriculture in the public schools that every effort should be made to clarify the function and purpose of the two types of instructional service in order to avoid duplication of effort and also to avoid confusion in the minds of the general public. To facilitate such an understanding, a memorandum of agreement between the State College of Agriculture and the State Department of Education was prepared and officially signed in June 1923 and a revised memorandum in July 1926. These memoranda were in general conformity to the recommendations prepared by committees from the Land-Grant College Association, the officials of the Extension Service, United States Department of Agriculture, the American Vocational Association, and the United States Office of Education. For nearly 20 years careful planning has been undertaken to carry forward both the spirit and the letter of the suggestions of the national agencies and committees and the agreements of the State memoranda.

Whenever cases of misunderstanding have arisen in communities or in counties every effort has been made on the part of officials at the college of agriculture and the state department of education to make the necessary adjustment in order to achieve the primary purpose of making available to our farm youth the richest possible educational program.

In Ohio ²⁸ counties and local community county agricultural agents and teachers of vocational agriculture have worked together in a common program with a common purpose.

²⁸Ibid., pp. 368-369.

Each cooperates in the work of the other, the identity of each agency being preserved in practically all instances.

One of the major purposes of 4-H club work, which is a part of the agricultural extension program, is to encourage local volunteer leadership. It has been the policy, therefore, for vocational agriculture to assist in securing and developing such volunteer leadership rather than to take the leadership of 4-H clubs personally. Many vocational agriculture students in Ohio have acted as 4-H club leaders.

Probably the best arrangement to secure cooperation between the vocational agricultural division and the agricultural extension service is to have the county agricultural extension agents and the vocational agriculture teachers of the county meet in joint sessions annually and prepare a detailed written program of work which would prevent overlapping and misdirected effort.

For many years in the state of Utah²⁹ teachers and agents have met once or twice a year in their counties and outlined cooperative programs in community service.

In the majority of districts the agricultural teacher is a member of the county planning board of which the county agricultural agent is secretary. Ordinarily the agricultural teacher is chairman of a sub-committee having to do with livestock feeding, marketing, farmstead improvements, and the like.

Theories and Studies Related to Activities of Working Relationships

From the historical look and the objectives of the

²⁹Ibid., p. 442.

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Cooperative Extension Service and vocational agriculture as well as the developments that happened it would seem that these agencies have much in common. In both services memoranda and agreements may be executed by state leaders. The implementation of close working relationships, however, often rests upon the decision of each agent or teacher on the basis of his own initiative when he sees it desirable for the effectiveness of his program. If this is true, then the frame in which they maintain working relationships should be known and considered.

Elbing's³⁰ model for viewing decision making in interaction situations from an historical perspective is considered appropriate in interaction situations between the two groups.

The model helps to illustrate the important variables which shape the interaction between "our" two professional groups. Elbing enunciated some criteria for constructing the model. They are briefed as follows:³¹

1. It should convey the present situation to the

³⁰A. O. Elbing, Jr., "A Model for Viewing Decision Making in Interaction Situations from an Historical Perspective," Business Review (Seattle, Washington: College of Business Administration, University of Washington, 1961), p. 38.

³¹Ibid., pp. 40-41.

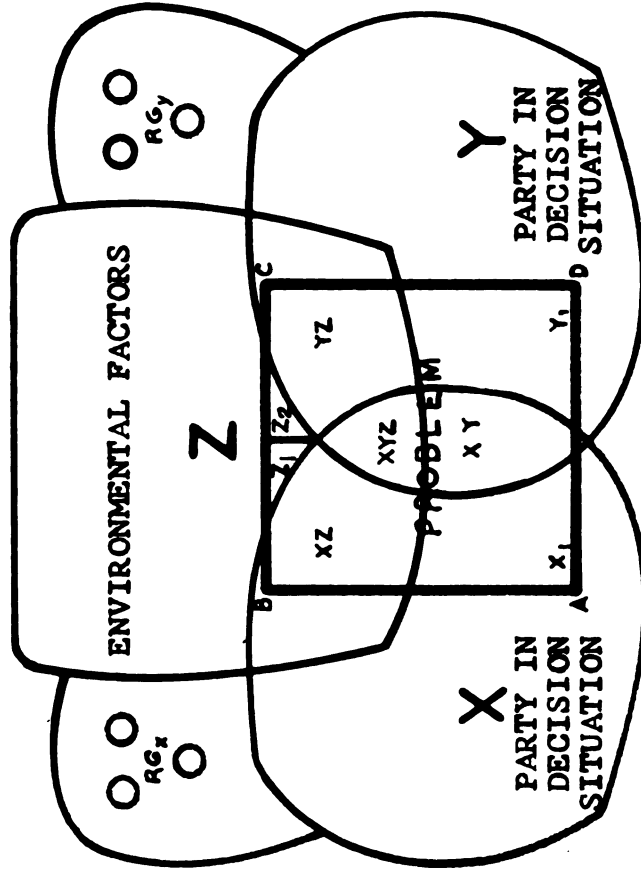
historical vantage and insight of the present analyst.

2. It also conveys the separate vantage points of the two groups in the interaction situation.
3. The model includes factors which are not seen by both interacting groups but play a part in the situation such as some of the unknown environmental factors.

As shown in Figure 1, the model represents two interacting groups X and Y overlapping somewhat in the area of the problem shown as the square ABCD. The two interacting groups supposedly differ in their frame of reference and they partially overlap in a part of the problem area. Hypothetically the two groups differ in their perception of alternatives of what is "socially acceptable" because of human limitations. Groups involved are not able to perceive the same in the time of interaction because of "historical, vocational and psychological vantage." Area Z represents "all social, political, and economical conditions" existing at the time of analyzing the interaction situation. RG_x and RG_y in the model represent "reference groups" to which individuals of the two groups refer. These "reference groups" along with the norms of the individuals shape their own decision.

The author of the model indicated that its value is "that of an analytical tool to assist in focusing on sig-

Figure 1
A MODEL FOR VIEWING DECISION MAKING IN INTERACTION
SITUATIONS FROM AN HISTORICAL PERSPECTIVE*



xz	Alternatives perceived by X and acceptable in the existing environment	z1	Socially acceptable alternatives not perceived by the parties in the situation
yz	Alternatives perceived by Y and acceptable in the existing environment	z2	Alternatives not perceivable at that time
xy	Alternatives perceived by both X and Y but not acceptable in the environment	xyz	Alternatives perceived by both parties and acceptable in the environment
x1, y1	Alternatives preceived by one party but not acceptable in the environment	RGx	Reference groups for party X
		RGy	Reference groups for party Y

*By permission from the University of Washington Business Review, Vol. XX, No. 5, June 1961, p. 42.

nificant factors in an interaction situation." It also "differentiates individual frames of reference from any absolute conception of the problem."

As related to Elbing's theory, working relationships between county extension agents and teachers of vocational agriculture would be illustrated as follows:

X and Y would be the two professional groups

ABCD would be "the problem" which is maintaining effective educational programs in agriculture

RG_x and RG_y would be the two organizations of the two professional groups

Z is the social, political, and economical conditions in the county

Alternatives perceived and non-perceived by both groups are the same as shown in the model.

Thus, the model can be a help, focusing the attention on variables of the situation under consideration, which might affect decisions of the two groups in carrying out certain cooperative activities.

However, as soon as we profile the frames of reference as structuring and limiting the relative importance of teachers and agents working together for increasing the effectiveness of their educational programs in agriculture, factors of "historical relativity enter into the concept."³²

³²Elbing, op. cit., p. 49.

It should be known that the frame of reference to their working relationships at this time of increasing challenges is circumscribed by this period with no further extension beyond it. Yet this frame of reference continues to be a base of further historical analysis in the future of their working relationships.

Therefore, in studying working relationships of county extension agents and teachers of vocational agriculture, the history of these working relationships has to be reviewed and considered as well as theories of functional factors affecting their environmental relationships.

Historical perspective has been presented, but before we continue with theories of functional factors just mentioned we ought to discuss the content of these working relationships.

Not very many related studies have been conducted concerning the content of working relationship activities between county extension agents and teachers of vocational agriculture.

Horn³³ found in his study in 1939 that 100% of the county extension agents and the teachers of vocational agri-

³³T. J. Horn, "A Study of the Activities and Inter-relationships between the Departments of Vocational Agriculture and the Agricultural Extension Agents in Ohio," Non-Thesis Study, 1939, Ohio State University, Columbus, Summaries of Studies in Agricultural Education, Sup. No. 1 to Vo-Ed. Bulletin, No. 180, (Danville, Illinois: The Interstate Printers & Publishers, 19-23 N. Jackson Street, 1943), p. 81.

culture who responded to his questionnaire in Ohio conducted joint programs of activities and inter-relationships. Teachers of vocational agriculture, subjects of the study, reported 148 joint activities and inter-relationships.

Rutherford³⁴ reported in his study that cooperation between the Smith-Hughes agricultural program and the Agricultural Extension Service should be on an equal basis. The study recommended an agreement to be drawn between the two agencies to clearly define the functions and to provide a definite plan of cooperation and action.

Lemons³⁵ specified the content of working relationships of county extension agents and teachers of vocational agriculture in the state of Tennessee in his study's recommendations. They are briefed as follows:

1. Organization of a county agricultural council for planning and coordinating education in agriculture in the county through:
 - a. Increasing joint activities between agencies concerned.
 - b. Preventing undesirable duplication of efforts.

³⁴D. M. Rutherford, "An Analysis of the Relationships Existing Between the Smith-Hughes Agricultural Program and the Agricultural Extension Service," Thesis, M.A., 1939, University of California, Berkeley, Summaries of Studies in Agricultural Education, Sup. No. 1 to Vo-Ed. Bulletin No. 180 (Danville, Illinois: The Interstate Printers & Publishers, 19-23 North Jackson Street, 1943), p. 126.

³⁵Lemons, op. cit., pp. 76-78.

- c. Having the welfare of the people in mind rather than gaining personal recognition.
 - d. Informing public on cooperative activities.
 - e. Striving to maintain cooperative working relationships.
2. The same coordination needs to be followed by higher levels.

Working relationships of county extension agents and teachers of vocational agriculture seem desirable not only because of the similarities of programs or because they may deal with the same people, but also because program planning principles in vocational agriculture and cooperative extension are very similar if not the same.

Boyle³⁶ found that eleven professional categories of program planning of adult programs are considered in vocational agriculture and Cooperative Extension. The categories considered are:

- 1. Overall objectives of the agency.
- 2. Educational needs of the potential program participants.
- 3. Interests of the entire community.

³⁶P. G. Boyle, "An Analysis of Selected Program Planning Principles of The Adult Programs of Vocational Agriculture and Cooperative Extension," Thesis (Ph.D.), University of Wisconsin, 1958, Review of Extension Research, 1958, M.S.D.A., Extension Service Circular 521, July 1959, p. 40.

4. A wide range of resources.
5. The planning group includes local citizens who are potential participants in the program.
6. Democratic processes are used wherever possible in planning the program.
7. Various methods which might be used in reaching the objectives are explored in the planning.
8. The program planning process is continuous.
9. The program process is flexible.
10. Provisions are made for appraisal and/or evaluation of the program.
11. The planning group coordinates its activities with those of other adult educational agencies.

Cooperative relationships with related agencies became essential for the development of effective adult education in vocational agriculture.

Shroeder³⁷ found that the criterion of "cooperation" with other agricultural and educational groups and agencies rated among the highest in value of all criteria tested in evaluating local programs of adult education in vocational agriculture.

Also in administration and policy of adult-farmer courses Byram, Kitts and Phipps³⁸ found that 80.1% of

³⁷W. P. Schroeder, An Analysis of Practices Used in Evaluating Local Programs of Adult Education in Vocational Agriculture (Unpublished Ph. D. Dissertation, Mich. State University, East Lansing, Mich., 1953), pp. 215-217.

³⁸H. M. Byram, H. W. Kitts and L. J. Phipps, Organizing, Conducting, and Evaluating Adult-Farmer Courses in the Cen-

teachers of vocational agriculture, who participated in their study from the Central Region, have coordinated meetings and courses with the educational programs of other agricultural education agencies. They also found that 49.8% used other agricultural education agencies as consultants in planning the content of their courses.

Cooperative relationships with related agencies became essential for program development in Extension as well.

In analyzing selected principles related to the program planning process in Cooperative Extension Service, Williams³⁹ found that an important principle is to provide for the coordination of educational efforts, activities, and resources of interested leaders, organizations and agencies.

Along the same line, Powers⁴⁰ found that in an Iowa County, nine criteria were met in the extension planning process. One of them is "coordination with the programs of other groups, organizations and agencies that work in the same or related problem areas." There is no doubt that

tral Region, Bureau of Research and Service (East Lansing, Mich.: College of Education, M.S.U., 1955), pp. 12 and 18.

³⁹C. G. Williams, "An Analysis of Selected Principles Related to the Program Planning Process in the Cooperative Extension Service," Madison, University of Wisconsin, 1959, Review of Extension Research, 1960, U.S.D.A., Extension Service Circular 534, July 1961, p. 34.

⁴⁰R. C. Powers, Degrees to Which an Iowa County's Extension Program Planning Process Met Selected Criteria (Unpublished Master's Thesis, Iowa State University; Ames, Iowa, 1961), p. 148.

departments of vocational agriculture are among these agencies.

In another study of an overall look at relationships between the County Extension Service and other organizations, Alexander⁴¹ found that for improving rural out-of-school education through existing organizations, the organizations need to be more familiar with each other and to exploit the special features of each other.

On the basis of this discussion, there seems to be general agreement on the desirability of carrying out certain professional activities in the working relationships of county extension agents and teachers of vocational agriculture. On the other hand, there seem to be insufficient working relationships or coordination of educational programs in agriculture.

"Competition for clients' leisure hour is more characteristic of the local scene than cooperation in the development of a well-rounded total program consistent with the ideal of an educative community."⁴² The reason of this case will be discussed in the following section of this chapter.

⁴¹F. D. Alexander, Rural Communities, Organized Groups and Public Agencies in Alcona County, Mississippi, in Relation to Community Development, Particularly Educational Programs Through Rural Community Clubs, Mississippi State College, 1955, Review of Extension Research, 1957, U.S.D.A. Extension Service Circular, 518, July 1958, pp. 30-31.

⁴²P. H. Sheats, "Present Trends and Future Strategies in Adult Education," Handbook of Adult Education in the U.S., Malcolm S. Knowles (ed.) (Chicago 11, Illinois: Adult Education Association of the U.S.A., 743 North Wabash Avenue, 1960), Chapter 47, p. 557.

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Theories and Studies Related To Functional Factors Affecting Working Relationships

An attempt will be made to point out the significance of factors involved in working relationships rather than to make a complete sociological analysis of them.

Working relationships of county extension agents and teachers of vocational agriculture are largely matters of their own decisions on the basis of their own initiative to carry out cooperatively certain professional activities for the effectiveness of their educational programs. Considered in this light, working relationships are likely therefore to be affected by functional factors related to personality, general characteristics, education and training and experience of both professional groups. Interorganizational relationships and the intraorganizational set-up of both the Cooperative Extension Service and vocational agriculture as well as the perception of importance of their working relationships should also affect intensity and/or direction of the activities involved.

Elbing's model focused the attention on the areas of variables that might affect decisions of the two groups concerning the problem. Getzel's⁴³ theory looks at these variables from an individual point of view. It emphasizes that a given act of an individual is simultaneously derived from

⁴³Jacob W. Getzels, "Administration as a Social Process," Quoting D. E. Griffith, Administrative Theory (New York: Appleton-Century-Crofts, Inc., 1959), pp. 54-55.

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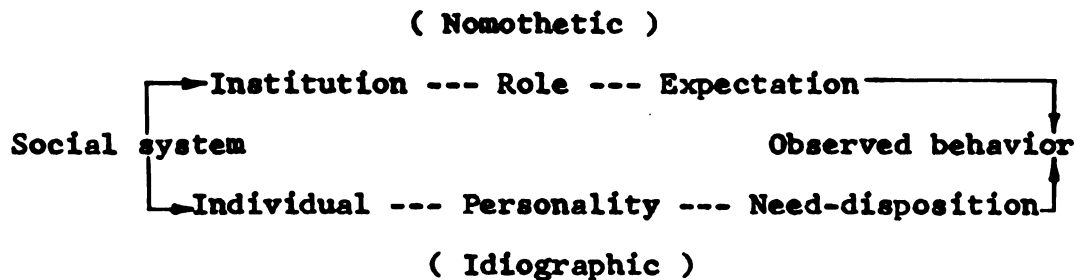
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two levels of interaction in any social system, the nomothetic and the idiographic. The nomothetic consists of institution, role, and expectation and the idiographic consists of the individual, his personality, and his need-disposition. A general formula of the relationship between the nomothetic dimension and the idiographic dimension is $B = f(R \times P)$, where B is the observed behavior of the individual, R is his institutional role and P is his personality. The model is:⁴⁴



From this theory an inference could be drawn; that a teacher of vocational agriculture and a county extension agent should exhibit in their working relationships an observed behavior which is an outcome of the interacting factors of their institutional roles and their personalities.

Hare⁴⁵ supports this in a broader sense. He sees that a social interaction can be viewed as a compromise between inputs of man's biological nature and personality on

⁴⁴Ibid., p. 157.

⁴⁵A. P. Hare, Handbook of Small Group Research (Illinois: The Free Press of Glencoe, 1962), p. 8.

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the one hand, and role, culture and environment on the other hand. Dimensions of interaction can be divided into two phases: form and content.⁴⁶ The form is represented by the communication network and the interaction rate. The content is represented by the task behavior and the social emotional behavior. In the interaction process concerning the content area, the actual behavior would be some place between the personality and the role.⁴⁷

Realizing the fact that working relationships of county extension agents and teachers of vocational agriculture is a voluntary type of interaction with no specific legality, it was seen necessary to discover (find out) how formal and informal structure of their "role-positions" affect their working relationships. Hare pointed out the usefulness of differentiating between the "formal role structure" and the "informal role structure" to enable one to assume expectations of behavior of a particular type.⁴⁸

The formal roles of both systems of the Cooperative Extension Service and vocational agriculture are more visible since they are often recorded in codes of their positions. The informal roles as the "assumptions" or the non-specified "expectations" are the scapegoats of the formal structure.

⁴⁶Ibid., p. 11.

⁴⁷Ibid., p. 16.

⁴⁸Ibid., p. 18.

Wide variations in perceiving informal role structures are predominantly expected. But regardless of whether working relationships between teachers of vocational agriculture are prescribed formally or informally, these working relationships exist and their importance is recognized and praised.

The question is: what kind of functional factors shape and direct working relationships one way or the other. Expectations may be "other directed"⁴⁹ through peers or organizational conformity or they may be "inner directed" through oneself. Conformity pressures within the organization and outside it play quite a part in individual behavior building the attitudes which he perceives and which remain with him for a while.

Social characteristics of a person such as his friendship and initiative are basic qualities for effective interaction. Solving problems between close friends was found more efficient than between strangers.⁵⁰

Friendship between county extension agents and teachers of vocational agriculture should increase the effectiveness of their interaction and homogenize their behavioral patterns which might have favorable bearing on their pro-

⁴⁹D. Reisman, The Lonely Crowd (Garden City, New York: Doubleday Anchor Books, Doubleday & Co., Inc., 1955), p. 48.

⁵⁰R. W. Husband, "Cooperative versus Solitary Problem Solution," Journal of Soc. Psychology, 1940, pp. 405-409.

ductivity.⁵¹

Previous experience in the role of an educator of agriculture influences his ability to play that role. The effects of training in education and in agriculture can be a base of predicting future behavior on the job. Many studies have pointed out the effect of training and preparation on the performance of the job.

Moe⁵² indicated that a change has been brought about in one of the major national voluntary organizations by developing strong training programs directed toward a major objective stated in this manner: "to help people become better human beings rather than cogs in an organizational machine."⁵³

Another important area of functional factors is the role of the position occupied. One segment of it is "role collision." In this case it is used to indicate the type of conflict which may occur if two individuals are carrying out jobs which overlap in some respect. Hare⁵⁴ explained the role of two doctors who were called to treat the same patient. "Each is expected to prescribe treatment for the

⁵¹A. J. Philip, "Strangers and Friends as Competitors and Cooperatives," J. Genet. Psychol., 1940, 57, 249-258.

⁵²E. O. Moe, Some Alternatives to Organization Man, A paper presented at University of Illinois Faculty Forum, Champaign, Illinois, 1959, pp. 13-14.

⁵³Ibid., p. 14.

⁵⁴Hare, op. cit., p. 119.

patient, but unless the doctors coordinate their behavior the patient's wounds may be bound up one day and left open the next, depending upon which of the doctors last visited the ward."⁵⁵

Using Hare's idea as an illustration the patient would be the farmer or the prospective farmer and the two "doctors" are the county extension agent and the teacher of vocational agriculture. Unless they coordinate their educational efforts, their clientele will be the victims.

"Role incompatibility" of each position of the two professional groups may arise from the difficulty of satisfying the expectations of the position within a system.⁵⁶ Teachers of vocational agriculture may find it difficult to perform all that is required to be done in the school and at the same time work with related agencies outside the school. In a similar way this can be true in the case of the county agents fulfilling their intraorganizational requirements. It may be especially true if they also disagree regarding their role definition or nature of their roles.⁵⁷

⁵⁵Hare, op. cit., quote from p. 119.

⁵⁶M. Seeman, "Role Conflict and Ambivalence in Leadership," Amer. Soc. Rev., 1953, 18, pp. 373-380.

⁵⁷Ibid., p. 373-380.

Theories and Studies Related to Cooperation and Coordination

An implicit purpose of the present study is to foster cooperation between teachers of vocational agriculture and county extension agents for the effectiveness of educational programs in agriculture. Theories of cooperation and competition are as old as history. As related to this study productivity and efficiency are aspects which are aspired from cooperation between the two professional groups.

May and Doob⁵⁸ found that in groups motivated to cooperate, members work toward the goal dependent on their interdependent activities.

Shaw⁵⁹ also found that cooperative efforts increase efficiency and productivity of people engaged in cooperative activities.

There might be no question about cooperation in its general meaning but there might be a question in the case pointed out by Hare. He noted that cooperation will be minimal "if the task does not lend itself to a division of labor or if rewards for the individual for cooperating are less than for competing."⁶⁰ This is a very important point

⁵⁸M. A. May and L. W. Doob, "Competition and Cooperation," Soc. Sci., Res. Council Bull., 1937, No. 25, In Hare, op. cit., p. 254.

⁵⁹M. E. Shaw, "Some Motivational Factors in Cooperation and Competition," J. Pers., 1958, 26, pp. 155-169.

⁶⁰Hare, op. cit., p. 255.

to consider especially in this period of "role transition" of both Cooperative Extension Service and vocational education in agriculture.

Homans⁶¹ crowned the division of labor theory by his remark that the division of labor should not reach the point of diminishing returns. This implies a scheme of interaction by which the different divided activities are coordinated.

Before closing this chapter, it is appropriate to add that the theory of cooperation has rarely been questioned; but in order to achieve increasing cooperation between county extension agents and teachers of agriculture on their county and community levels, it is necessary to be realistic and to understand with an "open mind" conditions which affect change in the community. In this respect Moe reported that:⁶²

1. Communication of feelings and ideas among people in different groups and organizations is difficult and relatively infrequent. As a result serious misunderstandings among people continue and others are allowed to develop.
2. There is no adequate mechanism at present in the structure of the community for settlement of intergroup differences or

⁶¹G. C. Homans, The Human Group (New York: Harcourt, Brace & Company, 1950), p. 101.

⁶²E. O. Moe, "Consulting with a Community System: A Case Study," The Journal of Social Issues, Vol. XV, No. 2, pp. 32-33.

achievement of understanding among members of different groups. The community has no way through which policies and programs affecting the whole community can be integrated.

3. Members of the several groups and sub-cultures represented in the community know little about the control systems of other groups, and frequently make unrealistic demands on members of other groups.
4. Few groups follow action evaluation or an experimental methodology in meeting their problems. Too frequently problems are pre-defined to fit special categories or stereotypes.
5. The objectives, programs, and activities of various groups are interpreted by members of the groups as "mutually threatening." This arises because groups are unable to distinguish problem-solving from their own process problems, that is, maintaining membership and keeping their organization going.
6. Leaders and members of organizations and groups do not see or understand each other realistically. The difference in group or member roles are defined by members, and these attributed by members of other groups are great enough to seriously impede effective cooperation.
7. The advantages of cooperation none the less are generally recognized. Facilities are lacking, however, to implement this recognition.

Summary

The U.S.A. has a dual system of nationally aided education in agriculture. One part of the system is conducted through public schools and the other is conducted through the Extension Service.

Through the history of the two systems, functional overlapping and misunderstanding have been evident. On the other hand, there have been good examples of cooperation and coordination between the two systems.

State and national leaders of both systems, in many instances, encourage close working relationships realizing the importance of cooperation for the effectiveness of educational programs in agriculture at the local levels.

The theories and literature reviewed clarified what might be elements of working relationships of county extension agents and teachers of vocational agriculture.

Increasing cooperation between the two groups is unquestionable, but it is necessary to be realistic, knowledgeable of the situation, patient, and open-minded.

CHAPTER III

STUDY PROCEDURES

This chapter is concerned with the description of the systematic steps carried out in conducting the study.

The planning stage:

The present writer, through his previous educational experience in the field of agriculture, became aware of the value of such a study. It was kept in mind that the study should:

1. Contribute to the development of effective educational programs in agriculture for local communities in Michigan by adding to knowledge of present working relationships between county extension agents and teachers of vocational agriculture as well as to knowledge of the desirability of carrying out certain activities in their working relationships.
2. Help in wise planning of educational programs in agriculture through identification of the factors involved and their effect on working relationships.
3. Help in preparation of pre-service as well as in-service cooperative training projects for county extension agents and teachers of vocational agriculture.

Instrument Preparation:

To accomplish the objectives of the study, it was necessary to review the history of the Cooperative Extension Service; the history of vocational education, especially its phase in agriculture, and theories and studies pertaining to general interaction, decision-making, roles of county extension agents and teachers of vocational agriculture. Several texts, articles in magazines, periodicals and publications of the Cooperative Extension Service and of vocational agriculture, U.S. Government publications and reports related to the study were also reviewed.

A survey checklist of about forty major cooperative activities and thirty-five possible factors which might affect working relationships was constructed. Two forms were prepared having the same items, one with directions to county extension agents and the second with directions to teachers of vocational agriculture.

The survey checklist was prepared and presented for consultation to state leaders of vocational agriculture, the agricultural education staff at Michigan State University, and Cooperative Extension leaders and administrative team. The presentation of the survey checklist to the leaders was made by personal interviews, using the survey checklist as the basis for consultation. Consultants were asked to evaluate the survey checklist in terms of its clarity to respondents, briefness and completeness of items. They were

asked to delete those items which they believed had repetition in meaning or insignificance in direction. The survey checklist was presented to the Guidance Committee for further suggestions and revision. Items of the checklist were revised in line with the suggestions received.

A pre-final draft was duplicated and tested by four county agents and four teachers of vocational agriculture who had been in service for more than one year. They were asked to add what they believed were necessary items, to mark for deletion items of insignificance, and to mark for unclarity specific items or directions. Taking into consideration the comments, remarks, and suggestions of the consultants, the final survey checklist was prepared to include three phases. Phase I contained four items of information about the respondent. Phase II contained thirty activities of working relationships. Phase III contained thirty-three factors which might be involved and might affect working relationships of the county agents and teachers of vocational agriculture.¹

Rating:

Items of Phase II were designed to be rated in two different ways.

The first had a five point range which measured both the direction and intensity of carrying out the activities

¹See the checklist forms in Appendix (B).

in working relationships. To make it easy for the respondents to follow the rating pattern, arbitrary values were assigned as follows: 0 never, 2 occasionally, 3 frequently, and 4 always.

The second rating has another five point range which allowed the measurement of both the direction and intensity of the desirability of carrying out working relationship activities. For ease of scoring the following arbitrary values were assigned: -2 very undesirable, -1 undesirable, 0 neither desirable nor undesirable, 1 desirable, and 2 very desirable.

Items of Phase III were designed to be rated from two different standpoints.

The first had a five point range which measured the direction and intensity of the factors involved in working relationships. Arbitrary values were assigned for ease of scoring as follows: 0 is not involved, 1 very little involved, 2 some involved, 3 much involved, and 4 very much involved.

The second rating had a five point range which allowed the measurement of factors for promoting and for hampering effective educational programs in agriculture. Arbitrary values were assigned to the perceived degree for ease of scoring as follows: -2 hampers much, -1 hampers some, 0 neither hampers nor promotes, 1 promotes some, 2 promotes much.

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Developing Areas of Activities and Areas of Factors:

As preparation for data analysis, theories and literature previously reviewed were used as a basis for developing areas of activities and areas of factors involved in working relationships. The following were the areas of the activities:²

I. Pre-planning -

1. Investigating needs and examining objectives.
2. Identifying local potential for launching educational programs.

II. Planning:

1. educational programs for youth,
2. educational programs for farmers,
3. public relations and
4. exhibits and contests.

III. Evaluation of Programs

IV. Implementation

Areas of factors developed were:

I. Personality and General Characteristics

II. Education and Training -

1. Similarities
2. Differences

III. Experience

²See items of each area in Appendix (C).

IV. Interorganizational Relationships

V. Intraorganizational Requirements

VI. Perceiving Importance of Working Relationships

Population of the Study

To get complete results it was decided to use the whole population. All teachers of vocational agriculture who had had at least one year in service were considered eligible for participation in the study (204 were eligible out of a total of 229 in the state, the rest of 25 teachers were beginners). In the counties where the vocational agriculture departments were located, all county extension directors, agents for agriculture, agents for 4-H club work who supervised agricultural projects for boys and girls were eligible for participation in the study. A total of 129 agents were eligible to participate.

Justification for Population Selection:

1. The limitation of having at least one year in service for all respondents was considered a precaution against responses based on experiences from outside the described profession.
2. County extension directors usually have direct relationships with extension policy and working relationships with related agencies. Many of them carry out educational work in agriculture in addition to their administrative work.

3. County extension agents for agriculture predominantly carry out educational work in agriculture which could be easily matched with educational work carried out by teachers of vocational agriculture.
4. County extension agents for 4-H club work in many cases supervise agricultural projects for boys and girls.
5. Other county extension personnel at the county level were excluded because of the differences in nature of their subject matter and of clientele from those of teachers of vocational agriculture.

Michigan Area Covered by the Study

Respondents from sixty-one counties out of eighty-three counties of Michigan were requested to participate in the study.³ In fifty-five of the sixty-one counties, respondents from both professional groups participated. In five of the remaining six counties, agents only responded; the teachers did not respond. In the sixth county, the one eligible teacher responded; the agent did not respond. The rest of Michigan counties were not covered by the study as one or the other of the two professional groups was not represented. Figure 2 shows the counties covered by the

³ See Table of Counties Participated in Appendix (D).

study and the groups who participated.

Methods of Collecting the Data

To reach the population described above, the survey checklist was mailed. Code numbers were given to each respondent for providing and insuring anonymity. A self-addressed, stamped envelope was enclosed with each survey checklist prepared for each respondent.

To secure a high percentage of responses, leaders of both vocational education in agriculture in the state and the Cooperative Extension Service wrote an endorsement on the cover letter which was attached to the survey checklist.⁴

As was suggested by leaders of both fields, the survey forms were sent out immediately after the Christmas and New Year holidays. On the third day after the first mailing the responses started to come back. By the first week 68.2% of the agents and 44.6% of the teachers responded. During the second week 6.2% of the agents and 15.2% of the teachers responded. The first follow-up letter and one cent extra stamp (because of the increase of postage rates which took place in the meantime) were sent at the end of the second week. During the fourth week 9.3% of the agents and 7.4% of the teachers responded. During the fourth week 7% of

⁴See cover letters in Appendix (A).

the agents and 6.9% of the teachers responded. The second follow-up letter and a second copy of the survey forms were sent one month from the first mailing. During the fifth week 3.1% of the agents and 11.3% of the teachers responded. During the sixth week 0.8% of the agents and 2.5% of the teachers responded. One and a half months after sending out the survey forms to the respondents the total number who had responded amounted to 94.6% of the agents and 88.2% of the teachers.⁵ This percentage of respondents who participated was considered satisfactory for analyzing the data collected.

Processing the Data

Code numbers were assigned for items and information collected. Responses were recorded on (IBM) tabulation sheets. Information was transferred from the tabulation sheets to individual IBM cards. Each of the 302 respondents had two IBM cards. One was used for recording information about carrying out working relationship activities and the degree of involvement of certain factors as seen by the respondent affecting working relationships. The second card was used for recording information about the desirability of carrying out working relationship activities and the degree to which certain factors hamper or promote educational programs in agriculture. Each of the two IBM cards which

⁵See Figure 12 in Appendix (D).

belonged to the respondent carried the same basic information about him.

Punching, verification for correctness, and frequency counting were made by the processing laboratory of Michigan State University.

The frequencies were then transferred on tape and the latter was fed into MISTIC to calculate a total of 122 χ^2 values for testing the two hypotheses of the study. Chi-square program K6M was used for 47 χ^2 calculations of 2 by 3 tables. A special chi-square program was prepared on MISTIC to calculate 75 χ^2 values for 2 by 2 tables. The formula used for this program is Yates' correction formula:

$$\chi^2 = \frac{(|f_o - f_e| - .5)^2}{f_e}$$

The formula was used for two reasons:

1. Some of the cells in the 2 by 2 tables had frequencies of 5.
2. It has become more general practice to use the correction formula whenever $df = 1$, regardless of the cell frequencies.^{6 & 7}

⁶S. Diamond, Information and Error (New York: Basic Books, Inc., 2nd ed., 1960), p. 154.

⁷TMI-Grilier Programmed Textbook, Statistical Inference (New York: Teaching Materials Corporation, A Division of Grolier Inc., 575 Lexington Avenue, 1961), p. B 10-12.

Presentation of the Data

Results of the data collected are presented in the same order as the study objectives. These will be analyzed as follows:

- I. To discern among county extension agents and teachers of vocational agriculture:**
 - a. Certain activities which are carried out in their working relationships.**
 - b. Certain factors which are involved in their working relationships.**

Information relevant to this objective is presented in a tabular form using respondents' percentages. To get a close view of present working relationships between the two professional groups, it was found appropriate to present the data detailed as for the teachers on the one hand and for the three positional groups of agents separate on the other hand.

- II. To determine differences in opinions held by county extension agents and teachers of vocational agriculture regarding:**
 - a. The desirability of carrying out certain activities in their working relationships for effective educational programs in agriculture.**
 - b. The effect of certain factors involved in their working relationships on educational programs in**

agriculture.

Data relevant to this objective are presented in frequencies and percentages. They are also analyzed by calculating chi-square values to determine whether observed differences of opinions of the two professional groups is a plausible explanation of their position classification.

Because of the few frequencies at the lower edge of the rating ranges, ratings of desirability were dichotomized between those who indicated positive desirability on one side and the remaining respondents on the other. Those who had not decided were added to the latter group of respondents. The same was done in analyzing some of the factors which happened to show few frequencies at one edge of the rating range. The remaining factors were analyzed and presented as viewed having positive, negative or neutral effect on educational programs in agriculture.

The determinant level of confidence used was .05. The first hypothesis that there were differences in opinions held by county extension agents and teachers of vocational agriculture concerning items (a) and (b) listed above, were accepted when X^2 was higher than its value under (p) of .05 with the appropriate degrees of freedom. Differences in opinions at the .01 level of confidence were also recorded.

III. To determine among county extension agents and among teachers of vocational agriculture the relationship

between selected background characteristics such as age, college degrees achieved and length of experience, and their opinions regarding:

- a. The desirability of carrying out cooperatively certain activities for implementing effective educational programs in agriculture.
- b. The effect of certain intraorganizational factors on educational programs in agriculture.

Information relevant to this objective is presented in the form of frequencies and percentages. Chi-square was the statistics used to determine association of degrees held, age, and length of experience and the desirability of carrying out certain activities in their working relationships. These activities were selected on the basis of observed importance in working relationships. With the three mentioned background characteristics, activities dealing with implementing educational programs in agriculture were related.

Opinions expressed by respondents that certain factors hamper or promote effective educational programs in agriculture were related also with the same three background characteristics for each of the two professional groups. The factors related were selected on the basis of observed importance in working relationships. These factors deal with intraorganizational requirements of extension and

vocational agriculture. The determinant level of confidence for association was decided to be .05. Association at the .01 level of confidence was also recorded. The second research hypothesis, that there was a relationship between selected background characteristics and opinions held by county extension agents and teachers of vocational agriculture concerning items (a) and (b) listed above, was accepted when χ^2 value was higher than its value under (p) of .05 with the appropriate degrees of freedom.

Background Characteristics of Respondents

Four background characteristics of respondents were used as independent variables in this study. These characteristics were: (1) position, (2) degrees achieved, (3) age, and (4) length of experience.

The first variable was used in all the analyses. The remaining background characteristics were used to test the second hypothesis.

1. Position:

Table I shows the classification of respondents by position. The total number of county extension agents was 122, broken down as follows:

59 County Extension Directors (48.4%)

25 County Extension Agents for Agriculture
(20.5% - agents of horticulture, dairy and
cash crops are included in this percentage)

38 County Extension Agents for 4-H club work
(31.1%)

The total number of teachers of vocational agriculture was 180.

Table I shows that the least number of agents were those in the classification of county extension agents for agricultural fields. This happened mostly because the county extension directors carry out extension work in agriculture in addition to their administrative work. In quite a few counties the extension director is the one who takes care of all types of extension work. Substitution of intra-positional groups of county extension staff takes place very often, or whenever needed. Thus, the division of labor is not clear cut and responsibilities of each position are interwoven with the responsibilities of the other positions of County Extension Service.

TABLE I
CLASSIFICATION OF RESPONDENTS BY POSITION

	County Extension Directors	County Ext. Agents for Agriculture	County Ext Agents for 4-H Club Work	Total of County Ext Agents	Teachers of Vocational Agriculture
N	59	25	38	122	180
%	(48.4)	(20.5)	(31.1)	(100)	(100)

County extension agents and teachers of vocational agriculture were not evenly distributed in the areas in which they serve. The reason for that was mainly the difference in the organizational set-ups as well as the kind and type of educational programs needed by local communities.

2. College Degrees Achieved

Extension directors seemed to have more graduate education than either agents for agriculture or agents for 4-H club. Table II shows that 66.1% of the directors, 60% of the agents for agriculture, and 42.1% of the agents for 4-H club work had master's degrees. The percentage of teachers of vocational agriculture who had master's degrees was less than that of county extension directors and agents for agriculture, but a little higher than that of agents for 4-H club work. In general, the proportion of teachers who had master's degrees is less than the matching proportion of the agents. One agricultural agent from the population of the study had his doctorate degree and one director had no college degree. The difference in level of education between the teachers and the agents might be related, among other reasons, to age and length of time in the position. Agents were older and had been in their positions longer.

TABLE II
CLASSIFICATION OF RESPONDENTS
BY COLLEGE DEGREES

Respondents		Frequency Distribution of College Degrees				
		Bachelor	Master	Doctor	Non-Degree	Total
Extension Directors	N %	19 (32.2)	39 (66.1)	--	1 (1.7)	59
Agents for Agriculture	N %	9 (36.0)	15 (60.0)	1 (4.0)	--	25
Agents for 4-H Club	N %	22 (57.9)	16 (42.1)	--	--	38
Total	N %	50 (41.0)	70 (57.4)	1 (0.8)	1 (0.8)	122
Teachers of Vocational Agriculture	N %	99 (55.0)	81 (45.0)	--	--	180

3. Age:

County extension directors in the population of the study were somewhat older proportionally than county extension agents for agriculture and county extension agents for 4-H club work. The largest group of the county extension directors were 45 years old or over. This group constituted 47.5% of the directors. County extension agents for agriculture seemed to take a middle position age-wise between the directors and the agents for 4-H club. Their largest group were 40-45

years old. This group constituted 44% of the agents for agriculture. The youngest agents were those of 4-H club work. Their largest group was 30-35 years old which constituted 36.9% of their total number.

On the other hand, the teachers were younger than any one group of the agents, as well as younger than all three groups of the agents combined. The largest group of teachers was 25-30 years old. This group constituted 22.8% of the number of teachers who responded. The second to the largest was 45 years old and over. This second group constituted 21.1% of the teachers. In comparison with the agents, variation in the age of the teachers was not as great, and there was an increasing tendency toward a younger age (Table III).

TABLE III
CLASSIFICATION OF RESPONDENTS BY AGE

Respondents		Frequency Distribution of Age						Total
		Under 25 Yrs.	25-30 Yrs	30-35 Yrs	35-40 Yrs	40-45	45 Yrs and Over	
Ext. Dir.	N	--	--	2	14	15	28	59
	%			(3.4)	(23.7)	(25.4)	(47.5)	
Agts. for Agri.	N	--	2	5	2	11	5	25
	%		(8.0)	(20.0)	(8.0)	(44.0)	(20.0)	
Agts. for 4-H	N	1	9	14	3	3	8	38
	%	(2.6)	(23.6)	(36.9)	(7.9)	(7.9)	(21.1)	
Total	N	1	11	21	19	29	41	122
	%	(0.8)	(9.0)	(17.2)	(15.6)	(23.8)	(33.6)	
Tchrs. of Vo. Ag.	N	18	41	30	33	20	38	180
	%	(10.0)	(22.8)	(16.7)	(18.3)	(11.1)	(21.1)	

4. Length of Experience:

Table IV shows that county extension directors seemed to have longer experience than the rest of the groups. The highest proportion of the directors had 10-15 years experience. This proportion constituted 28.8% of the directors. Agents for agriculture seemed to have less years of experience than the directors. The highest proportion of them constituting 32.0% had 5-10 years of experience. Agents for 4-H club work seemed to have the least years of experience. The highest proportion of them constituting 39.5%

had less than 5 years of experience. Teachers of vocational agriculture had a length of experience similar to that of the 4-H club agents. The highest proportion of them constituting 37.2% had less than 5 years of experience. Generally speaking, the teachers in comparison with the agents had less years of experience as educators.

TABLE IV
CLASSIFICATION OF RESPONDENTS
BY LENGTH OF EXPERIENCE

Respondents	Frequency Distribution of Length of Experience							Total
		Less than 5 yrs.	5-10 yrs.	10-15 yrs.	15-20 yrs.	20-25 yrs.	25 yrs and Over	
Ext. Dir.	N	2	9	17	11	11	9	59
	%	(3.4)	(15.3)	(28.8)	(18.6)	(18.6)	(15.3)	
Agts. for Agri.	N	5	8	4	6	2	--	25
	%	(20.0)	(32.0)	(16.0)	(24.0)	(8.0)		
Agts. for 4-H	N	15	9	6	5	3	1	38
	%	(39.5)	(21.1)	(15.8)	(13.2)	(7.9)	(2.7)	
Total	N	22	25	27	22	16	10	122
	%	(18.0)	(20.5)	(22.2)	(18.0)	(13.1)	(8.2)	
Tchrs. of Vo-Ag.	N	67	35	34	11	17	16	180
	%	(37.2)	(19.5)	(18.9)	(6.1)	(9.4)	(8.9)	

CHAPTER IV

ANALYSIS OF ACTIVITIES AND FACTORS INVOLVED IN WORKING RELATIONSHIPS

It was believed that the identification of activities of working relationships and factors involved in carrying them out by county extension agents and teachers of vocational agriculture would help both professional groups formulate a realistic picture of their working relationships.

In this chapter responses of agents and teachers with respect to activities of working relationships and the factors involved, were recorded in terms of percentages of the groups indicated by "N."

To make the picture clear for those concerned percentages of the agents were recorded according to their three positional groups: the directors, the agents for agriculture, and the agents for 4-H club. This detail in analysis was made with the intention of determining the relative importance of the activities as viewed by each group of agents and the teachers.

PART I

Activities of Working Relationships

This part of the chapter is concerned with the analysis of the activities of working relationships. The recorded percentages of the agents represent those

who carried out the activities in working with the teachers. The percentages of the teachers represent those who carried out the activities in working with the agents.

Investigating needs and examining objectives of educational programs in agriculture:

Table (V) shows the percentages of county extension agents and teachers of vocational agriculture who carried out in their working relationships activities of the area of investigating needs and examining objectives.

Of the four activities included in this area, three were carried out by high percentage of agents and teachers. The range was 56.8 - 91.5%. These three activities were:

1. Discussing community needs pertaining to education in agriculture.
2. Identifying common educational objectives of extension and vocational agriculture.
3. Discussing implications of current trends for program planning in agriculture.

The fourth activity: conducting community agricultural surveys, was participated in occasionally and by lower percentages of the agents and the teachers. The range was 16.2 - 40.7%.

The percentages of the teachers carrying out these activities in working with the agents were lower but close to the directors and agents for agriculture who carried

them out in working with the teachers. On the other hand, the percentages of the teachers who carried out each of these activities were higher than those of the 4-H club agents who carried them out in working with the teachers.

There was variation in the percentages of the three groups of agents who had worked with the teachers in this area of activities. The percentages of the directors were the highest and those of the 4-H club agents were the lowest. These low percentages of 4-H club agents carried out the four activities occasionally in working with the teachers.

TABLE V

AGENTS AND TEACHERS WHO INVESTIGATED NEEDS
AND EXAMINED OBJECTIVES IN THEIR
WORKING RELATIONSHIPS¹

Activity	Extension Agents for Agriculture		Agents for 4-H		Teachers of Average	
	Directors	%	Directors	%	Vocational	Per- Agriculture centage
Discussing community needs pertaining to education in agriculture	N (59)	91.5***	88.0**	76.3	82.2**	84.5
Identifying common educational objectives of extension and vocational agriculture	N (59)	81.4*	84.0***	56.8	71.5**	73.4
Conducting community agri- cultural surveys	N (59)	40.7	32.0	16.2	31.3	30.1
Discussing implications of current trends for program planning in agriculture	N (59)	71.2**	68.0**	60.5	67.1**	66.7
			(25)	(38)	(176)	

¹Sum of those who checked "occasionally," "frequently," and "always." For further details refer to Appendix (E).

*20 -- 29.99% carried out the activity frequently and/or always.

**30 -- 39.99%

***40 -- 49.99%

Identifying local potential for launching educational programs in agriculture:

Table (VI) shows the percentages of the county extension agents and teachers of vocational agriculture who carried out in their working relationships activities of the area of identifying local potential for launching educational programs in agriculture.

Of the four activities included in this area, the activity of discussing the need for a specialist's help in a particular project was carried out by higher percentages of agents and teachers. The range was 46 - 84%. Compared with the remaining respondents high percentages of agents for agriculture and teachers carried out this activity in their working relationships.

The activity of exchanging information about each other's experience with advisory councils seemed to be carried out the least by agents and teachers. The teachers and agents for 4-H club who carried out the activity in their working relationships indicated carrying it out only occasionally.

The percentage of agents for agriculture who called the teacher's attention to competent people who might serve on advisory councils was the highest. Less than half of the teachers carried out the activity occasionally in working with the agents.

A little more than half of the teachers discussed

Identifying local potential for launching educational programs in agriculture:

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The percentage of agents for agriculture who called the teacher's attention to competent people who might serve on advisory councils was the highest. Less than half of the teachers carried out the activity occasionally in working with the agents.

A little more than half of the teachers discussed

with agents instructional materials, space, and facilities locally available for carrying out educational programs in agriculture. The directors' proportion was the highest among the agents in carrying out the activity in working with the teachers.

Compared with the directors and agents for agriculture, the percentage of 4-H club agents who carried out activities of this area in working with teachers was the lowest.

TABLE VI
AGENTS AND TEACHERS WHO IDENTIFIED LOCAL
POTENTIAL IN THEIR WORKING RELATIONSHIPS¹

Activity	Extension Directors	Agents for Agriculture	Agents for 4-H	Teachers of Vocational Agriculture	Average Per-centage	Rank
Calling each other's attention to competent people who might serve on advisory councils ...	% 66.1* N (59)	70.8*** (24)	37.8 (37)	44.4 (178)	54.8	2
Exchanging information about each other's experience with advisory councils	% 45.8* N (59)	44.0* (25)	32.4 (37)	31.1 (177)	38.4	4
Discussing the need for a specialist's help in a particular project	% 72.9* N (59)	84.0*** (25)	46.0 (37)	78.8*** (179)	70.5	1
Discussing instructional materials, space, and facilities locally available for carrying out educational programs in agriculture	% 66.1* N (59)	60.0 (25)	31.6 (38)	52.0* (179)	52.4	3

¹Sum of those who checked "occasionally," "frequently," and "always." For further details refer to Appendix (E).

*20 -- 29.99% carried our activity frequently and/or always.

**30 -- 39.99% " " " "

***40 -- 49.99% " " " "

Planning educational programs for youth:

The percentage of the directors was the highest in carrying out the three activities of this area in working with the teachers (Table VII). An average of about 50% of the teachers carried out the activities in working with the agents.

The percentage of agents for agriculture who developed educational programs for out-of-school youth in agriculture with the teachers was quite high (72%). Of the teachers, 57.5% carried out the activity in working with the agents.

The percentages of the directors and the 4-H club agents who worked out a program of cooperation between 4-H club and FFA with the teachers were also quite high (78 - 65.8% respectively). Of the teachers, 55.3% carried out the activity in working with the agents.

An average of about half of the agents developed criteria for agricultural projects of FFA and 4-H club members in working with the teachers. Of the teachers, 44.1% carried out the activity in working with the agents.

TABLE VII

AGENTS AND TEACHERS WHO PLANNED EDUCATIONAL PROGRAMS
FOR YOUTH IN THEIR WORKING RELATIONSHIPS¹

Activity	Extension Agents for Agents for		Teachers of		Rank
	Directors	Agriculture	4-H	Vocational Agriculture	
	%			centage	
Developing educational programs for out-of-school youth in agriculture	N	74.1*	72.0*	40.5	57.5* 61.0 2
		(58)	(25)	(37)	(179)
Developing criteria for agricultural projects of FFA and 4-H club members	N	54.2*	44.0	46.0*	44.1* 47.1 3
		(59)	(25)	(37)	(177)
Working out a program of cooperation between 4-H club and FFA	N	78.0***	48.0*	65.8***	55.3** 61.8 1
		(59)	(25)	(38)	(179)

¹Sum of those who checked "occasionally," "frequently," and "always." For further details refer to Appendix (E).

*20 -- 29.99% carried out activity frequently and/or always.

**30 -- 39.99% " " " "

***40 -- 49.99% " " " "

Planning educational programs for farmers:

Percentages of the agents who carried out activities of this area in working with teachers can be ranked generally as follows:

1. Directors (a range of 59.3 - 84.8%)
2. Agents for agriculture (a range of 58.3 - 75.0%)
3. Agents for 4-H club (a range of 32.4 - 46.0%)

The proportions of the teachers who carried out the activities in working with agents fell in a range of 50.3 - 69.8%. This range is higher than the range of percentages of 4-H club agents who cooperated with teachers (Table VIII).

Carrying out these activities in this pattern might be a typical explanation of the conventional role of each group and its relationship to farmers' programs. Directors and agents for agriculture might have had the idea that farmers programs are "the typical" responsibilities of extension. Teachers might have had the idea that farmers' programs are merely a part of their educational work. Agents for 4-H club might have had the idea that their major role lies with youth development and not with adults; including farmers.

In coordinating educational programs of extension and vocational agriculture for adult farmers, the percentages of the directors and the agents for agriculture who coordinated educational programs for adult farmers with teachers

were quite high (84.8 and 72.0% respectively). Of the teachers, 69.4% carried out the activity in working with the agents.

Of the directors, 74.1% and of the agents for agriculture, 64% determined supportive roles with teachers in helping young and adult farmers adopt farm practices. Of the teachers, 53.9% carried out the activity in working with the agents.

More than half of the directors and agents for agriculture, in working with the teachers, organized ways of conducting educational programs through special interest groups and associations. Half of the teachers carried out the activity in working with the agents.

The activity of arranging for meetings in which farmers discuss agricultural problems with local resource personnel was carried out by 78% of the directors and 75% of the agents for agriculture in working with the teachers. Of the teachers, 69.8% carried out the activity in working with the agents.

TABLE VIII
AGENTS AND TEACHERS WHO PLANNED EDUCATIONAL PROGRAMS
FOR FARMERS IN THEIR WORKING RELATIONSHIPS¹

Activity	Extension Directors	Agents for Agriculture	Agents for 4-H	Teachers of Vocational Agriculture	Average Per-centage	Rank
Coordinating educational programs of extension and vocational agriculture for adult farmers	% N	84.6*** (59)	72.0*** (25)	46.0* (37)	69.4** (180)	1
Determining supportive roles in helping young and adult farmers adopt farm practices ..	% N	74.1* (58)	64.0* (25)	35.1 (37)	53.9 (178)	3
Organizing ways of conducting educational programs through special interest groups and associations	% N	59.3 (59)	58.3* (24)	37.8 (37)	50.3* (175)	4
Arranging for meetings in which farmers discuss agricultural problems with local resource personnel	% N	78.0* (59)	75.0 (24)	32.4 (37)	69.8** (179)	2

¹Sum of those who checked "occasionally," "frequently," and "always." For further details refer to Appendix (E).

*20 -- 29.99% carried out activity frequently and/or always.

**30 -- 39.99% " " " "

***40 -- 49.99% " " " "

Planning for public relations:

A range of 45 - 60% of the agents and the teachers shared responsibility for publicity concerning educational programs in agriculture. But a range of 24.3 - 44.1% of the agents and the teachers cooperatively developed means of securing public reactions to educational programs in agriculture.

The activity carried out least in working relationships of agents and teachers in this area was developing means of publicizing results of evaluation regarding educational programs in agriculture. A range of only 24.3 - 35.0% of agents and teachers considered carrying out the activity in their working relationships.

Attention is called to the degree of carrying out the last two activities. Neither the agents nor the teachers carried out cooperatively either of the two activities frequently or always (Table IX).

TABLE IX

AGENTS AND TEACHERS WHO PLANNED FOR PUBLIC RELATIONS
IN THEIR WORKING RELATIONSHIPS¹

Activity	Extension Agents for Agriculture		Agents for Teachers of Vocational Agriculture		Rank
	Directors	4-H	4-H	Average Per-	
Sharing responsibility for publicity concerning educational programs in agriculture in the county	% 45.8* N (59)	60.0** (25)	54.1* (37)	57.9* (178)	1
Developing means of securing public reactions to educational programs in agriculture	% 44.1 N (59)	24.0 (25)	24.3 (37)	37.6 (178)	2
Developing means of publicizing results of evaluating educational programs in agriculture	% 32.2 N (59)	28.0 (25)	24.3 (37)	35.0 (177)	3

¹Sum of those who checked "occasionally," "frequently," and "always." For further details refer to Appendix (E).

*20 -- 29.99% carried out activity frequently and/or always.

**30 -- 39.99% " " " "

***40 -- 49.99% " " " "

Planning for exhibits and contests:

Even though this area of activities should be a traditional one between county extension agents and teachers of vocational agriculture, yet the percentages of respondents who carried out the activities in their working relationships was not high (Table X).

A little more than half of the agents worked out cooperatively with teachers plans for educational exhibits in agriculture. About half of the teachers carried out the activity in working with the agents. A higher range of the agents (52.0 - 67.8%) worked out with the teachers uniform standards for contests in agriculture in their counties. Of the teachers, 59% carried out the activity cooperatively with the agents.

TABLE X

AGENTS AND TEACHERS WHO PLANNED FOR EXHIBITS AND
CONTESTS IN THEIR WORKING RELATIONSHIPS¹

Activity	Extension Agents for Agriculture		Agents for Teachers of Vocational Agriculture		Per-centage	Rank
	Directors	%	4-H	Agriculture		
Working out plans for educational exhibits in agriculture	52.5* (59)	%	54.1 (37)	50.3* (179)	53.2	2
Working out uniform standards for contests in agriculture in the county	67.8* (59)	%	52.6** (38)	59.0** (178)	57.8	1

¹Sum of those who checked "occasionally," "frequently," and "always." For further details refer to Appendix (E).

*20 -- 29.99% carried out activity frequently and/or always.

**30 -- 39.99% " " " "

***40 -- 49.99% " " " "

Evaluating educational programs in agriculture:

The fact that the area of evaluation has not been simple in educational programs in agriculture has had reflections on working relationships between the agents and the teachers in this area.

A range of 18.9 - 34.5% of the agents developed with the teachers criteria for judging effectiveness of local educational programs in agriculture. Of the teachers, 23.7% carried out the activity in working with the agents. A higher range (39.5 - 58.6%) of the agents discussed factors affecting educational programs in agriculture with teachers. Of the teachers, 43.2% carried out the activity in working with the agents.

Table (XI) shows that a large number of agents and teachers carried out two particular activities in their working relationships. A range of 63.2 - 71.2% of the agents, and 68% of the teachers secured each other's reaction on newly planned programs. Also a higher range (77.8 - 94.7%) of the agents and 80.5% of the teachers credited each other's contribution toward successful educational programs in agriculture.

TABLE XI

AGENTS AND TEACHERS WHO EVALUATED EDUCATIONAL PROGRAMS IN THEIR WORKING RELATIONSHIPS¹

Activity	Extension Agents for Agriculture		Agents for Teachers of Vocational Agriculture		Per-centage	Rank
	Directors	4-H	4-H	Agriculture		
Securing each other's reactions on newly planned programs	% 71.2** N (59)	72.0* (25)	63.2* (38)	68.0** (178)	66.7	2
Developing criteria for judging effectiveness of local educational programs in agriculture	% 34.5 N (58)	20.0 (25)	18.9 (37)	23.7 (177)	24.3	4
Discussing factors affecting success or failure of educational programs in agriculture. N	% 58.6* (58)	48.0 (25)	39.5* (38)	43.3* (178)	47.3	3
Crediting each other's contribution toward successful educational programs in agriculture	% 94.7*** N (57)	87.0** (23)	77.8** (36)	80.5*** (169)	85.0	1

¹Sum of those who checked "occasionally," "frequently," and "always." For further details refer to Appendix (E).

*20 -- 29.99% carried out activity frequently and/or always.

**30 -- 39.99% " " " "

***40 -- 49.99% " " " "

****50 -- 59.99% " " " "

Implementing educational programs in agriculture:

Consultation between agents and teachers seemed to take place more or less on other bases than that of commitment to serve on each other's advisory committees. A range of 27.0 - 47.5% of the agents served as consultants on teachers' advisory committees. Of the teachers, 27.8% served as consultants on extension advisory committees. A higher range of 59.5 - 67.2% of the agents utilized teachers' special knowledge and abilities in particular teaching situations in agriculture.

A very high percentage of agents (a range of 81.4 - 89.2%) worked with the teachers to conduct county and other agricultural fairs. Of the teachers, 81.3% carried out the activity with the agents.

A range of 46.0 - 67.2% of the agents conducted demonstration projects in agriculture with the teachers. Of the teachers, 52.8% indicated that they conducted these joint demonstrations with the agents.

One of the activities carried out in working relationships by high percentages of agents and teachers is exchanging printed and duplicated materials of mutual interest (Table XII). A range of 61.1 - 84.8% of the agents carried out the activity in working with teachers. Of the teachers, 84.4% carried out the activity in working with the agents. Also in exchanging use of educational equipment and facilities, a range of 51.4 - 78.0% of the agents

carried out the activity in working with the teachers. Of the teachers, 65.6% carried out the activity in working with the agents.

TABLE XII
AGENTS AND TEACHERS WHO IMPLEMENTED EDUCATIONAL
PROGRAMS IN THEIR WORKING RELATIONSHIPS¹

Activity	Extension Directors		Agents for Agriculture		Agents for 4-H		Teachers of Vocational Agriculture		Per-centage	Rank
	%	N	%	N	%	N	%	N		
A- Consulting and teaching for each other's programs										
Serving as consultants on each other's advisory committees ...	47.5	(59)	32.0*	(25)	27.0	(37)	27.8	(176)	33.6	6
Utilizing each other's special knowledge and abilities in particular teaching situations in agriculture	67.2***	(58)	64.0***	(25)	59.5*	(37)	64.4**	(180)	63.8	4
B - Conducting demonstrations and fairs										
Conducting joint demonstration projects in agriculture ..	67.2*	(58)	56.0*	(25)	46.0	(37)	52.8*	(180)	55.5	5
Conducting county and other agricultural fairs	81.4*****	(59)	84.0*****	(25)	89.1*****	(37)	81.3*****	(176)	83.9	1

(Continued)

TABLE XII (Continued)

Activity	Extension Agents for Agents for Teachers of				Average	
	Directors	Agriculture	4-H	Vocational	Per-	Rank
				Agriculture	centage	
C - Exchanging educational aids and facilities						
Exchanging printed and dupli- cated materials of mutual interest	% N	84.8**** (59)	72.0*** (25)	61.1** (36)	84.4**** (180)	75.6 2
Exchanging use of educational equipment and facilities	% N	78.0** (59)	64.0* (25)	51.4 (37)	65.6** (180)	64.7 3

¹Sum of those who checked "occasionally," "frequently," and "always." For further details refer to Appendix (E).

*20 -- 29.99% carried out activity frequently and/or always.

**30 -- 39.99%	"	"	"	"	"	"
***40 -- 49.99%	"	"	"	"	"	"
****50 -- 59.99%	"	"	"	"	"	"
*****60 -- 69.99%	"	"	"	"	"	"
*****70 -- 79.99%	"	"	"	"	"	"

Summary of Part I:

The extent of carrying out the thirty activities in working relationships varied among the three groups of agents and the teachers. To show the relative importance of the activities they were ranked in each area from high to low by average percentages of agents and teachers who carried them out in their working relationships. The rank orders are as follows:

Investigating needs and examining objectives of educational programs in agriculture:

- First: Discussing community needs pertaining to education in agriculture.
- Second: Identifying common educational objectives of extension and vocational agriculture.
- Third: Discussing implications of current trends for program planning in agriculture.
- Fourth: Conducting community agricultural surveys.

Identifying local potential in launching educational programs in agriculture:

- First: Discussing the need for a specialist's help in a particular project.
- Second: Calling each other's attention to competent people who might serve on advisory councils.
- Third: Discussing instructional materials, space, and facilities locally available for carrying out educational programs in agriculture.
- Fourth: Exchanging information about each other's experience with advisory councils.

Planning educational programs for youth:

- First: Working out a program of cooperation between 4-H club and FFA.
- Second: Developing educational programs for out-of-school youth in agriculture.
- Third: Developing criteria for agricultural projects of FFA and 4-H club members.

Planning educational programs for farmers:

- First: Coordinating educational programs of extension and vocational agriculture for adult farmers.
- Second: Arranging for meetings in which farmers discuss agricultural problems with local resource personnel.
- Third: Determining supportive roles in helping young and adult farmers adopt farm practices.
- Fourth: Organizing ways of conducting educational programs through special interest groups and associations.

Planning for public relations:

- First: Sharing responsibility for publicity concerning educational programs in agriculture in the county.
- Second: Developing means of securing public reactions to educational programs in agriculture.
- Third: Developing means of publicizing results of evaluating educational programs in agriculture.

Planning for exhibits and contests:

- First: Working out uniform standards for contests in agriculture in the county.

Second: Working out plans for educational exhibits in agriculture.

Evaluating educational programs:

First: Crediting each other's contribution toward successful educational programs in agriculture.

Second: Securing each other's reactions on newly planned programs.

Third: Discussing factors affecting success or failure of educational programs in agriculture.

Fourth: Developing criteria for judging effectiveness of local educational programs in agriculture.

Implementing educational programs:

First: Conducting county and other agricultural fairs.

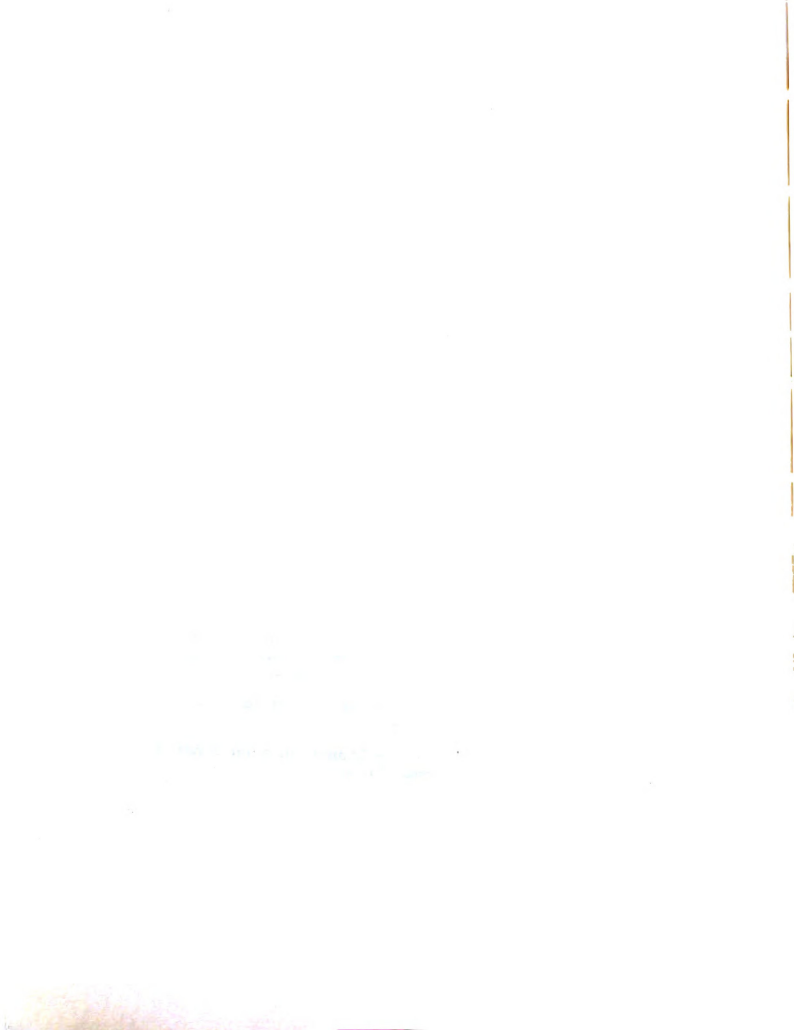
Second: Exchanging printed and duplicated materials of mutual interest.

Third: Exchanging use of educational equipment and facilities.

Fourth: Utilizing each other's special knowledge and abilities in particular teaching situations in agriculture.

Fifth: Conducting joint demonstration projects in agriculture.

Sixth: Serving as consultants on each other's advisory committees.



PART II

Factors Involved in Working Relationships

Agents and teachers expressed involvement of several factors in working cooperatively. Some of these factors are directly personal, others are related to task perspective and organizational set-ups. This part of the chapter is concerned with analyzing the involvement of factors in working relationships. The recorded percentages of the agents represent those who indicated the involvement of the factors in working with the teachers. The percentages of the teachers represent those who indicated the involvement of the factors in working with the agents.

Personality and general characteristics:

There were variations in opinions among the agents and the teachers concerning the involvement of factors of this area in their working relationships (Table XIII).

Personality seems to be one of the important factors involved. Agents, in general, indicated less involvement of the personality factor in working with the teachers. Approximately one-third of the agents indicated some involvement of age as a factor in working with the teachers, while a little more than one-third of the teachers indicated this involvement.

Personal friendship was indicated as involved by approximately 60% of all respondents except the 4-H club

agents whose proportion was only 45%.

Initiation of contacts was viewed the most important by all respondents despite the little variation in proportions who indicated its involvement. The directors' proportion was highest, followed by those of the agents for agriculture, the teachers, and the agents for 4-H club.

The democratic way of consultation seemed to be more important to the teachers than to the agents. The percentage of the teachers who indicated its involvement was higher than that of the agents. Also the degree of academic education seemed to have more importance to the teachers than to the agents. About half of the teachers indicated its involvement but less than half of the agents did so.

TABLE XIII
INVOLVEMENT OF PERSONALITY AND GENERAL CHARACTERISTICS

Factor	Respondents who indicated involvement of the factors in working relationships					Rank
	Extension Directors	Agriculture	Agents for 4-H	Teachers of Vocational Agriculture	Average Per- centage	
Personality of the other worker	% 79.7** N (59)	84.0** (25)	50.0* (38)	48.0*** (179)	65.4	4
Similarity of our age	% 30.5 N (59)	32.0 (25)	27.0 (37)	38.0 (179)	31.9	7
Closeness of personal friendship	% 66.1** N (59)	64.0** (25)	46.0* (37)	60.9* (179)	59.2	5
Initiative in contacting me	% 83.1*** N (59)	79.2* (24)	69.4** (36)	67.6* (179)	74.3	2
Initiative in contacting him	% 88.1*** N (59)	84.0** (25)	70.3* (37)	76.6** (179)	79.7	1
His democratic way of consultation	% 66.1** N (59)	70.8 (24)	59.5* (37)	69.9*** (176)	66.6	3
Degree of his academic education	% 40.7 N (59)	24.0 (25)	13.5 (37)	51.1* (176)	32.3	6

¹Sum of those who checked "some involved," "much involved," and "very much involved." For further details refer to Appendix (E).

*20 -- 29.99% indicated much or very much factor involvement.

**30 -- 39.99%

***40 -- 49.99%

Education and training:

Table (XIV) shows that, in general, similarities rather than differences in education and training are more involved in working relationships.

A higher percentage of teachers than agents indicated that similarity of educational specialization is involved in working with the other. Agents of agriculture and teachers indicated in almost equal proportions the involvement of similarities of in-service training in technical subject matter. Similarities of in-service training in teaching methods had some involvement as expressed by less than 45% of the respondents.

Less than half of the agents and approximately one-third of the teachers expressed some involvement of differences of education and training in their working relationships.

On the basis of the total responses it might be safe to point out that similarities of education and training seem to have importance in cooperation between county extension agents and teachers of vocational agriculture.

TABLE XIV
INVOLVEMENT OF EDUCATION AND TRAINING

Respondents who indicated involvement of the factors in working relationships ¹					
Factor	Extension Agents for Directors Agriculture		4-H	Vocational	Rank
	Agriculture		Agriculture	Per- centage	
Similarities of Education and Training					
Similarity of our educa- tional specialization	% 48.3* (58)	40.0 (25)	24.3 (37)	56.8** (176)	2
Similarity of our in-service training in technical sub- ject matter	% 57.6 (59)	50.0* (24)	27.0 (37)	49.7* (177)	1
Similarity of our in-service training in teaching methods ..	% 37.9 (58)	37.5 (24)	24.3 (37)	42.9 (177)	3
Differences of Education and Training					
Difference of our educational specialization	% 43.1 (58)	29.2 (24)	21.1 (38)	33.2 (178)	2
Difference of our in-service training in technical subject matter	% 47.5 (59)	41.7* (24)	21.6 (37)	33.9 (177)	1
Difference of our in-service training in teaching methods ..	% 37.3 (59)	29.2 (24)	27.0 (37)	29.9 (177)	3

¹Sum of those who checked "some involved," "much involved," and "very much involved." For further details refer to Appendix (E).

*20 -- 29.99% indicated much or very much factor involvement.

**30 -- 39.99% " " " " " "

Experience:

Table (XV) shows that experience in working with rural people is not less than experience in the field of agriculture as an important factor involved in working relationships of county extension agents and teachers of vocational agriculture. About equal proportions of the directors and the teachers (a range of 76 - 79%) indicated that experience in working with rural people is a factor involved in their working relationships. Also about equal proportions of the agents for agriculture and the agents for 4-H club indicated that too, but in a lower range (63 - 68%). Only about half of the 4-H club agents indicated experience in the field of agriculture as a factor somewhat involved in working with the teachers. The proportions of the rest of the agents were higher.

An interesting observation was that all respondents except the agents for 4-H club indicated that their own experience in the field of agriculture is highly involved in working relationships of agents and teachers. But when they were asked about each other's experience in the field, teachers indicated a higher degree of involvement of agents' experience and the agents indicated only some involvement of teachers' experience in the field. An explanation for this might be that the agents had more experience than the teachers in agriculture. Another observation was that the teachers seemed to consider the factor of experience in

agriculture as more involved in working with the agents
than the factor of experience in working with rural people.

TABLE XV
INVOLVEMENT OF 'EXPERIENCE'

Factor	Respondents who indicated involvement of the factors in working relationships ¹					Rank
	Extension Directors	Agents for Agriculture	Agents for 4-H	Teachers of Vocational Agriculture	Average Per- centage	
His experience in working with rural people	% 78.0*** (59)	% 64.0*** (25)	% 65.8 (38)	% 76.7**** (176)	% 71.1	2
My experience in working with rural people	% 79.7**** (59)	% 68.0*** (25)	% 63.2* (38)	% 78.4*** (176)	% 72.3	1
His experience in the field of agriculture.....	% 66.1 (59)	% 64.0 (25)	% 51.4 (37)	% 82.4***** (176)	% 65.9	4
My experience in the field of agriculture	% 81.4***** (59)	% 64.0*** (25)	% 52.8 (36)	% 81.8**** (176)	% 70.0	3

¹Sum of those who checked "some involved," "much involved," and "very much involved." For further details refer to Appendix (E).

*20 -- 29.99% indicated much or very much factor involvement.
 **30 -- 39.99% " " "
 ***40 -- 49.99% " " "
 ****50 -- 59.99% " " "
 *****60 -- 69.99% " " "

Interorganizational Relationships:

From all respondents a range of about one-third to two-thirds indicated involvement of factors of this area in working relationships of agents and teachers (Table XVI). Existence and activity of the county agricultural council was considered more highly involved by teachers than by agents. A higher proportion of agents for agriculture than the rest of the respondents considered relationships between leaders of vocational agriculture and the Cooperative Extension staff at the state level involved in working with the teachers.

Relationships between school administrators and the county extension staff was considered involved in working relationships by higher proportions of the agents than of the teachers. An explanation might be that agents have a different perspective than teachers do of these relationships, thus a different view about cooperation with the teachers.

Existence of memoranda of understanding between Cooperative Extension and vocational agriculture seemed to have the least bearing on working relationships of agents and teachers, yet a little over half of the teachers considered the factor involved in working with agents.

Views passed down from state levels was considered involved by 63.8% of the directors, but by a little less than half of the rest of the agents and the teachers.

TABLE XVI
INVOLVEMENT OF INTERORGANIZATIONAL RELATIONSHIPS

Factor	Respondents who indicated involvement of the factors in working relationships ¹				
	Extension Directors	Agriculture	For Agents 4-H	Teachers of Vocational Agriculture	Average Per- Rank centage
Existence and activity of county agricultural council ...	% 50.0 (58)	41.7* (24)	37.8 (37)	52.6** (175)	45.5 4
Relationships between leaders of vocational agriculture and Cooperative Extension staff at state level	% 63.8* (58)	65.2*** (23)	40.0* (35)	55.8* (172)	56.2 2
Relationships between school administrators and county extension staff	% 79.7** (59)	64.0 (25)	65.8* (38)	30.5 (177)	60.0 1
Existence of memoranda of understanding between Co- operative Extension and vocational agriculture	% 30.5 (59)	37.5 (24)	43.2 (37)	54.1* (172)	41.3 5
Views passed down from state levels	% 63.8 (58)	45.8 (24)	46.0 (37)	48.3 (172)	50.9 3

¹Sum of those who checked "some involved," "much involved," and "very much involved." For further details refer to Appendix (E).

*20 -- 29.99% indicated much or very much factor involvement.

**30 -- 39.99%

***40 -- 49.99%

Intraorganizational requirements:

Table (XVII) shows great variation of involvement of this area of factors in working relationships. About one-fourth or less of the agents indicated some involvement of lack of clarity of functions of extension in agriculture and vocational agriculture, but a little over one-third of the teachers indicated the involvement of this factor. An interpretation of this might be that these proportions of agents and teachers see some overlapping of their functions. On the other hand, some involvement of the need for separate identity of vocational agriculture programs and extension work in agriculture was indicated by 39.7% of the directors and around one-fourth of the rest of the respondents. This factor is considered not involved in working relationships by about 60% of the directors and a little over 70% by the rest of the agents and the teachers. From another point of view, the proportion of the directors who took into consideration the need for the separate identity of extension and vocational agriculture seemed higher than the remaining respondents from the agents and the teachers. The reason for this may be a topic for further study.

Difficulty in scheduling was indicated highly involved by large proportions of the agents (a range of 59.5 - 84.8%) and the teachers (78.0%). Lack of adequate time for desirable working relationships was also considered involved, but by a lower proportion. Among the respondents,

the directors had the highest proportion of those who expressed much involvement of this factor in working relationships.

TABLE XVII

INVOLVEMENT OF INTRAORGANIZATIONAL REQUIREMENTS

Factor	Respondents who indicated involvement of the factors in working relationships ¹					Per- centage	Rank
	Extension Directors	Agriculture	For Agents 4-H	Teachers of Vocational Agriculture	Average		
Lack of clarity of functions (e.g. Smith-Lever and Smith - Hughes acts do not clearly distinguish functions of ex- tension in agriculture and vocational agriculture)	% 25.4 (59)	20.8 (24)	21.6 (37)	35.2 (176)	26.0	4	
Difficulty in scheduling (e.g. teachers cannot get away when school is in session, and ex- tension agents have many nights tied up)	% 84.8*** (59)	80.0**** (25)	59.5* (37)	78.0** (177)	75.6	1	118
Lack of adequate time for de- sirable working relationships between county extension agents and teachers of vocational agriculture	% 76.3*** (59)	64.0* (25)	61.1** (36)	74.0** (177)	68.8	2	1
Need for separate identity of vocational agricultural pro- grams and extension work in agriculture	% 39.7 (58)	28.0 (25)	24.3 (37)	26.7 (176)	29.7	3	

¹Sum of those who checked "some involved," "much involved," and "very much involved." For further details refer to Appendix (E).

*20 -- 29.99% indicated much or very much involvement of the factor.

***30 -- 39.99% " " " " " "

***40 -- 49.99% " " " " " "

***50 -- 59.99% " " " " " "

Perceiving importance of working relationships:

Teachers and agents seemed to perceive highly the importance of their working relationships. Even though proportions of agents for 4-H club were the lowest of all respondents yet they were high enough (a range from 44.7 - 79.0%) to indicate that they perceived working with teachers to be important.

An interesting observation about Table (XVIII) is that only from 41.7 - 51.4% of the respondents recognized that the public expects effective working relationships between extension agents and teachers of vocational agriculture.

Whether public expectations are valid, or whether agents and teachers are fully aware of public expectations are matters for further investigations.

Mutual respect of efforts was also recognized by a high percentage of all respondents. (The range was from a low of 67.6% for the 4-H club agents to a high of 78.2% for the teachers).

Over 90% of the teachers and a range of 73.7 - 93.2% of the agents showed recognition of the fact that their roles are complementary and that this factor is much involved in their working relationships.

A range of 57.9 - 84.8% of the agents and 85.2% of the teachers recognized the need for more than one educational agency to serve agriculture, and that the factor is

highly involved in working together.

High proportions of agents and teachers indicated much involvement of their belief in cooperation and their concern for the welfare of the people in their working relationships.

TABLE XVIII

INVOLVEMENT OF PERCEIVING IMPORTANCE
OF WORKING RELATIONSHIPS

Factor	Respondents who indicated involvement of the factors of working relationships ¹				Per- Rank
	Extension Directors	Agents for Agriculture	4-H	Teachers of Vocational Agriculture	
Belief that the public expects effective working relationships between extension agents and teachers of vocational agri- culture	% 50.9* N (59)	41.7* (24)	44.7* (38)	51.4* (177)	47.2 7
Mutual respect of efforts	% 78.0*** N (59)	80.0** (25)	67.6*** (37)	78.2*** (174)	75.9 5
Realization that communication between us is important	% 91.5*** N (59)	96.0*** (25)	68.4*** (38)	90.2*** (174)	86.5 4
Recognition of the fact that our roles are complementary ...	% 93.2*** N (59)	92.0*** (25)	73.7*** (38)	90.2*** (174)	87.3 3
Realization of the need for more than one educational agency to serve agriculture ...	% 84.8*** N (59)	60.0* (25)	57.9** (38)	85.2*** (176)	71.9 6
Belief in cooperation as a part of any professional worker's job	% 93.2*** N (59)	91.7*** (24)	76.3*** (38)	90.9*** (175)	88.0 2
Welfare of the people we serve	% 94.9*** N (59)	88.0*** (25)	79.0*** (38)	92.0*** (175)	88.5 1

(Continued)

TABLE XVIII
(Continued)

¹Sum of those who checked "some involved," "much involved," and "very much involved." For further details refer to Appendix (E).

*20 -- 29.99% indicated much or very much factor involvement.

**30 -- 39.99%	"	"	"	"	"	"
***40 -- 49.99%	"	"	"	"	"	"
****50 -- 59.99%	"	"	"	"	"	"
*****60 -- 69.99%	"	"	"	"	"	"
*****70 -- 79.99%	"	"	"	"	"	"
*****80 -- 89.99%	"	"	"	"	"	"

Summary of Part II:

The agents and the teachers varied in their opinions with regard to the degree of involvement of the factors in their working relationships. To show the relative importance of the factors, they were ranked in each area from high to low by average percentages of agents and teachers who indicated involvement of the factors in their working relationships. The rank orders are as follows:

Personality and general characteristics:

- First: Initiative of self.
- Second: Initiative of the other.
- Third: Democratic way of consultation.
- Fourth: Personality.
- Fifth: Friendship.
- Sixth: Degree of academic education.
- Seventh: Similarity of age.

Education and training:

- First: Similarities of:
 - 1. In-service training in technical subject matter.
 - 2. Educational specialization.
 - 3. In-service training in teaching methods.
- Second: Differences in the three items above.

Experience:

- First: 1. One's experience in working with rural

people.

2. The other's experience in working with rural people.

Second: 1. One's experience in the field of agriculture.

2. The other's experience in the field of agriculture.

Interorganizational relationships:

First: Relationships between school administrators and county extension staff.

Second: Relationships between leaders of vocational agriculture and Cooperative Extension staff at state level.

Third: Views passed down from state levels.

Fourth: Existence and activity of county agricultural council.

Fifth: Existence of memoranda of understanding between Cooperative Extension and vocational agriculture.

Intraorganizational requirements:

First: Difficulty in scheduling (e.g. teachers cannot get away when school is in session, and extension agents have many nights tied up).

Second: Lack of adequate time for desirable working relationships between county extension agents and teachers of vocational agriculture.

Third: Need for separate identity of vocational agricultural programs and extension work in agriculture.

Fourth: Lack of clarity of functions (e.g. Smith-Lever and Smith-Hughes acts do not clearly

distinguish functions of extension in agriculture and vocational agriculture).

Perceiving importance of working relationships:

- First: Welfare of the people.
- Second: Belief in cooperation as a part of any professional worker's job.
- Third: Recognition of the fact that roles of county extension agents and roles of teachers of vocational agriculture are complementary.
- Fourth: Realization that communication between county extension agents and teachers of vocational agriculture is important.
- Fifth: Mutual respect of efforts.
- Sixth: Realization of the need for more than one educational agency to serve agriculture.
- Seventh: Belief that the public expects effective working relationships between county extension agents and teachers of vocational agriculture.

* * * * *

The following chapter deals with opinions about working relationships for effective educational programs in agriculture.

CHAPTER V

OPINIONS ABOUT WORKING RELATIONSHIPS FOR EFFECTIVE EDUCATIONAL PROGRAMS IN AGRICULTURE

This chapter consists of the findings with regard to the differences in opinions held by county extension agents and teachers of vocational agriculture concerning their working relationships. The main purpose was to test the first hypothesis of the study, namely, that there are differences in opinions held by county extension agents and teachers of vocational agriculture regarding:

- a. The desirability of carrying out certain activities in their working relationships for effective educational programs in agriculture.
- b. The effect of certain factors involved in their working relationships on educational programs in agriculture.

The chapter is divided into two parts. The first part deals with analysis of the first section of the hypothesis. The second part of the chapter deals with analysis of the second section of the hypothesis.

PART I

Analysis of the Desirability of Carrying Out Activities in Working Relationships

This part is concerned with the analysis of opinions

of the agents and the teachers with respect to the desirability of carrying out certain activities in their working relationships for effective educational programs in agriculture.

Chi-square was calculated to determine whether or not there are differences in opinions between agents and teachers at the .05 or .01 level of confidence. Relevant data are presented in 2 by 2 chi-square tables. Because of the few frequencies at the lower edges of the rating ranges, respondents were grouped into two categories. The first category of 'positive responses' combines those who indicated the activity "desirable" and those who indicated the activity "very desirable." The second category of 'negative, neutral and no responses' combines those who indicated the activity otherwise and/or those who did not respond.

The analysis was focused on whether or not the working relationship activities were considered desirable for effective educational programs in agriculture.

Desirability of investigating needs and examining objectives as part of working relationships:

Opinions of the county extension agents and the teachers of vocational agriculture concerning the desirability of carrying out the activities of this area were approxi-

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mately identical (Table XIX). More than 90% of the two professional groups indicated that carrying out three activities of this area in their working relationships is desirable for effective educational programs in agriculture.

Conducting community agricultural surveys was indicated desirable by a larger percentage of the teachers (80.6%) than that of the agents (71.3%).

In general there was no significant difference in the opinions of the agents and the teachers in the desirability of carrying out the activities of this area in their working relationships.

TABLE XIX

DESIRABILITY OF INVESTIGATING NEEDS AND
EXAMINING OBJECTIVES AS PART OF WORKING RELATIONSHIPS

N1 For Agents 122
N2 For Teachers 180

Activity	Groups	** Negative, Neutral and No Responses		Positive Responses		X ² Value (df=1)	Significance at $\alpha=.05$
		n	%	n	%		
Discussing community needs pertaining to education in agri- culture	A	2	1.6	120	98.4	-	-
	T	4	2.2	176	97.8		
Identifying common edu- cational objectives of extension and vocational agriculture	A	5	4.1	117	95.9	.0912	not sig.
	T	10	5.6	170	94.4		
Conducting community agricultural surveys	A	35	28.7	87	71.3	2.9898	"
	T	35	19.4	145	80.6		
Discussing implications of current trends for program planning in agriculture ..	A	12	9.8	110	90.2	.0073	"
	T	17	9.5	163	90.6		

**A = Agents, and T = Teachers

11-12-54

Chlorophyll a
of *Chlorella* and
of *Scenedesmus*

1. *Chlorella* sp.
2. *Chlorella* sp.
3. *Chlorella* sp.

4. *Chlorella* sp.
5. *Chlorella* sp.

6. *Chlorella* sp.
7. *Chlorella* sp.
8. *Chlorella* sp.

9. *Chlorella* sp.
10. *Chlorella* sp.

Desirability of identifying local potential for launching educational programs in agriculture as part of working relationships:

The agents and the teachers seemed to be quite close in their opinions concerning this area of activities (Table XX). Even though there was no significant difference at the .05 level of confidence, yet there were some variations in responses. The percentages of the agents who indicated the activities of the area desirable were somewhat higher than those of the teachers. In discussing the need for a specialist's help in a particular project the percentage of teachers who indicated this activity desirable was somewhat higher than that of the agents.

In general, teachers and agents considered the area desirable by a range of 69.4 - 95%.

TABLE XX

DESIRABILITY OF IDENTIFYING LOCAL POTENTIAL FOR LAUNCHING
EDUCATIONAL PROGRAMS AS PART OF WORKING RELATIONSHIPS

Activity	Groups	Negative, Neutral and No Responses		Positive Responses		X ² Value (df=1)	Significance at $\alpha = .05$
		n	%	n	%		
Calling each other's attention to competent people who might serve on advisory councils	A	17	13.9	105	86.1	1.1864	not sig.
	T	35	19.5	145	80.6		
Exchanging information about each other's exper- ience with advisory councils	A	33	27.1	89	72.9	.2798	"
	T	55	30.6	125	69.4		
Discussing the need for a specialist's help in a particular project	A	13	10.7	109	89.3	2.6573	"
	T	9	5.0	171	95.0		
Discussing instructional materials, space, and facilities locally avail- able for carrying out educational programs in agriculture	A	21	17.2	101	82.8	.6478	"
	T	39	21.7	141	78.3		

**A = Agents, and T = Teachers.

Desirability of planning educational programs for youth as part of working relationships:

In this area of activities (Table XXI), teachers and agents had almost the same opinions about the desirability of developing educational programs for out-of-school youth in agriculture. Of the agents, 90.2%, and of the teachers, 91.1%, indicated the activity desirable for effective educational programs. A lesser percentage of both the agents (79.5%) and the teachers (79.4%) indicated that developing criteria for agricultural projects of FFA and 4-H club members is desirable. No significant difference was found between the opinions of the two professional groups concerning the desirability of the two activities.

A significant difference at .05 level of confidence was found in their opinions about the desirability of working out a program of cooperation between 4-H club and FFA. The percentage of the agents who indicated the activity desirable was higher (92.6%) than that of the teachers (82.2%).

Even though the percentages of the teachers and the agents who indicated the activity desirable were high, yet the significant difference in opinions about such an important activity may point out the need for further investigation.

TABLE XXI

DESIRABILITY OF PLANNING EDUCATIONAL PROGRAMS FOR
YOUTH AS PART OF WORKING RELATIONSHIPS

N₁ For Agents 122
N₂ For Teachers 180

Activity	Groups	Negative, Neutral and No Responses		Positive Responses		X ² (df=1)	Value at $\alpha = .05$
		n	%	n	%		
Developing educational programs for out-of- school youth in agri- culture	A	12	9.8	110	90.2	.0058	not sig.
	T	16	8.9	164	91.1		
Developing criteria for agricultural projects of FFA and 4-H club members	A	25	20.5	97	79.5	.0174	"
	T	37	20.6	143	79.4		
Working out a program of cooperation between 4-H club and FFA	A	9	7.4	113	92.6	5.8470	significant
	T	32	17.8	148	82.2		

**A = Agents, and T = Teachers.

Desirability of planning educational programs for farmers as part of working relationships:

Opinions of teachers and agents were very close in indicating the desirability of carrying out the first three activities as shown in Table (XXII). Coordinating educational programs of extension and vocational agriculture for adult farmers was considered desirable by 90.2% of the agents and by 95.6% of the teachers.

A high percentage of the agents (90.2%) indicated that determining supportive roles in helping young and adult farmers adopt farm practices was desirable. Of the teachers, 86.7% indicated the activity desirable.

About the same percentage of the agents (82.0%) and the teachers (82.8%) indicated that organizing ways of conducting educational programs through special interest groups and associations was desirable.

No significant differences in opinions were found concerning the above three activities. But there was a significant difference at .01 level of confidence regarding the desirability of arranging cooperatively meetings in which farmers discuss agricultural problems with local resource personnel. The percentage of the teachers (92.8%) was significantly higher than the percentage of the agents (78.7%) who indicated the activity desirable. An interpretation of this might be that the teachers felt that the agents with their contacts could give important help in arranging for effective meetings.

TABLE XXII

DESIRABILITY OF PLANNING EDUCATIONAL PROGRAMS FOR
FARMERS AS PART OF WORKING RELATIONSHIPS

N₁ For Agents 122
N₂ For Teachers 180

Activity	Groups	Negative, Neutral and No Responses		Positive Responses		X ² Value (df=1)	Significance at $\alpha = .05$
		n	%	n	%		
Coordinating educational programs of extension and vocational agricul- ture for adult farmers ..	A	12	9.8	110	90.2	2.6019	not sig.
	T	8	4.4	172	95.6		
Determining supportive roles in helping young and adult farmers adopt farm practices	A	12	9.8	110	90.2	.5467	"
	T	24	13.3	156	86.7		
Organizing ways of con- ducting educational pro- grams through special interest groups and associations	A	22	18.0	100	82.0	.0008	"
	T	31	17.2	149	82.8		
Arranging for meetings in which farmers discuss agricultural problems with local resource personnel	A	26	21.3	96	78.7	11.6127	significant ^(s)
	T	13	7.2	167	92.8		

**A = Agents, and T = Teachers

(s) Significant also at .01 level of confidence.

Desirability of planning for public relations as part of working relationships:

There was no significant difference in opinions of teachers and agents regarding the desirability of the activities of this area (Table XXIII).

The percentages of respondents who indicated the activities of the area desirable were quite high. Of the agents, 77.0%, and 86.1% of the teachers indicated that sharing responsibility for publicity concerning educational programs in agriculture in the country was desirable. Developing means of securing public reactions to educational programs in agriculture was indicated as desirable by 81.2% of the agents and 78.3% of the teachers.

As compared with these two activities, developing means of publicizing results of evaluating educational programs in agriculture, was considered desirable by lower proportions. Of the agents, 69.7%, and 74.4% of the teachers considered the activity to be desirable.

TABLE XXIII

DESIRABILITY OF PLANNING FOR PUBLIC RELATIONS
AS PART OF WORKING RELATIONSHIPS

N₁ For Agents 122
N₂ For Teachers 180

Activity	Groups	Negative, Neutral and No Responses		Positive Responses		X ² Value (df=1)	Significance at $\alpha = .05$
		n	%	n	%		
Sharing responsibility for publicity concern- ing educational programs in agriculture in the county	A	28	23.0	94	77.0	3.5242	not sig.
	T	25	13.9	155	86.1		
Developing means of securing public re- actions to educational programs in agriculture .	A	23	18.8	99	81.2	.2016	"
	T	39	21.7	141	78.3		
Developing means of publicizing results of evaluating educational programs in agriculture .	A	37	30.3	85	69.7	.6088	"
	T	46	25.6	134	74.4		

**A = Agents and T = Teachers.

Desirability of planning for exhibits and contests as part of working relationships:

High percentages of the agents and the teachers indicated that the two activities in the area were desirable (Table XXIV). A range of 78.3 - 84.4% of the respondents indicated that these were desirable. No significant difference, at the .05 level of confidence was recorded.

TABLE XXIV

DESIRABILITY OF PLANNING FOR EXHIBITS AND
CONTESTS AS PART OF WORKING RELATIONSHIPS

N₁ For Agents 122
N₂ For Teachers 180

Activity	Groups	** Negative, Neutral and No Responses		Positive Responses		X ² Value (df=1)	Significance at $\alpha = .05$
		n	%	n	%		
Working out plans for educational exhibits in agriculture	A	19	15.6	103	84.4	1.3692	not sig.
	T	39	21.7	141	78.3		
Working out uniform stand- ards for contests in agri- culture in the county	A	24	19.7	98	80.3	.1516	"
	T	31	17.2	149	82.8		

**A ' Agents, and T = Teachers.

Desirability of evaluating educational programs in agriculture as part of working relationships:

There seemed to be close agreement rather than differences in the opinions held by the agents and the teachers concerning the desirability of activities of this area (Table XXV). A range of 83.9 - 89.4% of the teachers considered the following three activities in their working relationships important for effective educational programs in agriculture:

1. Securing each other's reactions on newly planned programs.
2. Discussing factors affecting success or failure of educational programs in agriculture.
3. Crediting each other's contribution toward successful educational programs in agriculture.

Lesser percentages of the agents (77.9%) and the teachers (72.8%) indicated that developing criteria for judging effectiveness of local educational programs in agriculture was desirable.

An interpretation of this may be that both professional groups recognized that developing criteria for judging effectiveness is not simple to work out. But regardless of what might be the interpretation, about 3/4 of the respondents indicated that the activity was desirable. Among the teachers and the agents there were no significant differences in their opinions concerning the

activities of the area.

TABLE XXV

DESIRABILITY OF EVALUATING EDUCATIONAL PROGRAMS IN
AGRICULTURE AS PART OF WORKING RELATIONSHIPSN₁ For Agents 122
N₂ For Teachers 180

Activity	Groups	Negative, Neutral and No Responses		Positive Responses		X ² Value (df=1)	Significance at $\alpha = .05$
		n	%	n	%		
Securing each other's reactions on newly planned programs	A	16	13.1	106	86.9	.2486	not sig.
	T	19	10.6	161	89.4		
Developing criteria for judging effectiveness of local educational pro- grams in agriculture	A	27	22.1	95	77.9	.7487	"
	T	49	27.2	131	72.8		
Discussing factors affecting success or failure of educational programs in agriculture .	A	20	16.4	102	83.6	.0088	"
	T	29	16.1	151	83.9		
Crediting each other's contribution toward successful educational programs in agriculture .	A	14	11.5	108	88.5	.3294	"
	T	26	14.4	154	85.6		

**A = Agents, and T = Teachers.

Desirability of implementing educational programs in agriculture as part of working relationships:

High percentages of both the agents and the teachers indicated that the activities in this area were desirable, with no significant differences found among their opinions regarding each of the six activities (Table XXVI). But there were some variations in responses among the activities.

A range of 71.7 - 73.8% of the teachers and the agents indicated that serving as consultants on each other's advisory committees is desirable. A much higher range (89.3 - 93.3%) of the respondents indicated that utilizing each other's special knowledge and abilities in teaching situations is desirable.

An interpretation of the differences in the percentages of the respondents regarding the first and the second activity may be that the teachers and the agents considered it more desirable to consult and teach for each other's programs on a voluntary and individual basis than to serve on advisory committees on a commitment basis.

A very close but also high range of 87.2 - 90.0% of teachers and agents considered that conducting joint demonstrations and fairs is desirable. But a wider range of 79.5 - 94.4% of the respondents considered that exchanging educational aids and facilities is desirable. Exchanging printed and duplicated materials of mutual interest seemed to rank higher than exchanging use of educational equipment and facilities.

TABLE XXVI

DESIRABILITY OF IMPLEMENTING EDUCATIONAL PROGRAMS
IN AGRICULTURE AS PART OF WORKING RELATIONSHIPS

N₁ For Agents 122
N₂ For Teachers 180

Activity	Groups	** Negative, Neutral and No Responses		Positive Responses		X ² Value (df=1)	Significance at $\alpha = .05$
		n	%	n	%		
A. Consulting and teaching for each other's programs:							
Serving as consultants	A	32	26.2	90	73.8		
on each other's advisory committees	T	51	28.3	129	71.7	.0316	not sig.
Utilizing each other's special knowledge and abilities in particular teaching situations in agriculture							
	A	13	10.7	109	89.3	1.0438	" "
	T	12	6.7	168	93.3		
B. Conducting demonstrations and fairs:							
Conducting joint demonstration projects in agriculture	A	15	12.3	107	87.7	.1930	" "
	T	18	10.0	162	90.0		
Conducting county and other agricultural fairs	A	13	10.7	109	89.3	.1425	" "
	T	23	12.8	157	87.2		
C. Exchanging educational aids and facilities:							
Exchanging printed and duplicated materials of mutual interest	A	10	8.2	112	91.8	.4488	" "
	T	10	5.6	170	94.4		
Exchanging use of educational equipment and facilities	A	25	20.5	97	79.5	1.8417	" "
	T	25	13.9	155	86.1		

**A = Agents, and T = Teachers.

Summary of Part I:

In this part of the chapter the first section of the hypothesis was analyzed--that there is difference in opinions held by county extension agents and teachers of vocational agriculture concerning the desirability of carrying out certain activities in their working relationships for effective educational programs in agriculture.

Opinions of the two professional groups differed significantly at the .05 level of confidence regarding the following:

In the area of planning educational programs
for youth:

1. Working out a program of cooperation between 4-H club and FFA.

They differed significantly at the .01 level of confidence regarding the following:

In the area of planning educational programs
for farmers:

2. Arranging for meetings in which farmers discuss agricultural problems with local resource persons.

Regarding the first activity, a higher percentage of agents than of teachers indicated that the activity was desirable. The reverse was true regarding the second activity (Figure 3).

and was
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the first activity, a number of
agents from the office indicated that the activity was
described. The report was then regarding the second
the (Figure 2).

Concerning the remaining activities, there was no evidence that the teachers and the agents disagreed about the desirability of carrying them out in their working relationships for effective educational programs in agriculture.



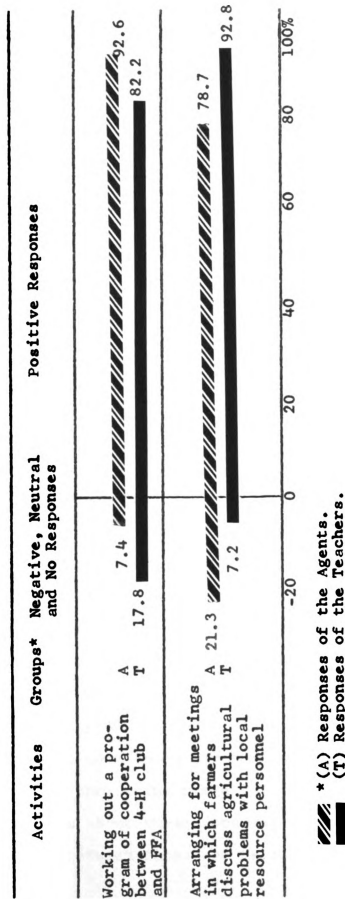


Figure 3 - Differences in opinions regarding the desirability of carrying out activities in working relationships.
 (Data taken from Tables XXI and XXII)

PART II

Analysis of the Effect of Certain Factors In volved in Working Relationships on Educational Programs in Agriculture

This part of the chapter is concerned with the analysis of opinions of the agents and the teachers with respect to whether or not certain factors involved in their working relationships hamper or promote effective educational programs in agriculture.

Chi-square was calculated to determine the differences in opinions at the .05 level of confidence. Significant differences at .01 level of confidence were also recorded. Relevant data are presented in 2 by 3 contingency tables.

In these tables respondents were grouped into three categories. The first category of 'positive effect' consists of those who indicated the factor "promotes some" and/or those who indicated the factor "promotes much." The second category of 'neutral and no responses' consists of those who indicated the factor "neither hampers nor promotes" and those who did not respond. The third category of 'negative effect' consists of those who indicated the factor "hampers some" and/or those who indicated the factor "hampers much."

In some cases few frequencies were observed at one edge of the rating range. To calculate differences in opinions about these factors, respondents were dichotomized either between those who responded positively and those who

responded otherwise, or between those who responded negatively and those who responded otherwise, depending upon the direction of the responses.

Attention is focused on whether the factor was considered as hampering or promoting effective educational programs in agriculture.

Effect of personality and general characteristics:

It was interesting to analyze opinions of the agents and the teachers regarding factors of personality and general characteristics involved in their working relationships.

Table (XXVII) shows that the teachers and the agents differed significantly at the .01 level of confidence in their opinions concerning the personality factor. Of the agents, 32.0% indicated a negative effect of the personality of the teachers with whom they had working relationships. A much lower percentage of teachers (17.8%) indicated a negative effect of the personality of the agents. A range of 28.9 - 29.5% of both respondents indicated that personality has no effect in their working relationships. On the other hand, 38.5% of the agents indicated a positive effect of the personality of the teachers. A higher percentage of the teachers (53.3%) indicated a positive effect of the personality of the agents. This might suggest a deeper sociological study about personality in relation to the working relationships of the two professional groups.

Teachers and agents also had significantly different opinions at the .01 level of confidence about the effect of degree of academic education as a factor in their working relationships. Of the agents, 27.8% indicated a positive effect of the degree of academic education of the teachers with whom they had working relationships. A higher

percentage of the teachers (50%) indicated a positive effect of the degree of academic education of the agents. An interpretation of this might be that the agents' higher level of education as was found in Chapter IV was considered favorably by the teachers. If this is true, advanced study by teachers might help them in their working relationships as well as in their educational work.

There was no evidence that the teachers and the agents disagreed in their opinions concerning the remaining factors. In fact, their opinions were very similar. Of the respondents, a range of 18.8 - 31.1% indicated a positive effect of the similarity of their age. A lower percentage (6.1 - 7.4%) indicated that the factor has a negative effect.

Closeness of personal friendship was considered to have a positive effect by approximately half of both groups. A very small percentage (2.5 - 5.6%) considered the factor to have a negative effect.

The other's initiation was considered to have a positive effect by a range of 51.1 - 55.7% of the respondents. A lower range of 16.1 - 19.7% considered the factor to have a negative effect. Self-initiation was considered to have a positive effect by about 60% of the respondents. A lower range of 11.7 - 16.4% indicated that the factor has a negative effect.

A democratic way of consultation was considered to

have a positive effect by 55.6% of the teachers and by 52.5% of the agents. A very small range of 9.0 - 12.2% of the respondents considered the factor to have a negative effect.

TABLE XXVII
EFFECT OF PERSONALITY AND GENERAL CHARACTERISTICS

N₁ For Agents 122
N₂ For Teachers 180

Factor	Groups	Neutral and Responses				Positive Effect %	X ² Value (df=1)	Significance at $\alpha = .05$
		n	Effect %	n	No Responses %	n		
Personality of the other worker	A 39 T 32	32.0 17.8	36 52	29.5 28.9	47 96	38.5 53.3	9.6046	significant (s)
Similarity of our age	A 9 T 11	7.4 6.1	90 113	73.8 62.8	23 56	18.8 31.1	5.6604	not sig.
Closeness of personal friendship ..	A 3 T 10	2.5 5.6	58 78	47.5 43.3	61 92	50.0 51.1	.0052 *	" "
Initiative in contacting me	A 24 T 29	19.7 16.1	30 59	24.6 32.8	68 92	55.7 51.1	2.4732	" "
Initiative in contacting him	A 20 T 21	16.4 11.7	28 51	22.9 28.3	74 108	60.7 60.0	2.0072	" "
His democratic way of consultation	A 11 T 22	9.0 12.2	47 58	38.5 32.2	64 100	52.5 55.6	1.6430	" "
Degree of his academic education	A 3 T 2	2.5 1.1	85 88	69.7 48.9	34 90	27.8 50.0	13.8162	*significant (s)

*X² value was calculated by dichotomizing responses between the positive and otherwise since the frequencies in the cells on the negative side were less than 5.
Degree of freedom in this case = 1.

**A = Agents, and T = Teachers.

(s) Significant also at .01 level of confidence.

Effect of education and training:

The agents and the teachers exhibited significant differences at the .01 level of confidence in their opinions about the similarities of education and training.

Table (XXVIII) shows that, in general, the proportions of teachers (37.2 - 55.6%) who indicated a positive effect of the similarities of education and training were higher than those of the agents (18.8 - 34.4%). Very few of both groups (.8 - 6.5%) considered the similarities of education and training to have a negative effect.

The percentages of the agents (61.5 - 74.6%) who were neutral and those who did not respond were higher than the percentages of the teachers.

An interpretation of the difference may be that more teachers than agents consider similarities of education and training to be common ties which constitute a basis for effective working relationships.

The agents and teachers differed significantly at the .01 level of confidence in their opinions about whether differences in in-service training in technical subject matter promote or hamper effective educational programs in agriculture. Of the agents, 22.1% indicated a positive effect of the factor, and 16.4% considered the factor to have a negative effect. On the other hand, 27.2% of the teachers indicated a positive effect of this factor, and only 5.5% indicated the factor to have a negative effect.

Those who took the neutral position were 61.5% of the agents and 67.2% of the teachers. The proportion of the agents in comparison to that of the teachers who considered the factor to have a negative effect was about three times as great. This might indicate that a difference in in-service training in technical subject matter tends to have a negative effect on educational programs.

Differences in educational specialization and in in-service training in teaching methods were considered to have a positive effect by a range of 21.1 - 25.6% of the teachers, but by a lower range of 13.1 - 15.6% of the agents. On the other hand, these differences were considered to have a negative effect by a range of 6.5 - 13.1% of the agents, but by a lower range of 5.6 - 7.2% of the teachers. A majority of the respondents (68.9 - 77.9%) took a neutral position in considering these differences. These variations were not significant at the .05 level of confidence.

TABLE XXVIII

EFFECT OF EDUCATION AND TRAINING

N₁ For Agents 122
N₂ For Teachers 180

Factor	** Groups	Negative Effect		Neutral and No Responses		Positive Effect		X ² Value (df=2)	Significance at $\alpha = .05$
		n	%	n	%	n	%		
A. Similarities of Education and Training:									
Similarity of our educational specialization ...	A	1	.8	79	64.8	42	34.4	12.1974*	significant (g)
	T	4	2.2	76	42.2	100	55.6		
Similarity of our inservice training in technical sub-ject matter	A	7	5.7	75	61.5	40	32.8	7.3038*	"
	T	3	1.7	89	49.4	88	48.9		
Similarity of our inservice training in teaching methods	A	8	6.6	91	74.6	23	18.8	12.9960	"
	T	5	2.8	108	60.0	67	37.2		
B. Differences of Education and Training:									
Difference of our educational specialization ...	A	8	6.5	95	77.9	19	15.6	4.2972	not sig.
	T	10	5.5	124	68.9	46	25.6		
Difference of our inservice training in technical sub-ject matter	A	20	16.4	75	61.5	27	22.1	9.7170	significant (g)
	T	10	5.6	121	67.2	49	27.2		
Difference of our inservice training in teaching methods	A	16	13.1	90	73.8	16	13.1	5.2740	not sig.
	T	13	7.2	129	71.7	38	21.1		

*X² value was calculated by dichotomizing responses between the positive and otherwise since the frequencies in the cells on the negative side were less than 5. Degree of freedom in this case = 1.

**A = Agents, and T = Teachers.

(s)Significant also at .01 level of confidence.

Effect of 'experience':

Table (XXIX) shows almost identical opinions of the teachers and the agents concerning their own experience in working with rural people. Approximately 70% of both groups indicated that the factor has a positive effect on educational programs. About 26% of the respondents took the neutral position and a negligible percentage of both (about 3%) considered the factor to have a negative effect.

Regarding the remaining factors of the area, opinions of the agents and the teachers differed significantly at .05 level of confidence.

A higher percentage of the teachers (73.3%) considered that the experience of the agents in working with rural people promotes effective educational programs in agriculture. A lower percentage of the agents (62.3%) considered that experience of the teachers in working with rural people has the same effect. The case may point out that the teachers, in contrast to the agents, need more experience in working with rural people.

Experience in the field of agriculture was considered a factor which promotes effectiveness of educational programs by a range of 64.7 - 78.3% of the respondents. But the interesting observation was that a higher percentage of the teachers (76.7 - 78.3%) than that of the agents (64.7 - 65.6%) considered the factor to have a positive effect. An interpretation of this might be that differences

in work orientation toward the field of agriculture exist
at the present time.

TABLE XXIX
EFFECT OF 'EXPERIENCE'

N₁ For Agents 122
N₂ For Teachers 180

Factor	** Groups	Negative Effect		Neutral and No Responses		Positive Effect		X ² Value (df=2)	Significance at $\alpha = .05$
		n	%	n	%	n	%		
His experience in working with rural people	A	12	9.8	34	27.9	76	62.3	6.1332	significant
	T	7	3.9	41	22.8	132	73.3		
My experience in working with rural people	A	4	3.3	32	26.2	86	70.5	.0136*	not sig.
	T	6	3.3	47	26.1	127	70.6		
His experience in the field of agriculture	A	8	6.5	34	27.9	80	65.6	5.3991*	significant
	T	2	1.1	37	20.6	141	78.3		
My experience in the field of agriculture	A	9	7.4	34	27.9	79	64.7	4.5303*	significant
	T	3	1.7	39	21.6	138	76.7		

*X² value was calculated by dichotomizing responses between the positive and other-wise since the frequencies in the cells on the negative side were less than 5. Degree of freedom in this case = 1.

**A = Agents, and T = Teachers.

Effect of interorganizational relationships:

The largest differences, significant at the .01 level of confidence, between the agents and the teachers were found in their opinions about the relationships between school administrators and the county extension staff. Of the agents, 62.3% considered the relationships to have a positive effect on educational programs, but only 23.3% of the teachers considered that as true. Twelve-and-a-half per cent of the agents and 15.6% of the teachers considered these relationships to have a negative effect. The percentage of those who preferred the neutral position among the teachers was much higher (61.1%) than that of the agents (25.4%).

This situation may suggest an important aspect for further investigation; that is, the attitude of school administrators toward working relationships between teachers of vocational agriculture and county extension agents.

Regarding the remaining factors of this area, table (XXX) shows no significant differences at the .05 level of confidence.

The existence and activity of a county agricultural council was considered to have a positive effect by 44.3% of the agents and 50.6% of the teachers.

Relationships between the leaders of vocational agriculture and the cooperative extension staff at the state level was considered to have a positive effect by a rela-

tively low percentage of the respondents (39.3 - 40.6%). A considerable proportion of the agents (19.7%) and 12.8% of the teachers considered these relationships to have a negative effect. This observation may suggest further investigation.

Existence of memoranda of understanding between Cooperative Extension and vocational agriculture was considered a neutral factor by 68% of the agents and 52.2% of the teachers. A proportion of 29.5% of the agents and 39.5% of the teachers considered the effect of the factor to be positive.

About views passed down from state levels, 23.8% of the agents considered the factor to have a negative effect and a little more than that (29.5%) considered the factor to have a positive effect. A lower percentage of the teachers (13.3%) considered the factor to have a negative effect and 31.7% considered it to have a positive effect. About half of the respondents saw these views to be neutral in effect. Only less than one-third of the respondents regarded these views as promoting effective educational programs in agriculture. The remainder of the respondents (more than two-thirds) regarded these views either as neutral or hampering the effectiveness of educational programs. Why this was the case is a matter for further investigation.

Investigation
The first step in the investigation of a case of suspected fraud is to determine the facts of the case. This is done by interviewing the parties involved, reviewing the relevant documents, and conducting a search of the public records. Once the facts are established, the next step is to determine the legal issues involved in the case. This is done by consulting the relevant laws and precedents. Finally, the case is decided based on the facts and the law.

TABLE XXX
EFFECT OF INTERORGANIZATIONAL RELATIONSHIPS

Factor	** Groups	Neutral and				X ² Value (df=2)	Significance at $\alpha = .05$		
		Negative Effect		No Responses				Positive Effect	
		n	%	n	%			n	%
Existence and ac- tivity of county agricultural council	A	2	1.6	66	55.1	54	44.3	.9154*	not sig.
	T	18	10.0	71	39.4	91	50.6		
Relationships be- tween leaders of vocational agri- culture and Cooper- ative Extension staff at state level	A	24	19.7	50	41.0	48	39.3	2.7768	"
	T	23	12.8	84	46.6	73	40.6		
Relationships be- tween school ad- ministrators and county extension staff	A	15	12.3	31	25.4	76	62.3	48.6444	significant ^(s)
	T	28	15.6	110	61.1	42	23.3		
Existence of mem- oranda of under- standing between Cooperative Exten- sion and vocational agriculture	A	3	2.5	83	68.0	36	29.5	2.7188*	not sig.
	T	15	8.3	94	52.2	71	39.5		
Views passed down from state levels.	A	29	23.8	57	46.7	36	29.5	5.5884	"
	T	24	13.3	99	55.0	57	31.7		

*X² value was calculated by dichotomizing responses between the positive and otherwise since the frequencies in the cells on the negative side were less than 5.
Degree of freedom in this case = 1.

**A = Agents, and T = Teachers.

(s) Significant also at .01 level of confidence.

Effect of intraorganizational requirements:

Intraorganizational requirements of the Cooperative Extension Service and of the school system seemed to have the most direct and decisive effect on educational programs.

Table (XXXI) shows a noticeable tendency in the direction of responses toward the negative effect rather than toward the positive effect. The teachers and the agents who indicated the positive effect of the factors of the area are few (approximately 10%). The percentages of those who considered these factors to have a negative effect varied but were higher. Of the agents, 14.8%, and of the teachers 20% considered the lack of clarity of functions of extension in agriculture and vocational agriculture to have a negative effect. A majority of the respondents (70 - 76.2%) took a neutral stand.

The need for separate identity of vocational agriculture programs and extension work in agriculture was considered to have a negative effect by 22.1% of the agents and 15% of the teachers. A majority of the respondents (68.1 - 75%) took a neutral stand.

Difficulty in scheduling was the factor considered to have a negative effect by the highest percentages of the agents (67.2%) and of the teachers (72%) who responded to the factors of this area.

Lack of adequate time for desirable working relationships was also considered to have a negative effect by

62.3% of the agents and 66.7% of the teachers. Why the difficulty in scheduling, and why the lack of adequate time for desirable working relationships, are matters for further investigations.

Attention is called to the fact that, in responding to each item in this area, there have not been significant differences in the opinions between the agents and the teachers, but responses among the items varied considerably.

TABLE XXXI
EFFECT OF INTRAORGANIZATIONAL REQUIREMENTS

Factor	** Groups	Neutral and				X ² Value (df=2)	Significance at $\alpha = .05$
		Negative Effect	No Responses	Positive Effect			
		n	n	n	%		
Lack of clarity of functions (eg. Smith Lever and Smith- Hughes Acts do not clearly distinguish functions of extension in agriculture and vocational agriculture)	A	18	93	11	76.2	1.5815	not sig.
Difficulty in scheduling (eg. teachers cannot get away when school is in session and extension agents have many nights tied up)	T	36	126	18	70.0		
Lack of adequate time for desirable working relationships between county extension agents and teachers of vocational agriculture .	A	82	28	12	23.0	1.4322	" "
Need for separate identity of vocational agricultural programs and extension work in agriculture.	T	131	37	12	20.5		
	A	76	33	13	27.0	.7562	" "
	T	120	41	19	22.8		
	A	27	83	12	68.1	2.5590	" "
	T	27	135	18	75.0		

**A = Agents, and T = Teachers.

Effect of perceiving the importance of working relationships:

The responses to the items of this area showed the direction and importance of working relationships between the two professional groups.

From table (XXXII) it is safe to state that the importance of working relationships has been favorably perceived by a majority, and unfavorably considered by a minority of less than 10% of all the respondents. In addition to that, there was not a significant difference at the .05 level of confidence between the agents and the teachers in their opinions about any of the items. On the contrary, their responses were very close. But there was variation in responses to different items. The factor which rated the lowest in percentage of responses was the belief that the public expects effective working relationships between extension agents and teachers of vocational agriculture. Whether the public or the respondents are aware of the situation is a matter for further investigation.

Mutual respect of efforts was considered to have a positive effect on educational programs by 67.2% of the agents and 66.1% of the teachers.

Regarding the importance of communication between the two groups, 78.9% of the agents and 77.2% of the teachers considered it to have a positive effect.

A very high percentage of the agents (82%) and 75.6% of the teachers recognized that their roles are complementary and that this promotes effective educational programs in agriculture. This result should be important for those who plan and implement local educational programs in agriculture.

A large percentage of the respondents (65.6 - 67.2%) recognized the need for more than one educational agency to serve agriculture. An even larger percentage of the respondents (78.9 - 82.8%) believed that cooperation has a positive effect on educational programs.

The welfare of the people was considered a factor promoting effective educational programs by a high range (82 - 83.3%) of the agents and the teachers.

TABLE XXXII

EFFECT OF PERCEIVING THE IMPORTANCE OF WORKING RELATIONSHIPS

N₁ For Agents 122
N₂ For Teachers 180

Factor	Groups	Neutral and Responses				Positive Effect		X ² Value (df=2)	Significance at $\alpha = .05$
		Negative Effect	n	%	No Responses	n	%		
Belief that the public expects effective working relationships between extension agents and teachers of vocational agriculture									
	A	6	4.9	63	51.6	53	43.5	.3688	not sig.
	T	11	6.1	96	53.3	73	40.6		
Mutual respect of efforts									
	A	6	4.9	34	27.9	82	67.2	.3974	"
	T	12	6.7	49	27.2	119	66.1		
Realization that communication between us is important									
	A	11	9.0	15	12.3	96	78.7	.1609	"
	T	16	8.9	25	13.9	139	77.2		
Recognition of the fact that our roles are complementary. Realization of the need for more than one educational agency to serve agriculture									
	A	6	4.9	16	13.1	100	82.0	2.0404	"
	T	15	8.3	29	16.1	136	75.6		
Belief in cooperation as a part of any professional worker's job									
	A	9	7.4	33	27.0	80	65.6	.7950	"
	T	17	9.5	42	23.3	121	67.2		
Welfare of the people we serve ..									
	A	6	4.9	15	12.3	101	82.8	.7360	"
	T	10	5.6	28	15.5	142	78.9		
	A	5	4.1	17	13.9	100	82.0	.0235*	"
	T	4	2.2	26	14.5	150	83.3		

*X² value was calculated by dichotomizing responses between the positive and otherwise since the frequencies in the cells on the negative side were less than 5. Degree of freedom in this case = 1.

**A = Agents, and T = Teachers.

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Summary of Part II:

In the analysis presented in this part of the chapter the second section of the first hypothesis was discussed-- that there are differences in opinions held by county extension agents and teachers of vocational agriculture regarding the effect of certain factors in their working relationships on educational programs in agriculture.

A significant difference at the .01 level of confidence was found in opinions of the two groups regarding the effect of the following factors on educational programs in agriculture:

In the area of personality and general characteristics:

1. The other's personality.
2. Degree of academic education.

In the area of education and training:

3. Similarity of educational specialization.
4. Similarity of in-service training in technical subject matter.
5. Difference of in-service training in technical subject matter.
6. Similarity of in-service training in teaching methods.

In the area of 'experience' differences in opinions were found significant, at the .05 level of confidence regarding the following factors:

7. The other's experience in working with rural people.
8. The other's experience in the field of agriculture.
9. One's experience in the field of agriculture.

An interesting observation about the differences in opinions between the agents and the teachers is that in all the nine factors above, the percentages of teachers who considered the factors to have positive effect on educational programs were higher than those of the agents (Figure 4).

In the area of interorganizational relationships, a significant difference between the two groups was found at the .05 level of confidence in responses to the following factor:

10. Relationships between school administrators and county extension staff.

Responses to this factor were interesting. The percentage of the agents who considered the factor to have a positive effect on educational programs was about three times as great as that of the teachers (Figure 4). The result should be an important topic for further study.

Concerning the remaining factors, there was no evidence that the teachers and the agents disagreed in opinions about their effects.

In conclusion, responses of the agents and the teachers tended to indicate positive or neutral effects of all the factors except for the intraorganizational factors which were viewed mostly to have a negative effect on educational programs in agriculture.

★ ★ ★ ★ ★

The following chapter deals with the relationship of background characteristics and opinions regarding working relationships.

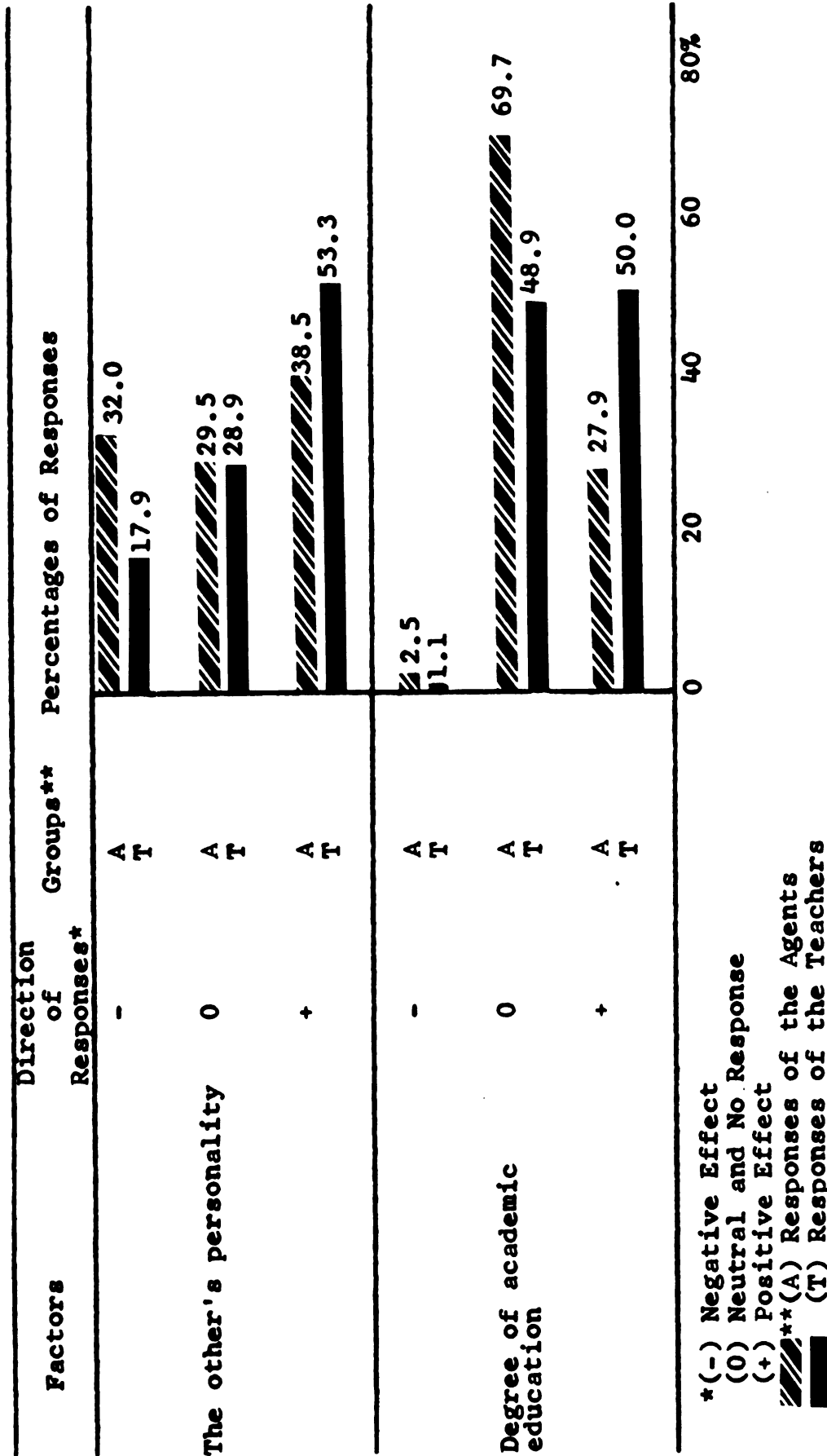


Figure 4 - Differences in opinions regarding the effect of factors involved in working relationships.

(Data taken from Table XXVII)

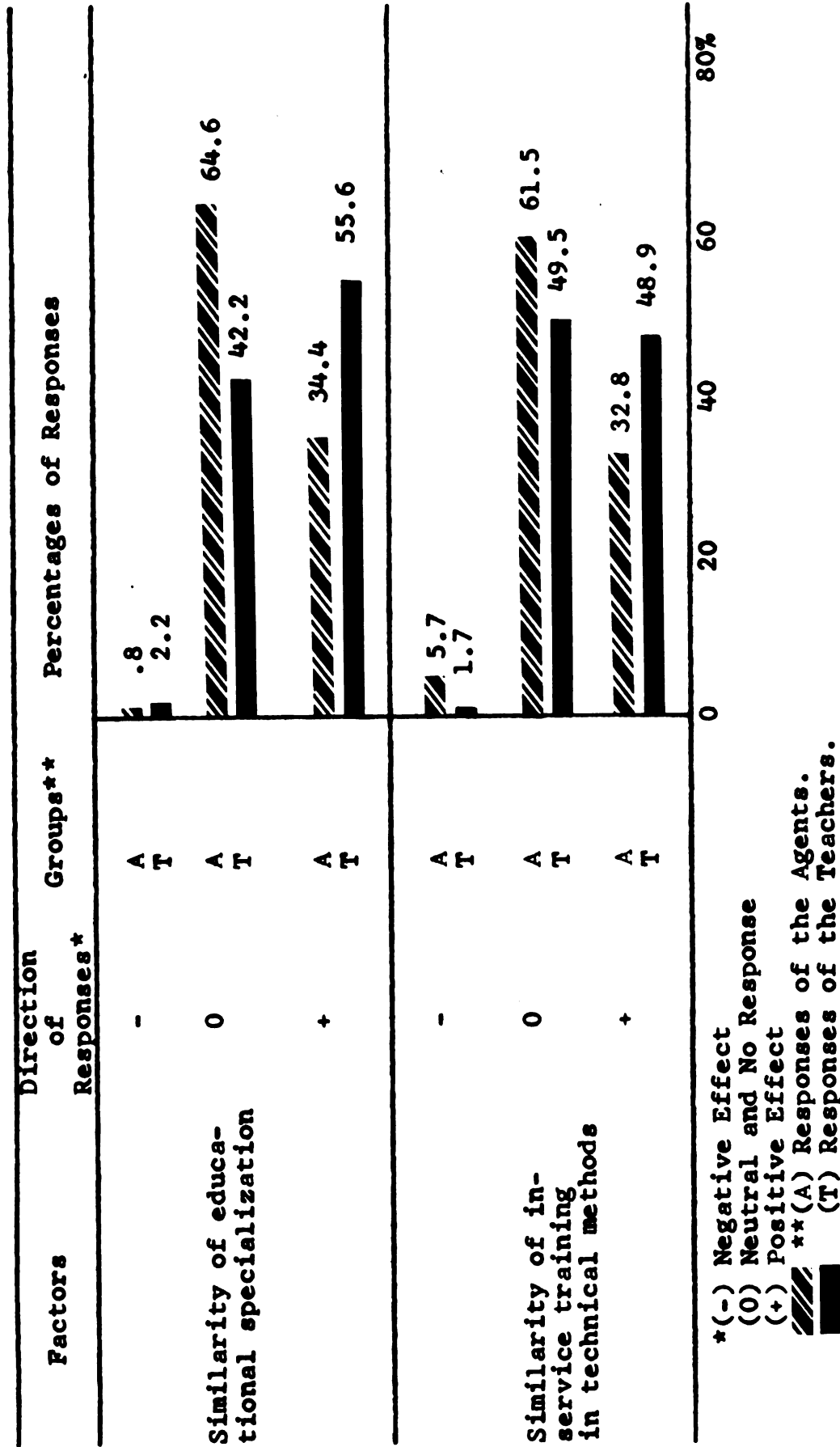


Figure 4 - Continued (Data taken from Table XXVIII)

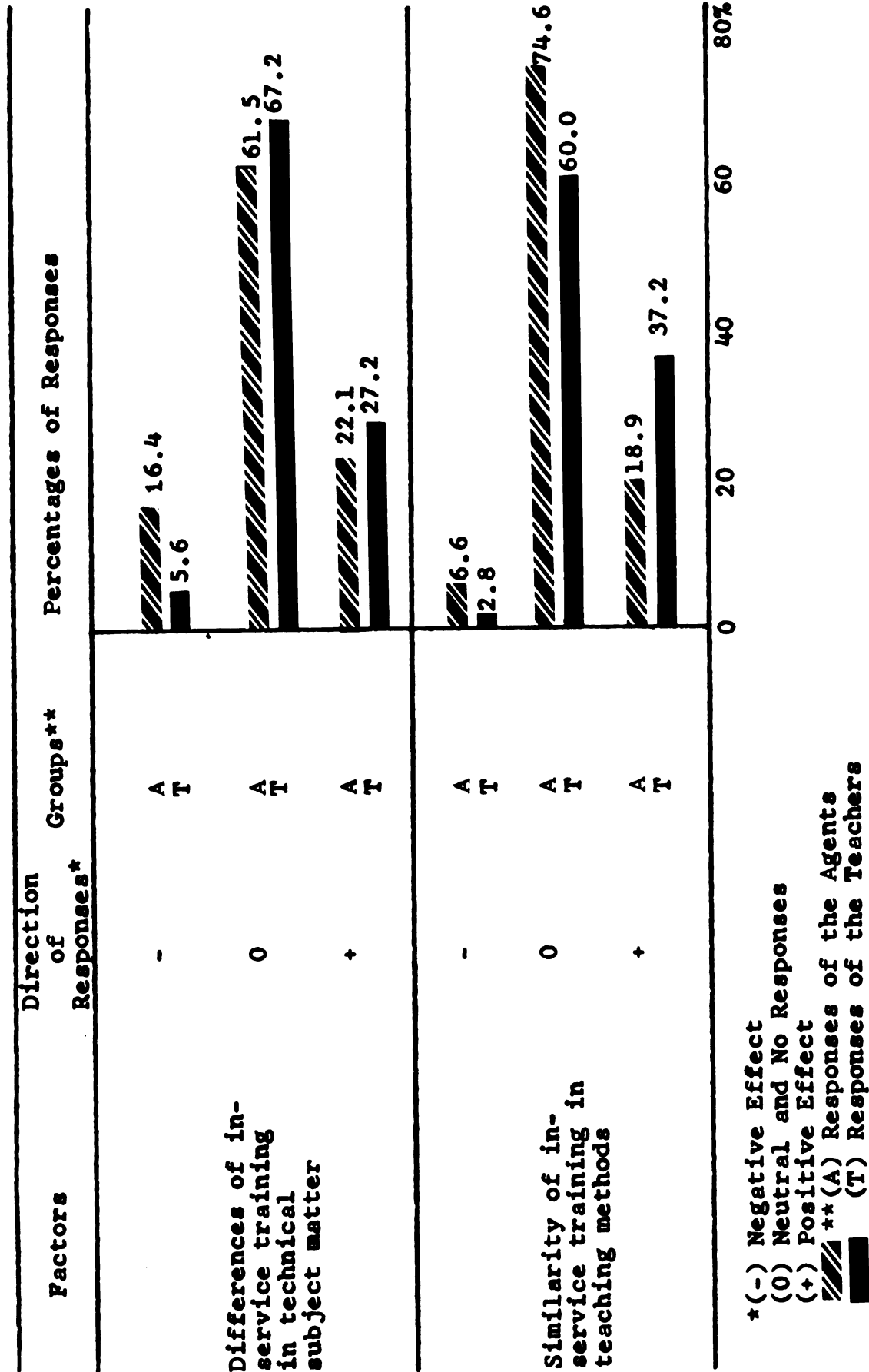
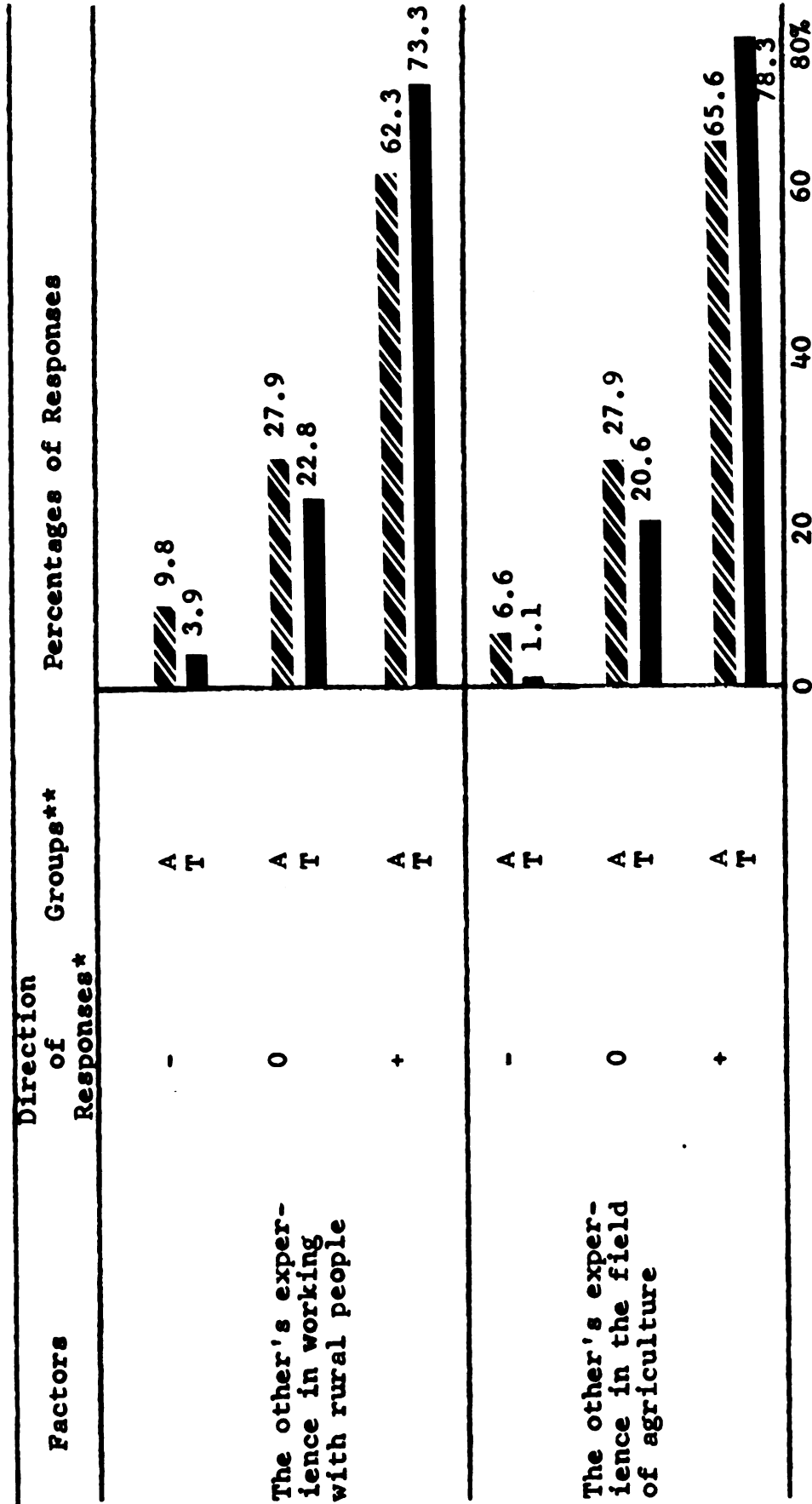
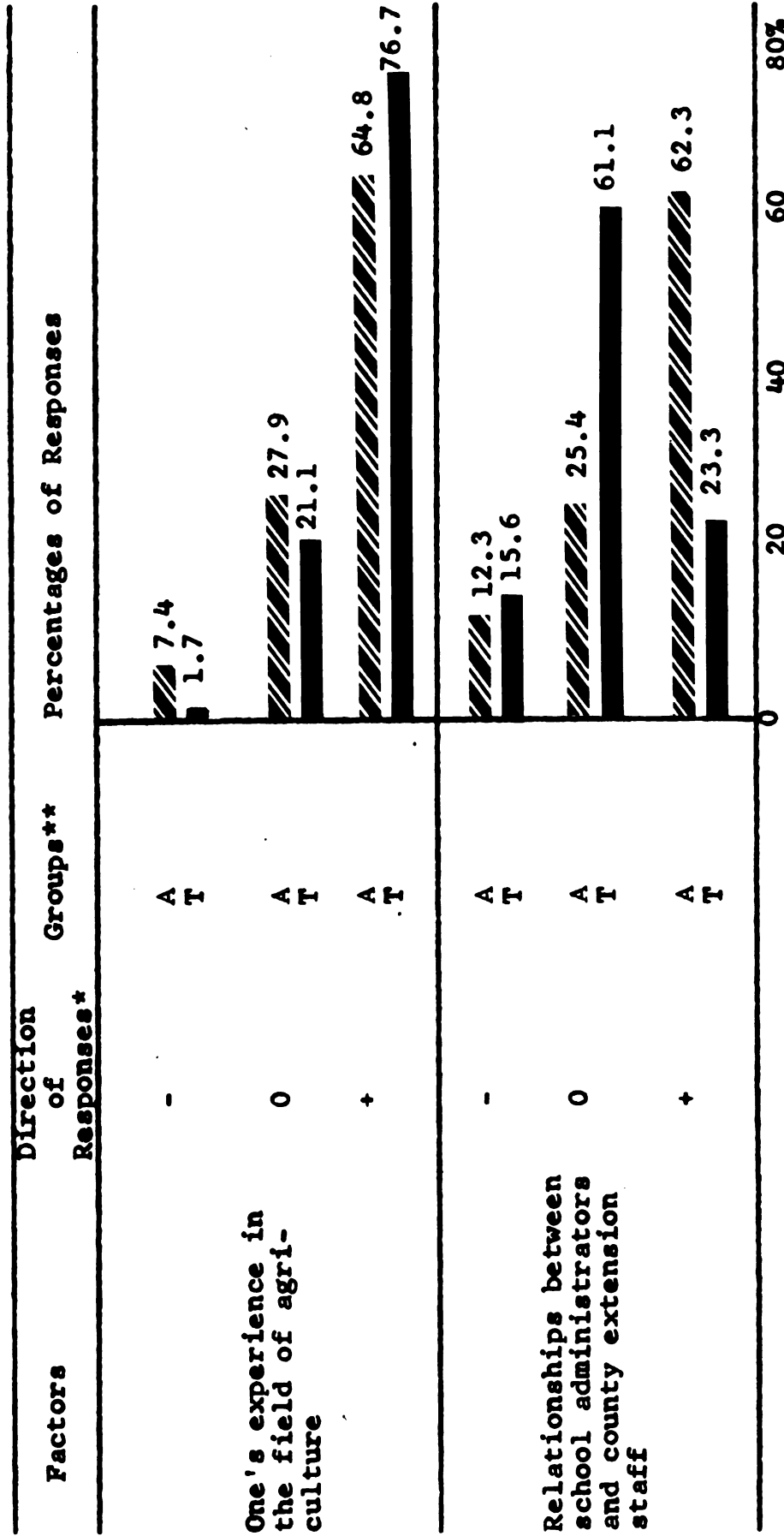


Figure 4 - Continued (Data taken from Table XVIII)



*(-) Negative Effect
 (0) Neutral and No Responses
 (+) Positive Effect
 ** (A) Responses of the Agents
 (T) Responses of the Teachers

Figure 4 - Continued (Data taken from Table XXIX)



*(-) Negative Effect
 (0) Neutral and No Responses
 (+) Positive Effect
 // (A) Responses of the Agents
 ■ (T) Responses of the Teachers

Figure 4 - Continued (Data taken from Tables XXIX and XXX)



CHAPTER VI

BACKGROUND CHARACTERISTICS AND OPINIONS REGARDING WORKING RELATIONSHIPS

Age, college degrees achieved and length of experience of the county extension agents and the teachers of vocational agriculture are "given" characteristics. These characteristics are "given" in the sense that they are related to the composition¹ of each group.

Even though these background characteristics are not the entire base of relationships between the two groups, yet they may "set the limits to the range of variation possible for the two groups, which are somewhat differently organized."²

In this chapter, taking this part of 'Homan's' theory into consideration, age, college degrees achieved, and length of experience of both professional groups were related to their opinions about activities dealing with implementing educational programs in agriculture. The three background characteristics were also related to opinions of the two groups regarding factors which deal with intra-organizational requirements of extension and vocational agriculture.

The purposes of analyzing the relevant data were to

¹Homans, op. cit., p. 446.

²Ibid., p. 447.

test the second hypothesis of the study, namely that there is a relationship between selected background characteristics such as age, degrees achieved and length of experience, and opinions held by county extension agents and by teachers of vocational agriculture regarding:

- a. The desirability of carrying out cooperatively certain activities for implementing effective educational programs in agriculture.
- b. The effect of certain intraorganizational factors on educational programs in agriculture.

To test the first section of the hypothesis, chi-square was calculated to determine whether or not there are associations at the .05 or .01 level of confidence between the background characteristics and opinions expressed by respondents. The results were presented in 2 by 2 tables. Because of the few frequencies at the lower edges of the rating ranges, respondents were grouped into two categories. The first category of 'positive responses' combines those who indicated the activity "desirable" and those who indicated the activity "very desirable." The second category of 'negative, neutral and no responses' combines those who indicated the activity otherwise and/or those who did not respond.

In testing the second section of the hypothesis, chi-square was calculated to determine whether or not there are associations at .05 or .01 level of confidence between the

background characteristics and opinions expressed by respondents. The results were presented in 2 by 3 contingency tables. In these tables respondents were grouped into three categories. The first category of 'positive effect' consists of those who indicated the factor "promotes some" and/or those who indicated the factor "promotes much." The second category of 'neutral effect and no response' consists of those who indicated the factor "neither hampers nor promotes" and those who did not respond. The third category of 'negative effect' consists of those who indicated the factor "hampers some" and/or those who indicated the factor "hampers much."

Age and opinions regarding cooperation in implementing educational programs in agriculture:

A general observation from Table (XXXIII) is that opinions of the majority of the teachers; younger and older than 35 years indicated that carrying out the activities of the area is desirable. No significant relationship was found at the .05 level of confidence between the age of the teachers and their opinions regarding cooperation in this area.

The percentages of the younger agents who indicated that carrying out these activities is desirable were lower than those of the older agents (Table XXXIV). The case was true also with responses of the younger and the older teachers. The only exception was regarding the desirability of 'conducting county and other agricultural fairs.' Proportions of the younger teachers who indicated that carrying out the activity is desirable was larger than that of the older teachers.

A significant relationship was found at the .01 level of confidence between age of the agents and their opinions regarding the desirability of having teachers and agents serve as consultants on each other's advisory committees. The percentage of the younger agents who indicated that carrying out the activity is desirable was 54.5%, but the percentage of the older agents who indicated that carrying out the activity is desirable was much higher (80.9%).

No significant relationship was found between the older and younger agents regarding the remaining activities of the area. Both the older and the younger agents indicated that carrying out these activities is desirable by a high range of 81.8 - 94.4%.

TABLE XXXIII

RELATIONSHIP OF AGE OF THE TEACHERS AND THEIR OPINIONS REGARDING COOPERATION
IN IMPLEMENTING EDUCATIONAL PROGRAMS IN AGRICULTURE

Total of < 35 = 89
Total of > 35 = 91

Activity	Groups	Negative		Neutral, and		Positive Responses	X ² Value	Significance
		n	%	n	%			
Serving as consultants on each other's advisory committees	< 35 yrs	29	32.6	60	67.4		1.1799	not sig.
Conducting joint demonstration projects in agriculture	> 35 yrs	22	24.2	69	75.8			
Conducting county and other agricultural fairs	< 35 yrs	11	12.4	78	87.6		.6322	" "
Utilizing each other's special knowledge and abilities in particular teaching situations in agricul.	> 35 yrs	7	7.7	84	92.3			
Exchanging printed and duplicated materials of mutual interest	< 35 yrs	8	8.9	81	91.0		1.6451	" "
Exchanging use of educational equipment and facilities	> 35 yrs	15	16.5	76	83.5			
	< 35 yrs	7	7.9	82	92.1		.1147	" "
	> 35 yrs	5	5.5	86	94.5			
	< 35 yrs	5	5.6	84	94.4		.0837	" "
	> 35 yrs	5	5.5	86	94.5			
	< 35 yrs	14	15.7	75	84.3		.2410	" "
	> 35 yrs	11	12.1	80	87.9			

TABLE XXXIV

RELATIONSHIP OF AGE OF THE AGENTS AND THEIR OPINIONS REGARDING COOPERATION
IN IMPLEMENTING EDUCATIONAL PROGRAMS IN AGRICULTURE

Total of < 35 = 33
Total of > 25 = 89

Activity	Groups	Negative Neutral, and		Positive Responses		X ² Value (df=1)	Significance at $\alpha = .05$
		n	%	n	%		
Serving as consultants on each other's advisory committees	< 35 yrs	15	45.5	18	54.5	7.3323	significant
	> 35 yrs	17	19.1	72	80.9		
Conducting joint demonstra- tion projects in agricul- ture	< 35 yrs	6	18.2	27	81.8	.8017	not sig.
	> 35 yrs	9	10.1	80	89.9		
Conducting county and other agricultural fairs ..	< 35 yrs	6	18.2	27	81.8	1.7168	"
	> 35 yrs	7	7.9	82	92.1		
Utilizing each other's special knowledge and abil- ities in particular teach- ing situations in agri.....	< 35 yrs	6	18.2	27	81.8	1.7168	"
	> 35 yrs	7	7.9	82	92.1		
Exchanging printed and duplicated materials of mutual interest	< 35 yrs	5	15.2	28	84.8	1.7788	"
	> 35 yrs	5	5.6	84	94.4		
Exchanging use of edu- cational equipment and facilities	< 35 yrs	11	33.3	22	66.7	3.5618	"
	> 35 yrs	14	15.7	75	84.3		

(s) Significant also at .01 level of confidence.

Age and opinions regarding effect of intraorganizational factors.

Table (XXXV) shows that a larger proportion of younger teachers than older ones indicated that the factors of this area have a negative effect on educational programs in agriculture. The reverse was true with the few who indicated that the factors have a positive effect. The proportions of the younger teachers who indicated the positive effect of the factors were smaller than those of the older.

These differences in proportions were not sufficiently high to show significant association between age of the teachers and their opinions regarding the factors of the area.

Among the agents, proportions of the younger who indicated a negative effect of the factors were larger than those of the older (Table XXXVI). The only exception for the case was the opinions of the agents about the 'difficulty in scheduling.' Responses of the older agents (70.8%) who indicated the negative effect of this factor were more than those of the younger (57.6%). An interpretation of responses of the agents with respect to this factor might be that most of those who were older agents were directors and had many duties to carry out which might be in conflict time-wise with schedules of the teachers.

A significant relationship at the .05 level of confidence was found between age of the agents and their



responses toward the factor of the 'lack of clarity of functions' specified in the Smith-Lever and the Smith-Hughes acts. Of the younger agents, 21.2% indicated that this factor has a negative effect, and 18.2% indicated that the factor has a positive effect, 66.6% took the neutral position or did not respond. Of the older agents, 82% took the neutral position or did not respond, 12.4% indicated the negative effect of the factor and a few (5.6%) indicated the positive effect of it. An interpretation of such responses might be that the younger agents have less consensus than the older agents regarding their concept of the functions specified by the Smith-Lever and the Smith-Hughes acts.

TABLE XXXV

RELATIONSHIP OF AGE OF THE TEACHERS AND THEIR OPINIONS REGARDING
EFFECT OF INTRAORGANIZATIONAL FACTORS

Total of <35 = 89
Total of >35 = 91

Factor	Groups	Negative Neutral and Positive				X ² Value (df=2)	Significance at $\alpha = .05$
		Effect	No Response	Effect			
		n	%	n	%		
Lack of clarity of functions (e.g. Smith-Lever and Smith- Hughes acts do not clearly distinguish functions of ex- tension in agriculture and vocational agriculture	<35 yrs	19	21.4	64	71.9	6	6.7
	>35 yrs	17	18.7	62	68.1	12	13.2
2.1209							not sig.
Difficulty in scheduling (e.g. teachers cannot get away when school is in session, and extension agents have many nights tied up)	<35 yrs	66	74.2	18	20.2	5	5.6
	>35 yrs	65	71.4	19	20.9	7	7.7
.3458							" "
Lack of adequate time for desirable working relation- ships between county exten- sion agents and teachers of vocational agriculture	<35 yrs	65	73.0	17	19.1	7	7.9
	>35 yrs	55	60.4	24	26.4	12	13.2
3.3224							" "
Need for separate identity of vocational agricultural programs and extension work in agriculture	<35 yrs	15	16.9	68	78.4	6	6.7
	>35 yrs	12	13.2	66	72.6	12	13.2
2.3577							" "

TABLE XXXVI

RELATIONSHIP OF AGE OF THE AGENTS AND THEIR OPINIONS REGARDING
EFFECT OF INTRAORGANIZATIONAL FACTORS

Total of < 35 = 33
Total of > 35 = 89

Factor	Groups	Negative Effect				Neutral and Positive Effect				X ² Value (df=2)	Significance at $\alpha = .05$
		n	%	n	%	n	%	n	%		
Lack of clarity of functions (e.g. Smith-Lever and Smith-Hughes acts do not clearly distinguish functions of extension in agriculture and vocational agriculture	< 35 yrs	7	21.2	20	60.6	6	18.2			6.9418	significant
	> 35 yrs	11	12.4	73	82.0	5	5.6				
Difficulty in scheduling (e.g. teachers cannot get away when school is in session, and extension agents have many nights tied up) ...	< 35 yrs	19	57.6	8	24.2	6	18.2			3.8613	not sig.
	> 35 yrs	63	70.8	20	22.5	6	6.7				
Lack of adequate time for desirable working relationships between county extension agents and teachers of vocational agriculture	< 35 yrs	21	63.6	7	21.2	5	15.2			1.4409	" "
	> 35 yrs	55	61.8	26	29.2	8	9.0				
Need for separate identity of vocational agricultural programs and extension work in agriculture	< 35 yrs	7	21.2	21	63.6	5	15.2			1.4452	" "
	> 35 yrs	20	22.5	62	69.6	7	7.9				

College degrees achieved and opinions regarding cooperation in implementing educational programs in agriculture:

Table (XXXVII) shows that the majority of the teachers were close in their opinions regarding activities of this area. High percentages of those who had bachelor's degrees and of those who had master's degrees indicated that carrying out these activities is desirable. No significant association was found between degrees achieved by teachers and their opinions with regard to the desirability of cooperation in the area.

Table (XXXVIII) shows that the percentages of the agents who had master's degrees were higher than the percentages of those who had bachelor's degrees in indicating that carrying out these activities is desirable.

A significant association was found at the .01 level of confidence between degrees achieved by the agents and their opinions with regard to the desirability of having teachers and agents serve on each other's advisory committees. Of the agents who had bachelor's degrees, 68% indicated that the activity is desirable. A much higher percentage (91.4%) of the agents who had master's degrees indicated that the activity is desirable.

Now, it might be concluded that the agents with higher college degrees view the merit of having teachers and agents serve on each other's advisory committees more highly than the agents with no graduate studies.

TABLE XXXVII

RELATIONSHIP OF DEGREES ACHIEVED BY THE TEACHERS AND THEIR OPINIONS REGARDING
COOPERATION IN IMPLEMENTING EDUCATIONAL PROGRAMS IN AGRICULTURE

Total of those who had Bachelor's Degrees (B) = 99
Total of those who had Master's Degrees (M) = 81

Activity	Groups*	Negative, Neutral, and		Positive Responses		X ² Value (df=1)	Significance at $\alpha = .05$
		n	%	n	%		
Serving as consultants on each other's advisory committees	B	29	29.3	70	70.7		
Conducting joint demonstration projects in agriculture	M	22	27.2	59	72.8	.0224	not sig.
Conducting county and other agricultural fairs ..	B	12	12.1	87	87.9		
Utilizing each other's special knowledge and abilities in particular teaching situations in agriculture .	M	6	7.4	75	92.6	.6385	" "
Exchanging printed and duplicated materials of mutual interest	B	12	12.1	87	87.9	.0045	" "
Exchanging use of educational equipment and facilities	M	11	13.6	70	86.4		
	B	7	7.1	92	92.9	.0036	" "
	M	5	6.2	76	93.8		
	B	5	5.1	94	94.9	.00001	" "
	M	5	6.2	76	93.8		
	B	16	16.2	83	83.8		
	M	9	11.1	72	88.9	.5748	" "

* (B) Those who had bachelor's degrees.

(M) Those who had master's degrees.

TABLE XXXVIII

RELATIONSHIP OF DEGREES ACHIEVED BY THE AGENTS AND THEIR OPINIONS REGARDING
COOPERATION IN IMPLEMENTING EDUCATIONAL PROGRAMS IN AGRICULTURE

Total of those who had Bachelor's Degrees (B) = 50
Total of those who had Master's Degrees (M) = 70

Activity	Groups*	Negative, Neutral, and		Positive Responses		X ² Value (df=1)	Significance at $\alpha = .05$
		n	%	n	%		
Serving as consultants on each other's advisory committees	B	16	32.0	34	68.0	9.1853	significant
	M	6	8.6	64	91.4		
Conducting joint demon- stration projects in agriculture	B	7	14.0	43	86.0	.0196	not sig.
	M	8	11.4	62	88.6		
Conducting county and other agricultural fairs	B	6	12.0	44	88.0	.0025	"
	M	7	10.0	63	90.0		
Utilizing each other's special knowledge and abil- ities in particular teaching situations in agriculture .	B	6	12.0	44	88.0	.0025	"
	M	7	10.0	63	90.0		
Exchanging printed and duplicated materials of mutual interest	B	5	10.0	45	90.0	.0499	"
	M	5	7.1	65	92.9		
Exchanging use of edu- cational equipment and facilities	B	12	24.0	38	76.0	.2440	"
	M	13	18.6	57	81.4		

(s) Significant also at .01 level of confidence.

* (B) Those who had bachelor's degrees.

(M) Those who had master's degrees.

College degrees achieved and opinions regarding effect of intraorganizational factors:

No significant association was found between college degrees achieved by teachers and their opinions with regard to the factors of this area. However, the three first factors shown in table (XXXIX) were viewed to have a negative effect on educational programs by more teachers with bachelor's degrees than teachers with master's degrees. Few of both groups of teachers (14.2% of those who had bachelor's degrees and 16.1% of those who had master's degrees) indicated a negative effect of the separate identity of vocational agriculture programs and extension work in agriculture.

A significant association, at the .05 level of confidence, was found between college degrees achieved by the agents and their opinions with regard to the 'difficulty of scheduling' (Table XL). Of the agents who had master's degrees, 77.1% indicated the negative effect of the factor; 56% of those who had bachelor's degrees also indicated the negative effect of the factor. A reason for this result might be that the agents with higher degrees are holding the positions of directors who, again, feel too busy to adjust their time schedules with those of the teachers.

No significant association was found between college degrees achieved by the agents and their opinions regarding the remaining factors of the area.

TABLE XXXIX

RELATIONSHIP OF DEGREES ACHIEVED BY THE TEACHERS AND THEIR OPINIONS REGARDING
EFFECT OF INTRAORGANIZATIONAL FACTORS

Total of those who had Bachelor's Degrees (B) = 99
Total of those who had Master's Degrees (M) = 81

Factor	Groups*	Negative Neutral and Positive				X ² Value (df=2)	Significance at $\alpha = .05$
		Effect n	%	No Response n	Effect n		
Lack of clarity of functions (e.g. Smith-Lever and Smith- Hughes acts do not clearly distinguish functions of ex- tension in agriculture and vocational agriculture	B	25	25.3	63	11	11.1	4.5791 not sig.
	M	11	13.5	63	7	8.6	
Difficulty in scheduling (e.g. teachers cannot get away when school is in session, and extension agents have many nights tied up) ...	B	74	74.7	18	7	7.1	.7742 " "
	M	57	70.4	19	5	6.2	
Lack of adequate time for desirable working relation- ships between county exten- sion agents and teachers of vocational agriculture	B	71	71.7	21	7	7.1	3.6096 " "
	M	49	60.5	20	12	14.8	
Need for separate identity of vocational agricultural programs and extension work in agriculture	B	14	14.2	73	12	12.1	1.1448 " "
	M	13	16.1	62	6	7.4	

* (B) Those who had bachelor's degrees.
(M) Those who had master's degrees.

TABLE XL

RELATIONSHIP OF DEGREES ACHIEVED BY THE AGENTS AND THEIR OPINIONS REGARDING
EFFECT OF INTRAORGANIZATIONAL FACTORS

Total of those who had Bachelor's Degrees (B) = 50
Total of those who had Master's Degrees (M) = 70

Factor	Groups*	Negative Neutral and Positive				X ² Value Significance (df=2) at $\alpha = .05$
		Effect	No Response	Effect		
		n	n	n	%	
Lack of clarity of functions (e.g. Smith-Lever and Smith- Hughes acts do not clearly distinguish functions of ex- tension in agriculture and vocational agriculture	B	8	16.0	37	74.0	5 10.0
	M	9	12.9	56	80.0	5 7.1
Difficulty in scheduling (e.g. teachers cannot get away when school is in session, and extension agents have many nights tied up) ...	B	28	56.0	17	34.0	5 10.0
	M	54	77.1	10	14.3	6 8.6
Lack of adequate time for desirable working relation- ships between county exten- sion agents and teachers of vocational agriculture	B	29	58.0	14	28.0	7 14.0
	M	46	65.7	18	25.7	6 8.6
Need for separate identity of vocational agricultural programs and extension work in agriculture	B	11	22.0	34	68.0	5 10.0
	M	16	22.9	49	70.0	5 7.1

*(B) Those who had bachelor's degrees.
(M) Those who had master's degrees.

Length of experience and opinions regarding cooperation in implementing educational programs in agriculture:

Table (XLI) shows no significant association between the length of experience of the teachers and their opinions regarding activities of the area. High percentages of both teachers who had less than 10 years and those who had more than 10 years of experience as educators in agriculture (county extension agents and/or teachers of vocational agriculture) indicated that carrying out all activities of the area is desirable.

Table (XLII) shows that the percentages of the agents who indicated that carrying out the activities of this area is desirable were higher among those who had more than 10 years of experience than among those who had less than 10 years of experience.

A significant association was found at the .01 level of confidence between the length of experience and the opinions of the agents regarding the desirability of having teachers and agents serve as consultants on each other's advisory committees. Of the agents who had less than 10 years of experience, 59.6% indicated that carrying out the activity is desirable. A much higher percentage (82.7%) of the agents who had more than 10 years of experience indicated that this is desirable.

Now, the conclusion might be drawn that agents with longer experience as educators in agriculture view the

merit of having teachers and agents serve on each other's advisory committees as more desirable than the agents with less experience.

TABLE XLI

RELATIONSHIP OF LENGTH OF EXPERIENCE OF THE TEACHERS AND THEIR OPINIONS REGARDING
COOPERATION IN IMPLEMENTING EDUCATIONAL PROGRAMS IN AGRICULTURE

Total of <10 = 102
Total of >10 = 78

Activity	Groups	Negative, Neutral, and		Positive Responses		X ² Value (df=1)	Significance at $\alpha = .05$
		No Responses	%	n	%		
Serving as consultants on each other's advisory committees	<10 yrs	28	27.4	74	72.6	.0178	not sig.
Conducting joint demonstration projects in agriculture	>10 yrs	23	29.5	55	70.5		
Conducting county and other agricultural fairs ..	<10 yrs	12	11.8	90	88.2	.4248	" "
Utilizing each other's special knowledge and abilities in particular teaching situations in agriculture ..	>10 yrs	6	7.7	72	92.3		
Exchanging printed and duplicated materials of mutual interest	<10 yrs	10	9.8	92	90.2	1.3028	" "
Exchanging use of educational equipment and facilities	>10 yrs	13	16.7	65	83.3		
Exchanging use of educational equipment and facilities	<10 yrs	7	6.9	95	93.1	.0327	" "
Exchanging use of educational equipment and facilities	>10 yrs	5	6.4	73	93.6		
Exchanging use of educational equipment and facilities	<10 yrs	5	4.9	97	95.1	.0120	" "
Exchanging use of educational equipment and facilities	>10 yrs	5	6.4	73	93.6		
Exchanging use of educational equipment and facilities	<10 yrs	16	15.7	86	84.3	.0336	" "
Exchanging use of educational equipment and facilities	>10 yrs	9	11.5	69	88.5		

TABLE XLII

RELATIONSHIP OF LENGTH OF EXPERIENCE OF THE AGENTS AND THEIR OPINIONS REGARDING
COOPERATION IN IMPLEMENTING EDUCATIONAL PROGRAMS IN AGRICULTURE

Total of < 10 = 47
Total of > 10 = 75

Activity	Groups	Negative		Neutral, and		Positive Responses		X ² Value Significance (df=1) at $\alpha = .05$
		n	%	n	%	n	%	
Serving as consultants on each other's advisory committees	< 10 yrs	19	40.4	28	59.6			
Conducting joint demonstration projects in agriculture	> 10 yrs	13	17.3	62	82.7			6.8139 significant
Conducting county and other agricultural fairs ..	< 10 yrs	6	12.8	41	87.2			
Utilizing each other's special knowledge and abilities in particular teaching situations in agriculture ..	> 10 yrs	9	12.0	66	88.0			.0249 not sig.
Exchanging printed and duplicated materials of mutual interest	< 10 yrs	6	12.8	41	87.2			
Exchanging use of educational equipment and facilities	> 10 yrs	7	9.3	68	90.7			.0879 " "
	< 10 yrs	8	17.0	39	83.0			2.2572 " "
	> 10 yrs	5	6.7	70	93.3			
	< 10 yrs	5	10.6	42	89.4			.1929 " "
	> 10 yrs	5	6.7	70	93.3			
	< 10 yrs	12	25.5	35	74.5			.7419 " "
	> 10 yrs	13	17.3	62	82.7			

(s) Significant also at .01 level of confidence.

Length of experience and opinions regarding effect of intraorganizational factors:

No significant association was found at the .05 level of confidence between the length of experience of the agents or of the teachers and their opinions with regard to the factors of this area. However, the percentages of the teachers who indicated the negative effect of these factors on effective educational programs were higher among those who had less than 10 years of experience than among those who had more than 10 years of experience (Table XLIII). The reverse was true among the agents. The percentages of the agents who indicated the negative effect of the factors were lower among those who had less than 10 years of experience than among those who had more than 10 years of experience (Table XLIV).

Few of both professional groups indicated that the factors have a positive effect on educational programs (a range of 6.7 - 14.9%).

TABLE XLIII
RELATIONSHIP OF LENGTH OF EXPERIENCE OF THE TEACHERS AND THEIR OPINIONS REGARDING
EFFECT OF INTRAORGANIZATIONAL FACTORS

Total of < 10 = 102
Total of > 10 = 78

Factor	Groups	Negative Neutral and Positive				X ² Value Significance (df=2) at $\alpha = .05$
		Effect n	No Response n	Effect n	Effect n	
Lack of clarity of functions (e.g. Smith-Lever and Smith- Hughes acts do not clearly distinguish functions of ex- tension in agriculture and vocational agriculture	<10 yrs	22	21.6	71	69.6	9 8.8
	>10 yrs	14	18.0	55	70.5	9 11.5
Difficulty in scheduling (e.g. teachers cannot get away when school is in session, and extension agents have many nights tied up) ...	<10 yrs	76	74.5	20	19.6	6 5.9
	>10 yrs	55	70.5	17	21.8	6 7.7
Lack of adequate time for desirable working relation- ships between county exten- sion agents and teachers of vocational agriculture	<10 yrs	73	71.6	20	19.6	9 8.8
	>10 yrs	47	60.3	21	26.9	10 12.8
Need for separate identity of vocational agricultural programs and extension work in agriculture'	<10 yrs	16	15.7	78	76.5	8 7.8
	>10 yrs	11	14.1	57	73.1	10 12.8

.6206 not sig.

.4171

2.5558

1.2368

TABLE XLIV
RELATIONSHIP OF LENGTH OF EXPERIENCE OF THE AGENTS AND THEIR OPINIONS REGARDING
EFFECT OF INTRAORGANIZATIONAL FACTORS

Total of <10 = 47
Total of >10 = 75

Factor	Groups	Negative Neutral and Positive				X ² Value Significance (df=2) at $\alpha = .05$
		Effect	No Response	Effect		
		n	%	n	%	
Lack of clarity of functions (e.g. Smith-Lever and Smith- Hughes acts do not clearly distinguish functions of ex- tension in agriculture and vocational agriculture	< 10 yrs	6	12.8	36	76.5	5 10.6
	> 10 yrs	12	16.0	57	76.0	6 8.0
Difficulty in scheduling (e.g. teachers cannot get away when school is in session, and extension agents have many nights tied up) ...	< 10 yrs	30	63.8	12	25.5	5 10.7
	> 10 yrs	52	69.3	16	21.4	7 9.3
Lack of adequate time for desirable working relation- ships between county exten- sion agents and teachers of vocational agriculture	< 10 yrs	27	57.5	15	31.9	5 10.6
	> 10 yrs	49	65.3	18	24.0	8 10.7
Need for separate identity of vocational agricultural programs and extension work in agriculture	< 10 yrs	10	21.3	30	63.8	7 14.9
	> 10 yrs	17	22.6	53	70.7	5 6.7

.4292 not sig.

.4022 " "

.9577 " "

2.2119 " "

Summary:

Through the analysis presented in this chapter the second hypothesis of the study was discussed. This hypothesis was that there is a relationship between selected background characteristics such as age, degrees achieved, and length of experience, and opinions held by county extension agents and by teachers of vocational agriculture regarding:

- a. The desirability of carrying out cooperatively certain activities for implementing effective educational programs in agriculture.
- b. The effect of certain intraorganizational factors on educational programs in agriculture.

Chi-square values showed that:

1. There is a relationship between the age of the agents and their opinions regarding
 - a. The desirability of having teachers and agents serve as consultants on each other's advisory committees (at .01 level of confidence).
 - b. The clarity of functions as specified by the Smith-Lever and the Smith-Hughes acts (at .01 level of confidence).
2. There is a relationship between the college degrees achieved by the agents and their opinions regarding:
 - a. The desirability of having teachers and agents serve on each other's advisory committees (at the .01 level of confidence).

- b. The difficulty in scheduling time for effective working relationships (at the .05 level of confidence).
3. There is a relationship between the length of the experience of the agents and their opinions regarding the desirability of having teachers and agents serve on each other's advisory committees (at the .01 level of confidence).

Responses to the above activities and factors reveal that the agents above 35 years of age, those who have higher college degrees, and those who had longer experience seem to perceive the merit of having teachers and agents serve as consultants on each other's advisory committees to a greater degree than the other agents did (Figure 5). The majority of the older agents see the 'lack of clarity of functions as specified by the Smith-Lever and Smith-Hughes acts as neither hampering nor promoting effective educational programs in agriculture. Approximately forty per cent of the younger agents split themselves into two groups; one group indicated the factor hampers the effectiveness of cooperation and the other group indicated that the factor promotes this effectiveness (Figure 6).

The majority of agents with the higher college degrees more than those with bachelor's degrees indicated that the difficulty of scheduling hampers the effectiveness of cooperation (Figure 7).

No significant relationship has been found between the three background characteristics of the agents and their

opinions regarding the remaining activities or factors.

The three background characteristics of the teachers were related to their opinions regarding the same activities and factors but no relationships were found. An interpretation for this might be that there are more similarities in the age, degrees achieved, and length of experience among the teachers than among the agents.

★ ★ ★ ★ ★ ★

The following chapter is the summary and the conclusion.

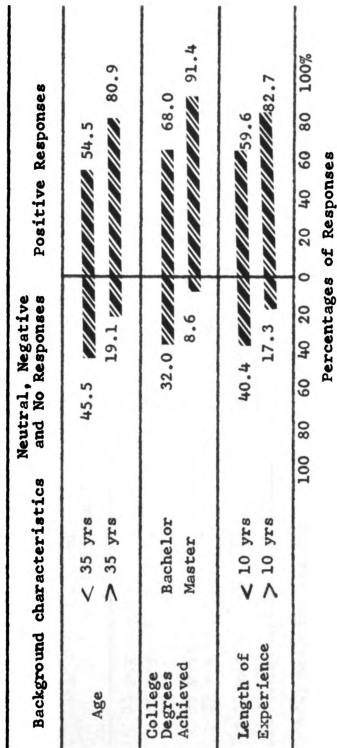


Figure 5 - Relationship of background characteristics of the agents and their opinions regarding having teachers and agents serve on each other's advisory committees.

(Data taken from tables XXXIV, XXXVIII and XLII)

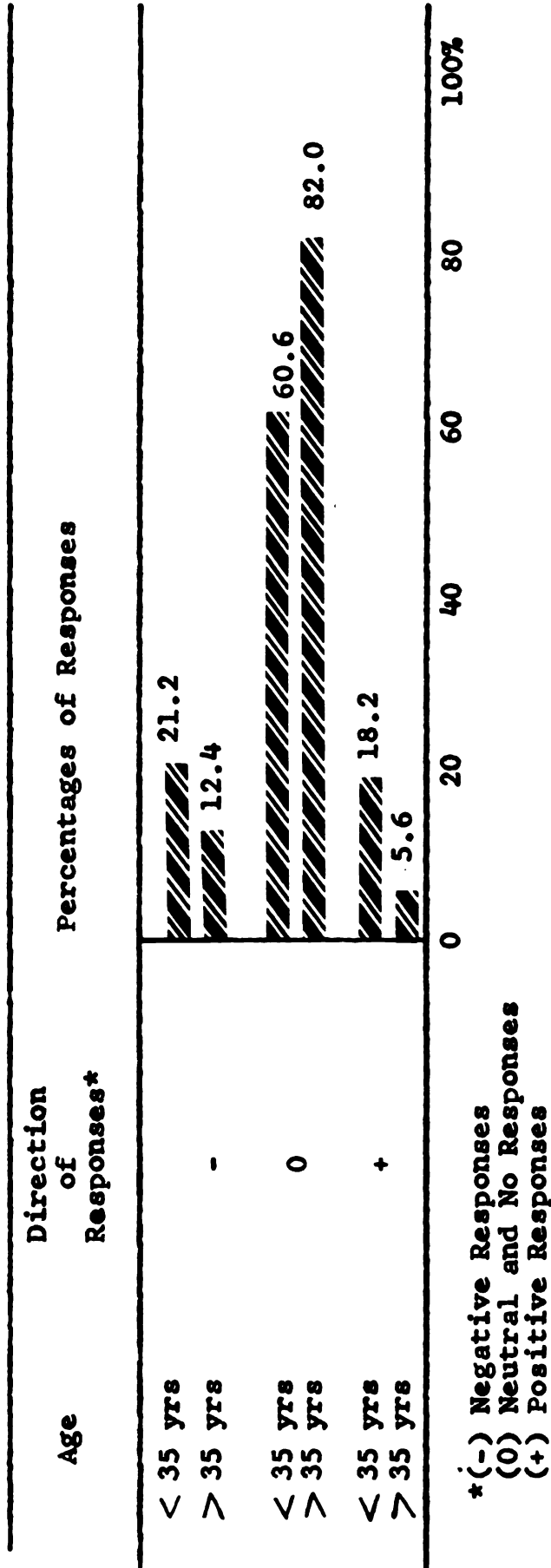


Figure 6 - Relationship of age and opinions of agents regarding the effect of the clarity of functions as specified by the Smith-Lever and the Smith-Hughes acts.

(Data taken from table XXXVI)

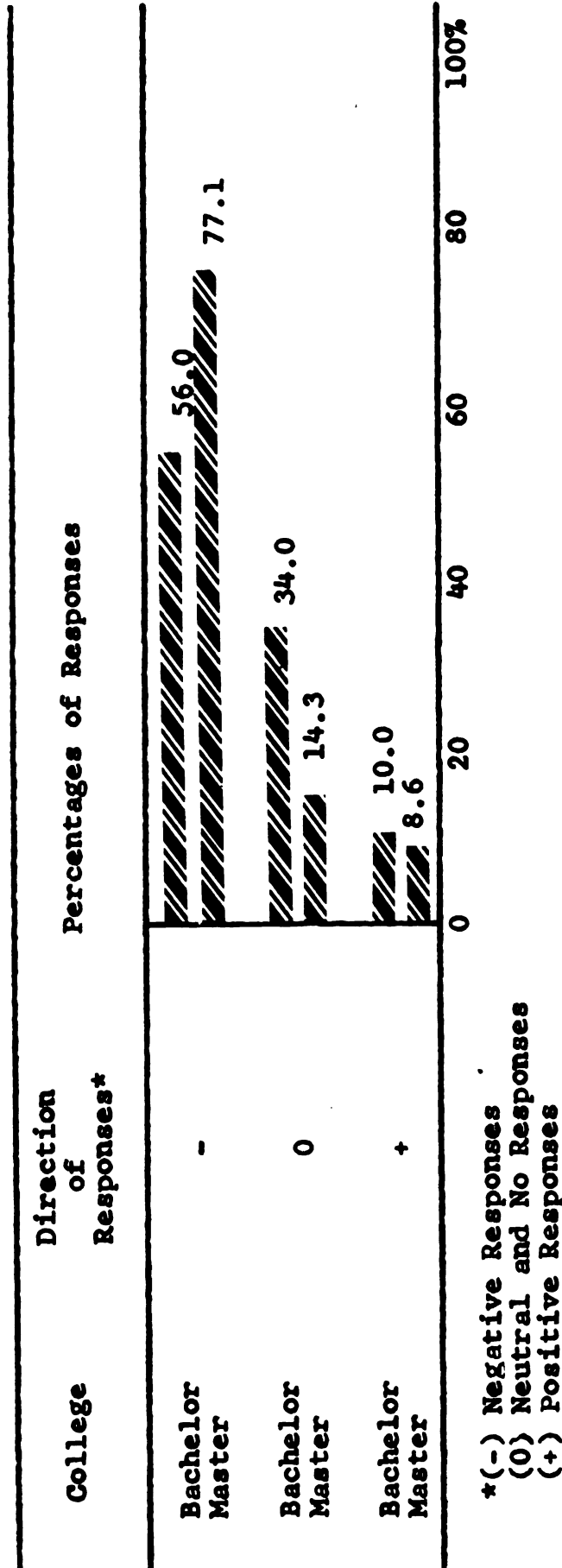


Figure 7 - Relationship of college degrees achieved by agents and their opinions regarding the difficulty of scheduling.

(Data taken from table XL)

CHAPTER VII

SUMMARY AND CONCLUSIONS

Objectives

This study has as its objectives: (1) to identify certain activities and factors involved in working relationships of county extension agents and teachers of vocational agriculture; (2) to determine differences in opinions held by county extension agents and teachers of vocational agriculture with regard to the desirability of carrying out certain activities and the effect of certain factors involved in their working relationships; (3) to determine among county extension agents and among teachers of vocational agriculture the relationship of certain background characteristics such as age, college degrees achieved and length of experience, and their opinions with regard to (a) the desirability of carrying out certain activities for implementing effective educational programs in agriculture, and (b) the effect of certain intraorganizational factors on educational programs in agriculture.

Procedures

On the basis of the literature reviewed, and consultation with leaders of the Cooperative Extension Service and vocational agriculture, a checklist was prepared as the instrument for collecting the needed information. The checklist was pre-tested by four county extension agents

and four teachers of vocational agriculture who had been in service for more than one year.

The survey checklist contains three phases. The first phase contains four items of information about the respondents. The second phase contains thirty activities. Teachers and agents were asked to check each activity twice; once for carrying out the activity and the other for the desirability of carrying out the activity in their working relationships. The third phase contains thirty-three factors which were thought to be involved in working relationships. Respondents were asked to check each factor twice; once for the involvement of the factor in working relationships and the other for the effect of the factor on educational programs in agriculture.

The survey checklist was printed in two forms; one for agents and one for teachers. The forms were mailed to the population of the study in 61 counties of Michigan. The population consisted of all teachers of vocational agriculture who had had at least one year in service and of the county extension agents in the counties where the vocational agriculture departments were located. The agents included were all county extension directors, agents for agriculture, and agents for 4-H club work who supervised agricultural projects for boys and girls. All the agents included had had at least one year in service.

Of the 204 teachers requested to participate in the

study 180 responded (88.2%), and of the 129 agents requested to participate, 122 responded (94.6%). Responses were recorded on IBM cards. Punching, verification, and frequency countings were made by the processing laboratory of Michigan State University. MISTIC was used to calculate chi-square values for testing the two major hypotheses of the study.

Position of the respondents was used as a primary independent variable. Age, college degrees achieved, and length of experience were used as independent variables for testing the second hypothesis. The determinant level of confidence used for accepting the research hypothesis was .05. The .01 level of confidence was recorded also.

Findings

Background characteristics of respondents:

1. Position: Of the 122 agents who responded to the study 59 (48.4%) were directors, 25 (20.5%) were agents for agriculture, and 38 (31.1%) were agents for 4-H club work. A total of 180 (88.2%) teachers responded to the study.
2. College degrees achieved: The proportion (45%) of the teachers who responded and who had master's degrees was less than that of the agents (57.4%). One agent for agriculture had his doctorate degree and one director had no college degree. The remaining proportions of both professional groups had their bachelor's degrees.

3. Age: The teachers who responded were younger than the agents. In comparison with the agents, variation in the age of the teachers was not as great, and there was a tendency toward a younger age.
4. Length of experience: The teachers who responded in comparison with the agents, had less years of experience as educators.

Activities and factors involved in working relationships:

The extent of carrying out the thirty activities in working relationships varied among the three groups of agents and the teachers. The respondents also varied in their opinions with regard to the degree of involvement of the factors in their working relationships.

Opinions about activities of working relationships:

The results of testing the first section of the first hypothesis, that there are differences in opinions held by county extension agents and teachers of vocational agriculture regarding the desirability of carrying out certain activities in their working relationships for effective educational programs in agriculture, were:

Opinions of the teachers and the agents differed significantly at the .05 level of confidence with regard to cooperation between 4-H club and FFA. The proportion of the agents who indicated that carrying out the activity is desirable was more than that of the teachers.

The teachers and the agents also differed in opinions with regard to arranging for educational meetings for farmers. The proportion of the teachers who indicated carrying out the activity is desirable was more than that of the agents.

Opinions of the teachers and the agents did not differ significantly concerning the remaining activities. Thus, this section of the hypothesis is partially accepted.

Opinions about the effect of factors involved in working relationships:

The results of testing the second section of the first hypothesis, that there are differences in opinions held by county extension agents and teachers of vocational agriculture regarding the effect of certain factors involved in their working relationships on educational programs in agriculture, were:

A significant difference was found in the opinions of the two professional groups at the .01 level of confidence with regard to the effect of the following factors:

1. The other's personality.
2. Degree of academic education.
3. Similarity of educational specialization.
4. Similarity of in-service training in technical subject matter.
5. Difference of in-service training in technical subject matter.

6. Similarity of in-service training in teaching methods.

Teachers and agents differed significantly in their opinions at the .05 level of confidence with regard to the following factors:

7. The other's experience in working with rural people.
8. The other's experience in the field of agriculture.
9. One's experience in the field of agriculture.

In their responses, the teachers considered the above nine factors as having greater positive effect on educational programs than did the agents.

A significant difference was found between opinions of the teachers and the agents at the .05 level of confidence with regard to the following factor:

10. Relationships between school administrators and county extension staff.

The percentage of the agents who indicated the positive effect of the factor on educational programs was approximately three times as great as that of the teachers. With regard to the remaining factors, the opinions of the teachers and the agents did not differ significantly. The second section of the first hypothesis, therefore, is partially accepted.

In general, the direction of responses tended to in-

dictate positive or neutral effects of all areas of factors, except for the area of intraorganizational requirements. The direction of responses regarding this area was mostly toward a negative effect.

Background characteristics and opinions regarding working relationships:

The following are the results of testing the second hypothesis, that there is a relationship between selected background characteristics such as age, college degrees achieved, and length of experience, and, their opinions regarding (a) the desirability of carrying out cooperatively certain activities for implementing effective educational programs in agriculture, and (b) the effect of certain intraorganizational factors on educational programs in agriculture:

A significant relationship at the .01 level of confidence was found between the age of the agents and their opinions with regard to the desirability of having teachers and agents serve as consultants on each other's advisory committees. Another relationship at the .01 level of confidence was found between age of the agents and their opinions with regard to what they viewed as functions specified by the Smith-Lever and the Smith-Hughes acts.

A significant relationship at the .01 level of confidence was found between the college degrees achieved by the agents and their opinions with regard to the desirability of having teachers and agents serve on each other's

advisory committees. Another relationship at the .05 level of confidence was found between the college degrees achieved by the agents and their opinions regarding the difficulty of scheduling.

At the .01 level of confidence, a relationship was found between length of experience of the agents and their opinions regarding the desirability of having teachers and agents serve on each other's advisory committees.

Responses to the above activities and factors reveal that the agents above 35 years of age, those who achieved higher college degrees, and those who had longer experience seemed to see the merit of having teachers and agents serve as consultants on each other's advisory committees to a greater degree than the other agents did. The older agents perceived the functions specified by the Smith-Lever and the Smith-Hughes acts as neither promoting nor hampering effective educational programs in agriculture. Forty per cent of the younger agents seemed to have different conceptions of the effect of these functions; 18.2% indicated that the factor has a positive effect on educational programs, and 21.2% indicated that the factor has a negative effect on educational programs.

The agents with the higher college degrees, more than those with no graduate studies seemed to see that the difficulty of scheduling has a negative effect on educational programs.

No significant relationship was found between the three background characteristics of the agents and their opinions with regard to the remaining activities or factors.

No significant relationship was found between the three background characteristics of the teachers and their opinions regarding activities of cooperative implementation of educational programs in agriculture and regarding intra-organizational factors. The second hypothesis of the study, then, is partially accepted with respect to the agents and rejected with respect to the teachers.

CONCLUSIONS AND IMPLICATIONS

On the basis of the objectives and the findings of the study and from the point of view of the writer the following conclusions and implications seem pertinent:

County extension agents and teachers of vocational agriculture through their responses to this study seemed very much in favor of close working relationships. The result of testing the first section of the first hypothesis showed that there were no differences in opinions of county extension agents and teachers of vocational agriculture regarding the desirability of carrying out the listed activities in their working relationships. They indicated that these cooperative activities contribute to effective planning and implementation of educational programs in agriculture for the local communities. Even though there were significant differences in their opinions with regard to two of these activities yet high percentages of both professional groups considered the activities desirable.

Since the majority of the teachers and the agents feel that these cooperative activities contribute to effective educational programs in agriculture, then it is reasonable to imply the following:

1. Provisions are needed to help the agents and the teachers put into effect the activities they

considered desirable.

2. Planning and implementing educational programs in agriculture for local communities should be carried out cooperatively.
3. Coordination of educational activities through individual roles should be encouraged by local and state administrators of the Cooperative Extension Service and of the public schools.
4. State-wide conferences should be arranged and supported financially and administratively, in which county extension agents and teachers of vocational agriculture could discuss affairs of mutual concern and develop closer working relationships.
5. As a support for close working relationships for professional workers in the field, leaders of Cooperative Extension and of vocational education in agriculture should meet periodically for coordination of policies and development of means of cooperation.

The result of testing the second section of the first hypothesis showed that there were no differences in opinions of the teachers and agents with regard to the importance of their working relationships. High percentages of both groups indicated that their communication is important for the effectiveness of educational programs in agriculture,

their roles are complementary and the welfare of the people is motivating their working relationships.

These close agreements in opinions about the importance of working relationship suggest the following implications:

6. Provision should be made at the local level to adopt a policy of eliminating over-identification of the agents and of the teachers.
7. The public should be informed about the cooperation that exists between county extension agents and teachers of vocational agriculture.

The respondents did not differ in their opinions with regard to the effect of the factors dealing with intraorganizational requirements. The responses of the agents and the teachers tended to indicate negative effects of these factors. 'Difficulty of scheduling' and 'lack of adequate time' seemed to be the determinant factors as viewed by both groups in maintaining desirable working relationships. These results suggest the following implications:

8. County extension agents and teachers of vocational agriculture should be encouraged and helped by their respective administrators to work out a

schedule of "get together" sessions for discussions and consultations.

9. Professional county agricultural councils should be encouraged and supported wholeheartedly by leaders and administrative teams of both groups at the local and state levels. Participants in these councils should be rewarded.

Functions of both groups as specified by the Smith-Lever and the Smith-Hughes acts and the need for separate identity of both services were factors in which opinions of the agents and the teachers were mostly of neutral character. Yet one third to one fourth of the responses indicated negative or positive effects of these factors on educational programs in agriculture. This lack of consensus in responses concerning the two factors suggests the following:

10. New Federal interpretations and policies for administration based on a new look at the expected future of extension and vocational education are essential for clarification of functions and for elimination of whatever misunderstanding, overlapping or separation was caused by the Smith-Lever and the Smith-Hughes acts.
11. The public and the professionals concerned, depending on their experience with the acts, should suggest whatever amendments are needed for clari-

fication of functions and for Federal support.

Teachers and agents differed significantly in their opinion with regard to the effect of relationships between school administrators and the county extension staff. A high percentage of the agents indicated that this factor has a positive effect on educational programs. A low percentage of the teachers indicated the same. The situation may be that the contacts between school administrators and the county extension agents take place mostly without the presence of the teachers. If this is true, then this implication follows:

12. School administrators should support by every possible means close working relationships between the teachers and the agents.

With regard to the effect of experience in working with rural people and experience in the field of agriculture, opinions of the teachers and the agents differed significantly. A higher percentage of the teachers than of the agents indicated that the factors have positive effects on educational programs. But despite these differences, high percentages of both groups indicated positive effects of the two factors on educational programs.

Furthermore, high proportions of the responses of both groups indicated that education and training had a positive effect even though significant differences were found

between their opinions with regard to education and training. It was also found that the similarities of education and training were thought to have more favorable effect than the differences in education and training. Accordingly, the following implications are pertinent:

13. Sociology of interaction should be required as an important part in the courses of study for preparation of county extension agents and teachers of vocational agriculture.
14. Concepts and aspects of cooperation between both groups should be discussed in in-service seminars. The basis of the discussion should be mutual understanding of functions, potential and limitations.
15. In-service training in the field of agriculture for both groups should continue and attendants should be rewarded.
16. Cooperative training projects for county extension agents and teachers of vocational agriculture should be developed, especially in the new phases of agriculture in such a way that the aspects of cooperation in the new development could be conceived from the very start.

The results of testing the first section of the second hypothesis showed that a majority of the older agents, those

who achieved higher college degrees and those who had longer experience seemed to perceive the merit of having teachers and agents serve as consultants on each other's advisory committees to a greater degree than the other agents did. Similarly in testing the second section of the second hypothesis, the older agents seemed to have consensus in their opinion regarding the provisions of the Smith-Lever and the Smith-Hughes acts. On the other hand, the younger agents seemed to be divided in their opinions with respect to their perception of the two acts. Moreover, a relationship was found between degrees achieved by the agents and their opinions with regard to the effect of the difficulty of scheduling on educational programs. Those with higher degrees seemed to have a different conception of what might be the effect of the difficulty of scheduling on educational programs from those who did not continue on in graduate studies. Whatever might be the cause of the above relationships of background characteristics of the agents and their opinions, the relationships existed. Since the desirable opinions of the agents concerning working relationships are associated with age, college graduate degrees and length of experience, then these implications follow:

17. The agents should be encouraged to continue their graduate studies.
18. Pre-service and in-service training should be intensive to provide wide experience in the shortest

possible time.

With regard to the teachers, there were no relationships between their age, college degrees achieved or their length of experience and their opinions. But in order to have effective interaction and cooperation between the agents and the teachers, it would seem logical that their level of knowledge and experience should match those of the agents. If this is true, then the following implications would follow:

19. Public schools should encourage teachers of vocational agriculture to pursue their graduate education.
20. Programs for preparing or training teachers of vocational agriculture should emphasize cooperation and benefiting from related agencies in the school community.

Suggestions for Further Studies

The results of the study suggest further investigation of the following areas:

1. Working relationships between leaders of Cooperative Extension, and vocational agriculture at the state level to determine the kind of activities which contribute to cooperation and coordination of their policies.
2. Attitudes of the school administrators toward working

relationships between county extension agents and teachers of vocational agriculture.

3. Opinions of the public about cooperation between county extension agents and teachers of vocational agriculture to determine public awareness and expectations regarding cooperation between the two professional groups.

4. Scheduling and time available for cooperation between county extension agents and teachers of vocational agriculture.

5. Opinions of professionals and laymen concerned with education in agriculture regarding whether or not new legislative acts are needed to deal with education in agriculture.

6. The effect of working relationships between the two groups on effectiveness of local educational programs in agriculture. Studies of this area could start as action researches in particular situations for particular cooperative programs undertaken, such as the one conducted by both groups in Huron county in the summer of 1962.*

*Refer back to p. 15.

APPENDIX A

December 17, 1962

Dear Mr.

In my work in Egypt I am responsible for training both Extension workers and teachers of vocational agriculture. Currently I am a Ph.D. student in Agricultural and Adult Education at M.S.U.

For my Ph.D. thesis I have chosen to study the working relationships between county extension agents and teachers of vocational agriculture. This study has been reviewed with leaders of vocational agriculture as well as the Extension Administrative and Program Team and with a number of your co-workers. Those responding to the inquiry will be county extension personnel and teachers of vocational agriculture in the State of Michigan.

Will you please respond to the enclosed check list and return it to me in the enclosed envelope. In appreciation for your help, a report of the findings will be sent to you.

I hope that the findings of my study will help in your working relationships with teachers of vocational agriculture and also with all who are involved in accomplishing your educational mission.

Your help will be sincerely appreciated.

Yours very truly,

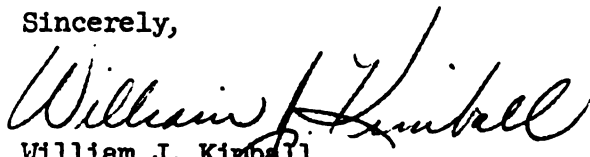
Ahmed M. Omar
Ph.D. Candidate at M.S.U.

Dear Friend:

It has been my responsibility and privilege to work with Ahmed Omar in the development of this questionnaire. Because he worked diligently on it with many reviewers, it is as brief and precise as possible.

Would you please mark your reactions as indicated and return your response soon. The findings should be very useful to Omar, M.S.U., and we hope to you.

Sincerely,


William J. Kimball
Extension Program Leader
Community Resource Development
and Public Affairs

East Lansing, Michigan
December 20, 1962

Dear Mr.

In your position as an educator you have accepted responsibility to all of the people in your community. To meet this responsibility, I am sure you have established working relationships with several individuals, groups, organizations, school personnel and many others.

I am conducting a study dealing with one segment of these relationships, namely with county extension agents. The plan of the study has been discussed with leaders of vocational education in agriculture, with a number of your fellow teachers, and state administrators of the Cooperative Extension Service. This same inquiry will also be presented to extension agents.

Will you please respond to the enclosed checklist and return it in the stamped, self-addressed envelope. In appreciation for your help, a report of the results of the study will be sent to you.

It is my hope that the results will be of help to you in accomplishing your educational mission.

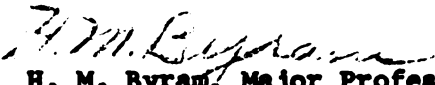
Yours very truly,

Ahmed M. Omar

Dear Sir:

This study is regarded as an important one for agricultural education in Michigan. It is the first one to be made dealing with relationships with the Cooperative Extension Service. The findings should be helpful to teachers of agriculture. We commend this inquiry to you for your careful consideration.

Yours sincerely,


H. M. Byram, Major Professor
Agricultural Education
Michigan State University


Harry E. Nesman, Chief
Agricultural Education Service
Michigan Department of Public
Instruction

East Lansing , Mich.
Jan. 14 , 1963

Dear Mr.

On Dec. 31 st. I mailed you a checklist seeking information about working relationships between county extension agents and teachers of vocational agriculture. Undoubtedly you have been busy since the holidays and haven't been able to respond to it . I am anxious to receive your response as soon as possible .

You may recall that the study was endorsed and reviewed by leaders of vocational education in agriculture and the Extension Administrative and Program Team in the state . The respondents of the inquiry are county extension agents and teachers of vocational agriculture in Michigan .

I would appreciate very much your participation by responding to the checklist and returning it to me . If you have misplaced the form I would be more than glad to send you another copy .

In appreciation for your help , a report of the findings will be sent to you .

Yours Very Truly

Ahmed M. Omar
Ph. D. Candidate at M.S.U.

P. S. :-

Because of the recent increase in postage and for your convenience I have enclosed a one cent stamp to add to the self addressed stamped envelope previously sent to you .

East Lansing, Mich.
Jan. 28 , 1963

Dear Mr.

Last month I mailed you a checklist seeking information about working relationships between county extension agents and teachers of vocational agriculture . Undoubtedly you have been too busy to have answered sooner .

In case you have misplaced the form , I am enclosing another along with a self-addressed stamped envelope .

You may recall that the study was endorsed by leaders of vocational agriculture and the Extension Administrative and program Team in the state. The respondents of the inquiry are county extension agents and teachers of vocational agriculture in Michigan .

I am very desirous to include your participation in the study . In appreciation for your help , a report of the findings will be sent to you .

Yours Very Truly

Ahmed M. Omar
Ph. D. Candidate at M. S. U.

P. S.

If you have already mailed your completed checklist , please disregard this request .

APPENDIX B

PHASE I - INFORMATION ABOUT YOURSELF

1. Your present position (please be specific) : _____

2. Your college degree(s):

Degree	Major	Date	Institution
_____	_____	_____	_____
_____	_____	_____	_____
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3. Your age last birthday (please check your response)

- ☐ a. Under 25 yrs
☐ b. 25 yrs - less than 30 yrs
☐ c. 30 yrs - less than 35 yrs
☐ d. 35 yrs - less than 40 yrs
☐ e. 40 yrs - less than 45 yrs
☐ f. 45 yrs or over

4. Length of your experience as a teacher of vocational agriculture and/or county extension worker (please check your response)

- ☐ a. Less than 5 yrs
☐ b. 5 yrs - less than 10 yrs
☐ c. 10 yrs - less than 15 yrs
☐ d. 15 yrs - less than 20 yrs
☐ e. 20 yrs - less than 25 yrs
☐ f. 25 yrs or over

PHASE II - INFORMATION ABOUT CERTAIN ACTIVITIES IN YOUR WORKING
RELATIONSHIPS WITH TEACHERS OF VOCATIONAL AGRICULTURE

Items in this section are activities which may or may not be carried out in your working relationships with teachers of vocational agriculture.

In column (I) please circle one number (0, 1, 2, 3, or 4) to indicate the degree to which you carry out each of the listed activities in your working relationships with teachers of vocational agriculture.

In column (II) please circle one number (-2, -1, 0, 1, or 2) to indicate your opinion of the desirability of carrying out each of these activities in your working relationships with teachers of vocational agriculture (As contributing to effective educational programs in agriculture).

Activities	COLUMN (I)					COLUMN (II)				
	Degree to which <u>you carry out</u> the activity in your working relationships with teachers of vo - ag.					Desirability of carrying out the activity in your working relationships with teachers of vo - ag.				
	Never	Rarely	Occasionally	Frequently	Always	Very undesirable	Undesirable	Neither desirable nor undesirable	Desirable	Very desirable
1. Discussing community needs pertaining to education in agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
2. Identifying common educational objectives of extension and vocational agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
3. Conducting community agricultural surveys -	0	1	2	3	4	-2	-1	0	1	2
4. Discussing implications of current trends for program planning in agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
5. Securing each other's reactions on newly planned programs - - - - -	0	1	2	3	4	-2	-1	0	1	2
6. Calling each other's attention to competent people who might serve on advisory councils -	0	1	2	3	4	-2	-1	0	1	2
7. Exchanging information about each other's experience with advisory councils - - - - -	0	1	2	3	4	-2	-1	0	1	2
8. Serving as consultants on each other's advisory committees - - - - -	0	1	2	3	4	-2	-1	0	1	2

Activities	Degree to which you carry out the activity in your working relationships with teachers of vo - ag.					Desirability of carrying out the activity in your working relationships with teachers of vo - ag.				
	Never	Rarely	Occasionally	Frequently	Always	Very undesirable	Undesirable	Neither desirable nor undesirable	Desirable	Very desirable
9. Developing educational programs for out-of-school youth in agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
10. Coordinating educational programs of extension and vocational agriculture for adult farmers	0	1	2	3	4	-2	-1	0	1	2
11. Conducting joint demonstration projects in agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
12. Sharing responsibility for publicity concerning educational programs in agriculture in the county - - - - -	0	1	2	3	4	-2	-1	0	1	2
13. Conducting county and other agricultural fairs	0	1	2	3	4	-2	-1	0	1	2
14. Working out plans for educational exhibits in agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
15. Utilizing each other's special knowledge and abilities in particular teaching situations in agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
16. Discussing the need for a specialist's help in a particular project - - - - -	0	1	2	3	4	-2	-1	0	1	2
17. Determining supportive roles in helping young and adult farmers adopt farm practices - - - -	0	1	2	3	4	-2	-1	0	1	2
18. Organizing ways of conducting educational programs through special interest groups and associations - - - - -	0	1	2	3	4	-2	-1	0	1	2
19. Working out uniform standards for contests in agriculture in the county - - - - -	0	1	2	3	4	-2	-1	0	1	2
20. Developing criteria for agricultural projects of FFA and 4-H club members	0	1	2	3	4	-2	-1	0	1	2
21. Discussing instructional materials, space, and facilities locally available for carrying out educational programs in agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
22. Exchanging printed and duplicated materials of mutual interest - - - - -	0	1	2	3	4	-2	-1	0	1	2
23. Exchanging use of educational equipment and facilities - - - - -	0	1	2	3	4	-2	-1	0	1	2
24. Arranging for meetings in which farmers discuss agricultural problems with local resource personnel - - - - -	0	1	2	3	4	-2	-1	0	1	2
25. Working out a program of cooperation between 4-H club and FFA - - - - -	0	1	2	3	4	-2	-1	0	1	2
26. Developing means of securing public reactions to educational programs in agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
27. Developing criteria for judging effectiveness of local educational programs in agriculture - - - -	0	1	2	3	4	-2	-1	0	1	2
28. Discussing factors affecting success or failure of educational programs in agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
29. Developing means of publicizing results of evaluating educational programs in agriculture -	0	1	2	3	4	-2	-1	0	1	2

Activities	COLUMN (I)					COLUMN (II)				
	Degree to which you carry out the activity in your working relationships with teachers of vo - ag.					Desirability of carrying out the activity in your working relationships with teachers of vo - ag.				
	Never	Rarely	Occasionally	Frequently	Always	Very undesirable	Undesirable	Neither desirable nor undesirable	Desirable	Very desirable
30. Crediting each other's contribution toward successful educational programs in agriculture	0	1	2	3	4	-2	-1	0	1	2

**PHASE III - INFORMATION ABOUT CERTAIN FACTORS INVOLVED IN YOUR
WORKING RELATIONSHIPS WITH TEACHERS OF VOCATIONAL
AGRICULTURE**

Items in this section are factors which may or may not be involved in your working relationships with teachers of vocational agriculture.

In column (I) please circle one number (0, 1, 2, 3, or 4) to indicate the degree to which each factor is involved in your working relationships with teachers of vocational agriculture.

In column (II) please circle one number (-2, -1, 0, 1, or 2) to indicate the degree to which each factor involved in your working relationships with teachers of vocational agriculture hampers or promotes effective educational programs in agriculture.

Factors	COLUMN (I)					COLUMN (II)				
	Degree to which the factor is involved in your working relationships with teachers of vo - ag.					Degree to which the factor involved hampers or promotes effective educational programs in agriculture.				
	Is not involved	Very little involved	Some involved	Much involved	Very much involved	Hampers much	Hampers some	Neither hampers nor promotes	Promotes some	Promotes much
I - PERSONAL										
31. Personality of the other worker - - - - -	0	1	2	3	4	-2	-1	0	1	2
32. Similarity of our age - - - - -	0	1	2	3	4	-2	-1	0	1	2
33. Closeness of personal friendship - - - - -	0	1	2	3	4	-2	-1	0	1	2
34. Initiative in contacting me - - - - -	0	1	2	3	4	-2	-1	0	1	2
35. Initiative in contacting him - - - - -	0	1	2	3	4	-2	-1	0	1	2
36. His democratic way of consultation - - - - -	0	1	2	3	4	-2	-1	0	1	2
37. Degree of his academic education - - - - -	0	1	2	3	4	-2	-1	0	1	2
38. Similarity of our educational specialization - -	0	1	2	3	4	-2	-1	0	1	2
39. Difference of our educational specialization - -	0	1	2	3	4	-2	-1	0	1	2
40. Similarity of our inservice training in technical subject matter - - - - -	0	1	2	3	4	-2	-1	0	1	2
41. Difference of our inservice training in technical subject matter - - - - -	0	1	2	3	4	-2	-1	0	1	2
42. Similarity of our inservice training in teaching methods - - - - -	0	1	2	3	4	-2	-1	0	1	2
43. Difference of our inservice training in teaching methods - - - - -	0	1	2	3	4	-2	-1	0	1	2

Factors	Degree to which the factor is involved in your working relationships with teachers of vo - ag.					Degree to which the factor involved hampers or promotes effective educational programs in agriculture.				
	Is not involved	Very little involved	Some involved	Much involved	Very much involved	Hampers much	Hampers some	Neither hampers nor promotes	Promotes some	Promotes much
44. His experience in working with rural people - -	0	1	2	3	4	-2	-1	0	1	2
45. My experience in working with rural people - -	0	1	2	3	4	-2	-1	0	1	2
46. His experience in the field of agriculture - - - -	0	1	2	3	4	-2	-1	0	1	2
47. My experience in the field of agriculture - - - -	0	1	2	3	4	-2	-1	0	1	2
II - NON-PERSONAL										
48. Existence and activity of county agricultural council - - - - -	0	1	2	3	4	-2	-1	0	1	2
49. Relationships between leaders of vocational agriculture and Cooperative Extension staff at state level - - - - -	0	1	2	3	4	-2	-1	0	1	2
50. Relationships between school administrators and county extension staff - - - - -	0	1	2	3	4	-2	-1	0	1	2
51. Existence of memoranda of understanding between Cooperative Extension and vocational agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
52. Views passed down from state levels - - - - -	0	1	2	3	4	-2	-1	0	1	2
53. Lack of clarity of functions (eg. Smith - Lever and Smith - Hughes acts do not clearly distinguish functions of extension in agriculture and vocational agriculture) - - - - -	0	1	2	3	4	-2	-1	0	1	2
54. Difficulty in scheduling (eg. teachers cannot get away when school is in session, and extension agents have many nights tied up) - - - - -	0	1	2	3	4	-2	-1	0	1	2
55. Belief that the public expects effective working relationships between extension agents and teachers of vocational agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
56. Lack of adequate time for desirable working relationships between county extension agents and teachers of vocational agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
57. Need for separate identity of vocational agricultural programs and extension work in agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
58. Mutual respect of efforts - - - - -	0	1	2	3	4	-2	-1	0	1	2
59. Realization that communication between us is important - - - - -	0	1	2	3	4	-2	-1	0	1	2
60. Recognition of the fact that our roles are complementary - - - - -	0	1	2	3	4	-2	-1	0	1	2
61. Realization of the need for more than one educational agency to serve agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
62. Belief in cooperation as a part of any professional worker's job - - - - -	0	1	2	3	4	-2	-1	0	1	2
63. Welfare of the people we serve - - - - -	0	1	2	3	4	-2	-1	0	1	2

THANK YOU VERY MUCH FOR YOUR COOPERATION

PHASE I - INFORMATION ABOUT YOURSELF

1. Your present position (please be specific) : _____

2. Your college degree(s):

Degree	Major	Date	Institution
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

3. Your age last birthday (please check your response)

- ☐ a. Under 25 yrs
☐ b. 25 yrs - less than 30 yrs
☐ c. 30 yrs - less than 35 yrs
☐ d. 35 yrs - less than 40 yrs
☐ e. 40 yrs - less than 45 yrs
☐ f. 45 yrs or over

4. Length of your experience as a teacher of vocational agriculture and/or county extension worker (please check your response)

- ☐ a. Less than 5 yrs
☐ b. 5 yrs - less than 10 yrs
☐ c. 10 yrs - less than 15 yrs
☐ d. 15 yrs - less than 20 yrs
☐ e. 20 yrs - less than 25 yrs
☐ f. 25 yrs or over

PHASE II - INFORMATION ABOUT CERTAIN ACTIVITIES IN YOUR WORKING RELATIONSHIPS WITH COUNTY EXTENSION AGENTS

Items in this section are activities which may or may not be carried out in your working relationships with county extension agents.

In column (I) please circle one number (0, 1, 2, 3, or 4) to indicate the degree to which you carry out each of the listed activities in your working relationships with county extension agents.

In column (II) please circle one number (-2, -1, 0, 1, or 2) to indicate your opinion of the desirability of carrying out each of these activities in your working relationships with county extension agents (As contributing to effective educational programs in agriculture).

Activities	COLUMN (I)					COLUMN (II)				
	Degree to which <u>you carry out</u> the activity in your working relationships with county extension agents.					Desirability of carrying out the activity in your working relationships with county extension agents.				
	Never	Rarely	Occasionally	Frequently	Always	Very undesirable	Undesirable	Neither desirable nor undesirable	Desirable	Very desirable
1. Discussing community needs pertaining to education in agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
2. Identifying common educational objectives of extension and vocational agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
3. Conducting community agricultural surveys -	0	1	2	3	4	-2	-1	0	1	2
4. Discussing implications of current trends for program planning in agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
5. Securing each other's reactions on newly planned programs - - - - -	0	1	2	3	4	-2	-1	0	1	2
6. Calling each other's attention to competent people who might serve on advisory councils -	0	1	2	3	4	-2	-1	0	1	2
7. Exchanging information about each other's experience with advisory councils - - - - -	0	1	2	3	4	-2	-1	0	1	2
8. Serving as consultants on each other's advisory committees - - - - -	0	1	2	3	4	-2	-1	0	1	2

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Activities	Degree to which you carry out the activity in your working relationships with county extension agents.					Desirability of carrying out the activity in your working relationships with county extension agents.				
	Never	Rarely	Occasionally	Frequently	Always	Very undesirable	Undesirable	Neither desirable nor undesirable	Desirable	Very desirable
9. Developing educational programs for out-of-school youth in agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
10. Coordinating educational programs of extension and vocational agriculture for adult farmers	0	1	2	3	4	-2	-1	0	1	2
11. Conducting joint demonstration projects in agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
12. Sharing responsibility for publicity concerning educational programs in agriculture in the county - - - - -	0	1	2	3	4	-2	-1	0	1	2
13. Conducting county and other agricultural fairs	0	1	2	3	4	-2	-1	0	1	2
14. Working out plans for educational exhibits in agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
15. Utilizing each other's special knowledge and abilities in particular teaching situations in agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
16. Discussing the need for a specialist's help in a particular project - - - - -	0	1	2	3	4	-2	-1	0	1	2
17. Determining supportive roles in helping young and adult farmers adopt farm practices - - - -	0	1	2	3	4	-2	-1	0	1	2
18. Organizing ways of conducting educational programs through special interest groups and associations - - - - -	0	1	2	3	4	-2	-1	0	1	2
19. Working out uniform standards for contests in agriculture in the county - - - - -	0	1	2	3	4	-2	-1	0	1	2
20. Developing criteria for agricultural projects of FFA and 4-H club members	0	1	2	3	4	-2	-1	0	1	2
21. Discussing instructional materials, space, and facilities locally available for carrying out educational programs in agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
22. Exchanging printed and duplicated materials of mutual interest - - - - -	0	1	2	3	4	-2	-1	0	1	2
23. Exchanging use of educational equipment and facilities - - - - -	0	1	2	3	4	-2	-1	0	1	2
24. Arranging for meetings in which farmers discuss agricultural problems with local resource personnel - - - - -	0	1	2	3	4	-2	-1	0	1	2
25. Working out a program of cooperation between 4-H club and FFA - - - - -	0	1	2	3	4	-2	-1	0	1	2
26. Developing means of securing public reactions to educational programs in agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
27. Developing criteria for judging effectiveness of local educational programs in agriculture - - - -	0	1	2	3	4	-2	-1	0	1	2
28. Discussing factors affecting success or failure of educational programs in agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
29. Developing means of publicizing results of evaluating educational programs in agriculture -	0	1	2	3	4	-2	-1	0	1	2

Activities	COLUMN (I)					COLUMN (II)				
	Degree to which you carry out the activity in your working relationships with county extension agents.					Desirability of carrying out the activity in your working relationships with county extension agents.				
	Never	Rarely	Occasionally	Frequently	Always	Very undesirable	Undesirable	Neither desirable nor undesirable	Desirable	Very desirable
30. Crediting each other's contribution toward successful educational programs in agriculture	0	1	2	3	4	-2	-1	0	1	2

**PHASE III - INFORMATION ABOUT CERTAIN FACTORS INVOLVED IN YOUR
WORKING RELATIONSHIPS WITH COUNTY EXTENSION
AGENTS**

Items in this section are factors which may or may not be involved in your working relationships with county extension agents.

In column (I) please circle one number (0, 1, 2, 3, or 4) to indicate the degree to which each factor is involved in your working relationships with county extension agents.

In column (II) please circle one number (-2, -1, 0, 1, or 2) to indicate the degree to which each factor involved in your working relationships with county extension agents hampers or promotes effective educational programs in agriculture.

Factors	COLUMN (I)					COLUMN (II)				
	Degree to which the factor is involved in your working relationships with county extension agents.					Degree to which the factor involved hampers or promotes effective educational programs in agriculture.				
	Is not involved	Very little involved	Some involved	Much involved	Very much involved	Hampers much	Hampers some	Neither hampers nor promotes	Promotes some	Promotes much
I - PERSONAL										
31. Personality of the other worker - - - - -	0	1	2	3	4	-2	-1	0	1	2
32. Similarity of our age - - - - -	0	1	2	3	4	-2	-1	0	1	2
33. Closeness of personal friendship - - - - -	0	1	2	3	4	-2	-1	0	1	2
34. Initiative in contacting me - - - - -	0	1	2	3	4	-2	-1	0	1	2
35. Initiative in contacting him - - - - -	0	1	2	3	4	-2	-1	0	1	2
36. His democratic way of consultation - - - - -	0	1	2	3	4	-2	-1	0	1	2
37. Degree of his academic education - - - - -	0	1	2	3	4	-2	-1	0	1	2
38. Similarity of our educational specialization - -	0	1	2	3	4	-2	-1	0	1	2
39. Difference of our educational specialization - -	0	1	2	3	4	-2	-1	0	1	2
40. Similarity of our inservice training in technical subject matter - - - - -	0	1	2	3	4	-2	-1	0	1	2
41. Difference of our inservice training in technical subject matter - - - - -	0	1	2	3	4	-2	-1	0	1	2
42. Similarity of our inservice training in teaching methods - - - - -	0	1	2	3	4	-2	-1	0	1	2
43. Difference of our inservice training in teaching methods - - - - -	0	1	2	3	4	-2	-1	0	1	2

Factors	Degree to which the factor is involved in your working relationships with county extension agents.					Degree to which the factor involved hampers or promotes effective educational programs in agriculture.				
	Is not involved	Very little involved	Some involved	Much involved	Very much involved	Hampers much	Hampers some	Neither hampers nor promotes	Promotes some	Promotes much
44. His experience in working with rural people - -	0	1	2	3	4	-2	-1	0	1	2
45. My experience in working with rural people - -	0	1	2	3	4	-2	-1	0	1	2
46. His experience in the field of agriculture - - - -	0	1	2	3	4	-2	-1	0	1	2
47. My experience in the field of agriculture - - - -	0	1	2	3	4	-2	-1	0	1	2
II - NON-PERSONAL										
48. Existence and activity of county agricultural council - - - - -	0	1	2	3	4	-2	-1	0	1	2
49. Relationships between leaders of vocational agriculture and Cooperative Extension staff at state level - - - - -	0	1	2	3	4	-2	-1	0	1	2
50. Relationships between school administrators and county extension staff - - - - -	0	1	2	3	4	-2	-1	0	1	2
51. Existence of memoranda of understanding between Cooperative Extension and vocational agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
52. Views passed down from state levels - - - - -	0	1	2	3	4	-2	-1	0	1	2
53. Lack of clarity of functions (eg. Smith - Lever and Smith - Hughes acts do not clearly distinguish functions of extension in agriculture and vocational agriculture) - - - - -	0	1	2	3	4	-2	-1	0	1	2
54. Difficulty in scheduling (eg. teachers cannot get away when school is in session, and extension agents have many nights tied up) - - - - -	0	1	2	3	4	-2	-1	0	1	2
55. Belief that the public expects effective working relationships between extension agents and teachers of vocational agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
56. Lack of adequate time for desirable working relationships between county extension agents and teachers of vocational agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
57. Need for separate identity of vocational agricultural programs and extension work in agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
58. Mutual respect of efforts - - - - -	0	1	2	3	4	-2	-1	0	1	2
59. Realization that communication between us is important - - - - -	0	1	2	3	4	-2	-1	0	1	2
60. Recognition of the fact that our roles are complementary - - - - -	0	1	2	3	4	-2	-1	0	1	2
61. Realization of the need for more than one educational agency to serve agriculture - - - - -	0	1	2	3	4	-2	-1	0	1	2
62. Belief in cooperation as a part of any professional worker's job - - - - -	0	1	2	3	4	-2	-1	0	1	2
63. Welfare of the people we serve - - - - -	0	1	2	3	4	-2	-1	0	1	2

THANK YOU VERY MUCH FOR YOUR COOPERATION

APPENDIX C

AREAS AND ITEMS OF THE INSTRUMENT

A - Areas of Activities

I. Preplanning:

a. Investigating needs and examining objectives:

Item No.

- 1 Discussing community needs pertaining to education in agriculture
- 2 Identifying common educational objectives of extension and vocational agriculture
- 3 Conducting community agricultural surveys
- 4 Discussing implications of current trends for program planning in agriculture

b. Identifying local potential for launching educational programs:

- 6 Calling each other's attention to competent people who might serve on advisory councils
- 7 Exchanging information about each other's experience with advisory councils
- 16 Discussing the need for a specialist's help in a particular project
- 21 Discussing instructional materials, space, and facilities locally available for carrying out educational programs in agriculture

II. Planning:

✓ a. Educational programs for youth:

- 9 Developing educational programs for out-of-school youth in agriculture
- 20 Developing criteria for agricultural projects of FFA and 4-H club members
- 25 Working out a program of cooperation between 4-H club and FFA

✓ b. Educational programs for farmers:

- 10 Coordinating educational programs of extension and vocational agriculture for adult farmers

Item No.

- 17 Determining supportive roles in helping young and adult farmers adopt farm practices
- 18 Organizing ways of conducting educational programs through special interest groups and associations
- 24 Arranging for meetings in which farmers discuss agricultural problems with local resource personnel

c. Public Relations:

- 12 Sharing responsibility for publicity concerning educational programs in agriculture
- 26 Developing means of securing public reactions to educational programs in agriculture
- 29 Developing means of publicizing results of evaluating educational programs in agriculture

✓ **d. Exhibits and Contests:**

- 14 Working out plans for educational exhibits in agriculture
- 19 Working out uniform standards for contests in agriculture in the county

III. Evaluation of Programs:

- 5 Securing each other's reactions on newly planned programs
- 27 Developing criteria for judging effectiveness of local educational programs in agriculture
- 28 Discussing factors affecting success or failure of educational programs in agriculture
- 30 Crediting each other's contribution toward successful educational programs in agriculture

IV. Implementation:

- a. **Consulting and teaching for each other's programs:**

Item No.

- 8 Serving as consultants on each other's advisory committees
- 15 Utilizing each other's special knowledge and abilities in particular teaching situations in agriculture

b. Conducting demonstrations and fairs:

- 11 Conducting joint demonstration projects in agriculture
- 13 Conducting county and other agricultural fairs

c. Exchanging educational aids and facilities:

- 22 Exchanging printed and duplicated materials of mutual interest
- 23 Exchanging use of educational equipment and facilities

B - Areas of Factors

I. Personality and General Characteristics:

- 31 Personality of the other worker
- 32 Similarity of our age
- 33 Closeness of personal friendship
- 34 Initiative in contacting me
- 35 Initiative in contacting him
- 36 His democratic way of consultation
- 37 Degree of his academic education

✓ **II. Education and Training:**

Similarities

- 38 Similarity of our educational specialization
- 40 Similarity of our in-service training in technical subject matter
- 42 Similarity of our in-service training in teaching methods

Differences

- 39 Differences of our educational specialization

Item No.

- 41 Differences of our in-service training in technical subject matter
- 43 Differences in our in-service training in teaching methods

III. Experience:

- 44 His experience in working with rural people
- 45 My experience in working with rural people
- 46 His experience in the field of agriculture
- 47 My experience in the field of agriculture

IV. Interorganizational Relationships:

- 48 Existence and activity of county agricultural council
- 49 Relationships between leaders of vocational agriculture and Cooperative Extension staff at state level
- 50 Relationships between school administrators and county extension staff
- 51 Existence of memoranda of understanding between Cooperative Extension and Vocational Agriculture
- 52 Views passed down from state levels.

V. Intraorganizational Requirements:

- 53 Lack of clarity of functions (e.g. Smith-Lever and Smith-Hughes acts do not distinguish functions of extension in agriculture and vocational agriculture)
- 54 Difficulty in scheduling (e.g. Teachers cannot get away when school is in session and extension agents have many nights tied up)
- 56 Lack of adequate time for desirable working relationships between county agents and teachers of vocational agriculture
- 57 Need for separate identity of vocational agricultural programs and extension work in agriculture

VI. Perceiving Importance of Working Relationships:

Item No.

- 55 Belief that the public expects effective working relationships between extension agents and teachers of vocational agriculture
- 58 Mutual respect of efforts
- 59 Realization that communication between us is important
- 60 Recognition of the fact that our roles are complementary
- 61 Realization of the need for more than one educational agency to serve agriculture
- 62 Belief in cooperation as a part of any professional worker's job
- 63 Welfare of the people we serve

APPENDIX D

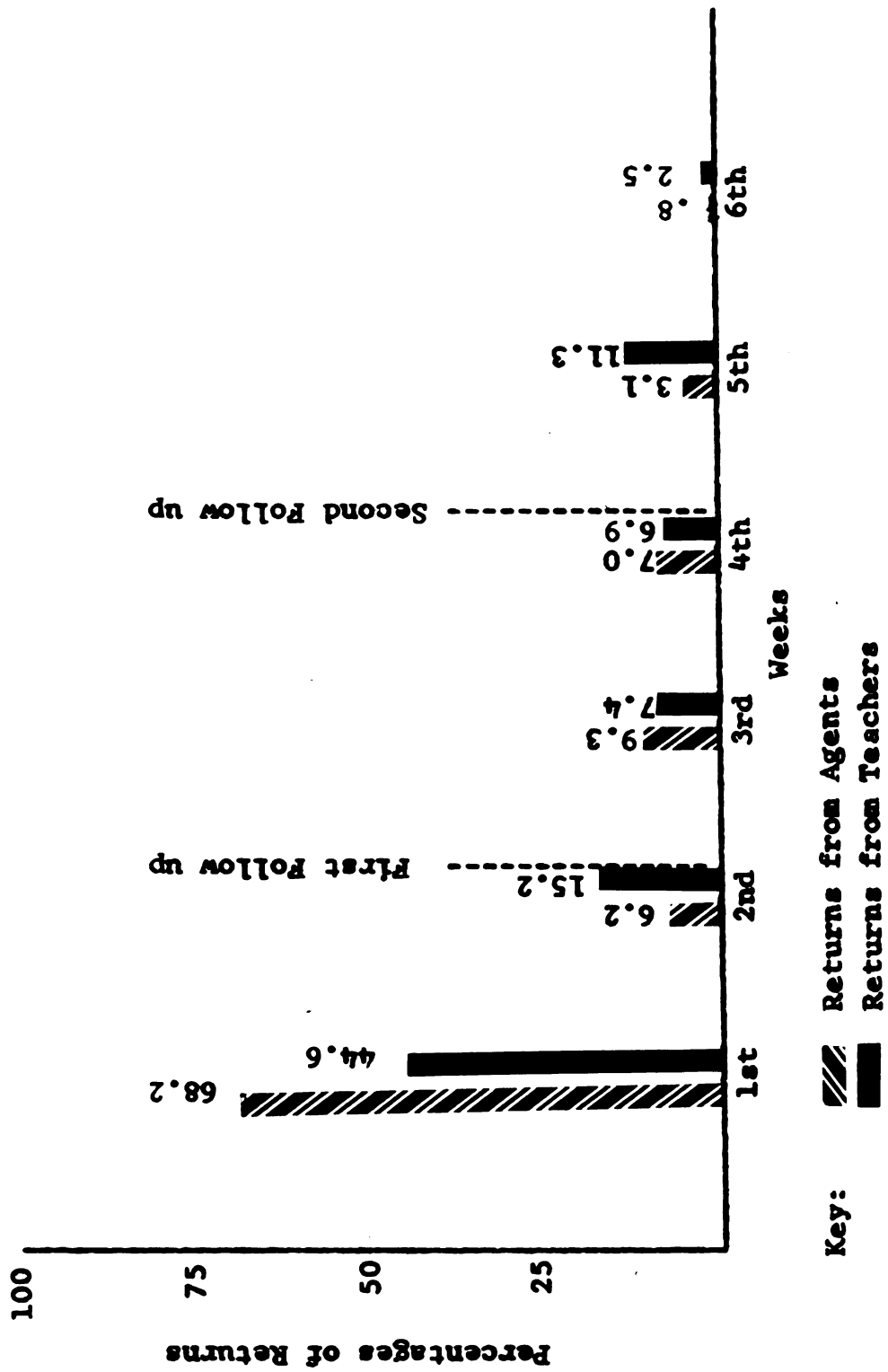


Figure 12 - Returns of the Instrument

TABLE XLV

NUMBER OF COUNTY EXTENSION AGENTS AND TEACHERS
OF VOCATIONAL AGRICULTURE WHO WERE REQUESTED
TO PARTICIPATE IN THE STUDY AND
THOSE WHO RESPONDED .

County	Agents		Teachers	
	Requested	Responded	Requested	Responded
Alcona	1	1	1	1
Allegan	1	1	4	4
Alpena	2	2	2	2
Arenac	1	1	1	1
Barry	2	2	2	2
Bay	3	3	2	1
Benzie	1	1	1	1
Berrien	4	4	8	7
Branch	2	2	3	2
Calhoun	3	3	3	3
Cass	1	-	2	2
Charlevoix	1	1	1	1
Cheboygan	1	1	1	1
Chippewa	2	2	3	3
Clinton	3	1	4	3
Dickinson	1	1	1	-
Eaton	3	3	6	6
Emmet	1	1	4	3
Genesee	3	3	5	4
Gladwin	1	1	1	1
Grand Traverse	2	2	1	1
Gratiot	2	2	4	4
Hillsdale	2	2	8	7
Houghton	2	2	2	2
Huron	2	2	7	6
Ingham	2	2	7	7
Ionia	2	2	7	7
Iosco	1	1	2	1
Isabella	2	2	3	3
Jackson	3	2	3	3
Kalamazoo	4	4	1	-
Kent	4	4	6	5

TABLE XLV - (Continued)

County	Agents		Teachers	
	Requested	Responded	Requested	Responded
Lapeer	3	3	5	4
Lenawee	2	2	9	9
Livingston	3	3	2	2
Macomb	3	3	2	2
Mason	2	2	3	3
Mecosta	2	1	2	2
Menominee	2	2	1	-
Missaukee	1	1	1	1
Monroe	1	1	6	5
Montcalm	1	1	6	6
Muskegon	2	2	3	3
Newago	2	2	3	2
Oakland	3	2	1	1
Oceana	2	2	1	-
Ogemaw	1	1	1	1
Oceola	2	2	1	1
Oscoda	1	1	1	1
Otsego	1	1	1	1
Ottawa	3	3	4	4
Presque Isle	2	2	1	-
Saginaw	3	3	4	4
St. Clair	3	3	3	3
St. Joseph	3	3	2	1
Sanilac	3	3	7	7
Shiawassee	3	3	6	4
Tuscola	3	2	9	7
Van Buren	3	3	6	5
Washtenaw	3	3	5	5
Wexford	1	1	3	2
TOTAL	129	122	204	180
%	100	94.6	100	88.2

APPENDIX E

TABLE XLVI

DEGREES TO WHICH CERTAIN ACTIVITIES WERE CARRIED
OUT IN WORKING RELATIONSHIPS OF COUNTY
EXTENSION AGENTS AND TEACHERS OF
VOCATIONAL AGRICULTURE IN MICHIGAN

Activity	Groups	Responses*					No Resp.	Total
		0	1	2	3	4		
1	Dir.	-	5	29	24	1	-	59
	Agts. Agri.	1	2	14	8	-	-	25
	Agts. 4-H	1	8	22	7	-	-	38
	Tech. Vo-ag.	6	26	78	64	6	-	180
2	Dir.	1	10	34	13	1	-	59
	Agts. Agri.	1	3	11	9	1	-	25
	Agts. 4-H	2	14	16	5	-	1	38
	Tech. Vo-ag.	16	35	72	51	5	1	180
3	Dir.	10	25	20	3	1	-	59
	Agts. Agri.	6	11	5	3	-	-	25
	Agts. 4-H	19	12	3	3	-	1	38
	Tech. Vo-ag.	61	60	40	9	6	4	180
4	Dir.	5	12	24	18	-	-	59
	Agts. Agri.	1	7	8	9	-	-	25
	Agts. 4-H	6	9	18	4	1	-	38
	Tech. Vo-ag.	21	37	63	48	7	4	180
5	Dir.	4	13	20	18	4	-	59
	Agts. Agri.	2	5	11	6	1	-	25
	Agts. 4-H	3	11	15	8	1	-	38
	Tech. Vo-ag.	23	34	58	50	13	2	180
6	Dir.	6	14	24	15	-	-	59
	Agts. Agri.	1	6	7	9	1	1	25
	Agts. 4-H	11	12	9	5	-	1	38
	Tech. Vo-ag.	52	47	50	23	6	2	180

*0 - Never, 1 - Rarely, 2 - Occasionally, 3 - Frequently, and 4 - Always.

TABLE XLVI - (Continued)

Activity	Groups	Responses*					No Resp.	Total
		0	1	2	3	4		
7	Dir.	9	23	15	12	-	-	59
	Agts. Agri.	4	10	5	5	1	-	25
	Agts. 4-H	13	12	11	1	-	1	38
	Tech. Vo-ag.	67	55	36	15	4	3	180
8	Dir.	15	16	18	9	1	-	59
	Agts. Agri.	11	6	3	5	-	-	25
	Agts. 4-H	20	7	5	4	1	1	38
	Tech. Vo-ag.	100	27	27	20	2	4	180
9	Dir.	3	12	30	13	-	1	59
	Agts. Agri.	3	4	11	7	-	-	25
	Agts. 4-H	9	13	8	6	1	1	38
	Tech. Vo-ag.	41	35	56	43	4	1	180
10	Dir.	1	8	23	23	4	-	59
	Agts. Agri.	1	6	7	10	1	-	25
	Agts. 4-H	13	7	8	8	1	1	38
	Tech. Vo-ag.	26	29	46	53	26	-	180
11	Dir.	3	16	25	11	3	1	59
	Agts. Agri.	6	5	8	6	-	-	25
	Agts. 4-H	13	7	13	2	2	1	38
	Tech. Vo-ag.	48	37	54	35	6	-	180
12	Dir.	9	23	16	9	2	-	59
	Agts. Agri.	3	7	7	7	1	-	25
	Agts. 4-H	11	6	12	8	-	1	38
	Tech. Vo-ag.	34	41	55	42	6	2	180
13	Dir.	4	7	11	13	24	-	59
	Agts. Agri.	3	1	6	12	3	-	25
	Agts. 4-H	3	1	7	11	15	1	38
	Tech. Vo-ag.	14	19	25	50	68	4	180
14	Dir.	10	18	16	13	2	-	59
	Agts. Agri.	7	4	9	5	-	-	25
	Agts. 4-H	8	9	13	5	2	1	38
	Tech. Vo-ag.	54	35	49	32	9	1	180

*0 - Never, 1- Rarely, 2 - Occasionally, 3 - Frequently, and 4 - Always.

TABLE XLVI - (Continued)

Activity	Groups	Responses*					No Resp.	Total
		0	1	2	3	4		
15	Dir.	6	13	16	20	3	1	59
	Agts. Agri.	1	8	7	9	-	-	25
	Agts. 4-H	6	9	12	9	1	1	38
	Tech. Vo-ag.	19	45	60	48	8	-	180
16	Dir.	5	11	26	14	3	-	59
	Agts. Agri.	2	2	11	10	-	-	25
	Agts. 4-H	9	11	12	3	2	1	38
	Tech. Vo-ag.	11	27	65	55	21	1	180
17	Dir.	3	12	28	15	-	1	59
	Agts. Agri.	2	7	9	6	1	-	25
	Agts. 4-H	15	9	10	2	1	1	38
	Tech. Vo-ag.	36	46	63	28	5	2	180
18	Dir.	6	18	26	9	-	-	59
	Agts. Agr.	3	7	9	5	-	1	25
	Agts. 4-H	11	12	10	3	1	1	38
	Tech. Vo-ag.	31	56	49	35	4	5	180
19	Dir.	8	11	26	10	4	-	59
	Agts. Agr.	5	7	7	5	1	-	25
	Agts. 4-H	11	7	8	9	3	-	38
	Tech. Vo-ag.	38	35	39	45	21	2	180
20	Dir.	6	21	18	13	1	-	59
	Agts. Agri.	6	8	8	2	1	-	25
	Agts. 4-H	6	14	9	7	1	1	38
	Tech. Vo-ag.	57	42	33	29	16	3	180
21	Dir.	4	16	26	13	-	-	59
	Agts. Agri.	2	8	12	3	-	-	25
	Agts. 4-H	14	12	9	2	1	-	38
	Tech. Vo-ag.	41	45	48	35	10	1	180
22	Dir.	1	8	12	32	6	-	59
	Agts. Agri.	3	4	7	9	2	-	25
	Agts. 4-H	5	9	10	9	3	2	38
	Tech. Vo-ag.	11	17	48	83	21	-	180

*0 - Never, 1 - Rarely, 2 - Occasionally, 3 - Frequently, and 4 - Always.

TABLE XLVI - (Continued)

Activity	Groups	Responses*					No Resp.	Total
		0	1	2	3	4		
23	Dir.	3	10	28	14	4	-	59
	Agts. Agri.	5	4	11	4	1	-	25
	Agts. 4-H	11	7	12	6	1	1	38
	Tech. Vo-ag.	28	34	62	42	14	-	180
24	Dir.	5	8	30	14	2	-	59
	Agts. Agri.	2	4	15	3	-	1	25
	Agts. 4-H	18	7	8	3	1	1	38
	Tech. Vo-ag.	22	32	66	48	11	1	180
25	Dir.	1	12	22	18	6	-	59
	Agts. Agri.	8	5	7	4	1	-	25
	Agts. 4-H	3	10	8	13	4	-	38
	Tech. Vo-ag.	36	44	45	33	21	1	180
26	Dir.	9	24	20	4	2	-	59
	Agts. Agri.	7	12	5	1	-	-	25
	Agts. 4-H	14	14	6	2	1	1	38
	Tech. Vo-ag.	61	50	43	22	2	2	180
27	Dir.	9	29	18	2	-	1	59
	Agts. Agri.	10	10	2	3	-	-	25
	Agts. 4-H	16	14	4	3	-	1	38
	Tech. Vo-ag.	74	61	26	14	2	3	180
28	Dir.	4	20	21	12	1	1	59
	Agts. Agri.	4	9	8	4	-	-	25
	Agts. 4-H	13	10	6	7	2	-	38
	Tech. Vo-ag.	48	53	44	29	4	2	180
29	Dir.	12	28	12	7	-	-	59
	Agts. Agri.	9	9	4	3	-	-	25
	Agts. 4-H	17	10	8	1	1	1	38
	Tech. Vo-ag.	65	50	43	13	6	3	180
30	Dir.	-	3	18	26	10	2	59
	Agts. Agri.	-	2	12	5	3	3	25
	Agts. 4-H	4	4	16	11	1	2	38
	Tech. Vo-ag.	15	18	50	57	29	11	180

*0 - Never, 1 - Rarely, 2 - Occasionally, 3 - Frequently, and 4 - Always.

TABLE XLVII

DEGREES TO WHICH CERTAIN FACTORS WERE INVOLVED
IN WORKING RELATIONSHIPS OF COUNTY
EXTENSION AGENTS AND TEACHERS OF
VOCATIONAL AGRICULTURE IN MICHIGAN

Factors	Groups	Responses*					No Resp.	Total
		0	1	2	3	4		
31	Dir.	4	8	22	14	11	-	59
	Agts. Agri.	2	2	13	4	4	-	25
	Agts. 4-H	9	10	8	5	6	-	38
	Tech. Vo-ag.	31	22	44	41	41	1	180
32	Dir.	20	21	13	2	3	-	59
	Agts. Agr.	8	9	6	1	1	-	25
	Agts. 4-H	22	5	5	3	2	1	38
	Tech. Vo-ag.	66	45	43	18	7	1	180
33	Dir.	4	16	18	16	5	-	59
	Agts. Agri.	5	4	7	8	1	-	25
	Agts. 4-H	14	6	7	6	4	1	38
	Tech. Vo-ag.	44	26	71	23	15	1	180
34	Dir.	3	7	25	15	9	-	59
	Agts. Agri.	3	2	13	5	1	1	25
	Agts. 4-H	7	4	14	9	2	2	38
	Tech. Vo-ag.	20	38	58	44	19	1	180
35	Dir.	2	5	28	17	7	-	59
	Agts. Agri.	1	3	13	6	2	-	25
	Agts. 4-H	6	5	17	7	2	1	38
	Tech. Vo-ag.	18	24	69	50	18	1	180
36	Dir.	10	10	18	15	6	-	59
	Agts. Agri.	4	3	14	1	2	1	25
	Agts. 4-H	13	2	12	8	2	1	38
	Tech. Vo-ag.	29	24	50	42	31	4	180

*0 - Not involved, 1 - Very little involved, 2 - Some involved, 3 - much involved, and 4 - very much involved.

TABLE XLVII - (Continued)

Factors	Groups	Responses*					No Resp.	Total
		0	1	2	3	4		
37	Dir.	20	15	17	4	3	-	59
	Agts. Agri.	12	7	5	1	-	-	25
	Agts. 4-H	26	6	4	1	-	1	38
	Tech. Vo-ag.	64	22	40	32	18	4	180
38	Dir.	15	15	15	10	3	1	59
	Agts. Agri.	9	6	8	2	-	-	25
	Agts. 4-H	24	4	6	2	1	1	38
	Tech. Vo-ag.	43	33	41	38	21	4	180
39	Dir.	17	16	20	5	-	1	59
	Agts. Agri.	9	8	5	2	-	1	25
	Agts. 4-H	21	9	4	2	2	-	38
	Tech. Vo-ag.	73	46	41	10	8	2	180
40	Dir.	16	9	24	6	4	-	59
	Agts. Agri.	7	5	7	5	-	1	25
	Agts. 4-H	19	8	7	2	1	1	38
	Tech. Vo-ag.	50	39	48	27	13	3	180
41	Dir.	16	15	17	8	3	-	59
	Agts. Agri.	6	8	5	4	1	1	25
	Agts. 4-H	20	9	4	2	2	1	38
	Tech. Vo-ag.	74	43	46	8	6	3	180
42	Dir.	19	17	14	5	3	1	59
	Agts. Agri.	8	7	9	-	-	1	25
	Agts. 4-H	17	10	7	1	2	1	38
	Tech. Vo-ag.	68	33	52	19	5	3	180
43	Dir.	17	20	15	5	2	-	59
	Agts. Agri.	8	9	7	-	-	1	25
	Agts. 4-H	17	10	6	1	3	1	38
	Tech. Vo-ag.	86	38	41	10	2	3	180
44	Dir.	7	6	21	21	4	-	59
	Agts. Agri.	6	3	6	9	1	-	25
	Agts. 4-H	8	5	20	5	-	-	38
	Tech. Vo-ag.	25	16	48	44	43	4	180

*0 - Not involved, 1 - Very little involved, 2 - Some involved, 3 - Much involved, and 4 - Very much involved.

TABLE XLVII - (Continued)

Factors	Groups	Responses*					No Resp.	Total
		0	1	2	3	4		
45	Dir.	5	7	15	25	7	-	59
	Agts. Agri.	5	3	7	9	1	-	25
	Agts. 4-H	10	4	16	7	1	-	38
	Tech. Vo-ag.	25	13	52	51	35	4	180
46	Dir.	6	4	12	25	12	-	59
	Agts. Agri.	6	3	5	9	2	-	25
	Agts. 4-H	11	7	10	8	1	1	38
	Tech. Vo-ag.	24	7	33	58	54	4	180
47	Dir.	6	5	10	23	15	-	59
	Agts. Agri.	6	3	4	8	4	-	25
	Agts. 4-H	11	6	12	6	1	2	38
	Tech. Vo-ag.	21	11	39	62	43	4	180
48	Dir.	15	14	21	5	3	1	59
	Agts. Agri.	8	6	4	3	3	1	25
	Agts. 4-H	17	6	10	2	2	1	38
	Tech. Vo-ag.	58	25	35	24	33	5	180
49	Dir.	9	12	24	10	3	1	59
	Agts. Agri.	5	3	5	7	3	2	25
	Agts. 4-H	16	5	6	5	3	3	38
	Tech. Vo-ag.	50	26	54	26	16	8	180
50	Dir.	8	4	28	12	7	-	59
	Agts. Agri.	4	5	12	4	-	-	25
	Agts. 4-H	9	4	16	6	3	-	38
	Tech. Vo-ag.	67	56	34	9	11	3	180
51	Dir.	26	51	16	1	1	-	59
	Agts. Agri.	10	5	6	3	-	1	25
	Agts. 4-H	17	4	10	2	4	1	38
	Tech. Vo-ag.	51	28	53	18	22	8	180
52	Dir.	11	10	24	8	5	1	59
	Agts. Agri.	9	4	7	4	-	1	25
	Agts. 4-H	14	6	10	3	4	1	38
	Tech. Vo-ag.	55	34	56	17	10	8	180

*0 - Not involved, 1 - Very little involved, 2 - Some involved, 3 - Much involved, and 4 - Very much involved.

TABLE XLVII - (Continued)

Factors	Groups	Responses*					No Resp.	Total
		0	1	2	3	4		
53	Dir.	27	17	12	2	1	-	59
	Agts. Agri.	13	6	2	3	-	1	25
	Agts. 4-H	21	8	3	4	1	1	38
	Tech. Vo-ag.	75	39	45	13	4	4	180
54	Dir.	3	6	22	20	8	-	59
	Agts. Agri.	3	2	7	10	3	-	25
	Agts. 4-H	13	2	11	6	5	1	38
	Tech. Vo-ag.	19	20	68	44	26	3	180
55	Dir.	14	15	18	9	3	-	59
	Agts. Agri.	6	8	4	6	-	1	25
	Agts. 4-H	16	5	9	8	-	-	38
	Tech. Vo-ag.	46	40	42	30	19	3	180
56	Dir.	7	7	21	21	3	-	59
	Agts. Agri.	2	7	11	4	1	-	25
	Agts. 4-H	8	6	11	6	5	2	38
	Tech. Vo-ag.	16	30	62	42	27	3	180
57	Dir.	20	15	17	5	1	1	59
	Agts. Agri.	13	5	5	2	-	-	25
	Agts. 4-H	23	5	7	1	1	1	38
	Tech. Vo-ag.	90	39	29	11	7	4	180
58	Dir.	5	8	19	17	10	-	59
	Agts. Agri.	2	3	11	8	1	-	25
	Agts. 4-H	11	1	10	10	5	1	38
	Tech. Vo-ag.	25	13	52	46	38	8	180
59	Dir.	3	2	19	21	14	-	59
	Agts. Agri.	1	-	13	8	3	-	25
	Agts. 4-H	7	5	10	12	4	-	38
	Tech. Vo-ag.	9	8	47	57	53	6	180
60	Dir.	3	1	20	21	14	-	59
	Agts. Agri.	1	1	13	7	3	-	25
	Agts. 4-H	8	2	9	14	5	-	38
	Tech. Vo-ag.	9	8	52	47	58	6	180

*0 - Not involved, 1 - Very little involved, 2 - Some involved, 3 - Much involved, and 4 - Very much involved.

TABLE XLVII - (Continued)

Factors	Groups	Responses*					No Resp.	Total
		0	1	2	3	4		
61	Dir.	5	4	23	14	13	-	59
	Agts. Agri.	5	5	9	4	2	-	25
	Agts. 4-H	13	3	10	8	4	-	38
	Tech. Vo-ag.	16	10	45	56	49	4	180
62	Dir.	3	1	13	20	22	-	59
	Agts. Agr.	2	-	8	9	5	1	25
	Agts. 4-H	7	2	6	11	12	-	38
	Tech. Vo-ag.	11	5	38	36	85	5	180
63	Dir.	2	1	8	17	31	-	59
	Agts. Agri.	3	-	8	4	10	-	25
	Agts. 4-H	7	1	5	10	15	-	38
	Tech. Vo-ag.	10	4	31	36	94	5	180

*0 - Not involved, 1 - Very little involved, 2 - Some involved, 3 - Much involved, and 4 - Very much involved.

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