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Douglas Malcolm Haynes

Louisiana State University and Agricultural & Mechanical College

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VOCATIONAL AGRICULTURE TEACHER'S PERCEPTIONS OF YOUNG/ADULT EDUCATION PROGRAMS IN THE SOUTHERN REGION OF THE UNITED STATES

The Louisiana State University and Agricultural and Mechanical Col.  PH.D.  1984

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Vocational Agriculture Teacher's Perceptions of Young/Adult Education Programs in the Southern Region of the United States

A Dissertation
Submitted to the Graduate Faculty of Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Vocational Agricultural Education

by
Douglas Malcolm Haynes
B.S. Tuskegee Institute, 1979
M.S. Tuskegee Institute, 1980
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Abstract

The purpose of this study was to determine vocational agriculture teachers' perceptions of their roles and responsibilities for and the importance of selected educationally related aspects of young/adult programs in agriculture. It was also the intent of the study to identify some characteristics of these programs in the South.

A proportional two-phase random sampling technique was used to select 361 teachers in four states in the Southern region. The four-part questionnaire, developed to record responses, netted an 82.8% usable return rate after four follow-up procedures, which included an intensive follow-up of non-respondents. Participants' responses were recorded on an 11-point continuum and then transformed to a 0 to 16 certainty scale for data analysis.

Vocational agriculture teachers perceived themselves as being to some extent (means of 8.00 or higher) responsible for all 16 roles and responsibilities items. In addition, teachers considered 22 of the 28 program factors as being of some (means of 8.00 to 10.00) or substantial (means higher than 10.00) importance to successful programs. Teachers with programs felt greater responsibility for all 16 roles and responsibilities and attached more importance to 22 of 28 program factors than teachers without programs. The selected teacher demographic variables had little or no influence on teachers' perceptions of their roles and
responsibilities for and their perceived importance of selected program factors. However, the majority of teachers who conducted programs were found in multiple teacher departments and had more years of experience than teachers without programs. Finally, of the 151 respondents (50.7%) with programs, 90.1% had enrollments of 10 or more participants per class; 83.4% of the respondents implemented eight or more instructional meetings; and 75.5% carried out on-the-farm instructional visits.
CHAPTER I

Introduction

Adult education in agriculture has been influenced by several factors including many early legislative enactments such as the Organic Act of 1862 and the first Morrill Act of 1862. The Organic Act had established the United States Department of Agriculture. One of the principal responsibilities of this agency, as approved by Congress was "...to acquire and to diffuse among the people of the United States useful information on subjects connected with agriculture..." (The Organic Act of 1862, p. 73).

The first Morrill Act facilitated the establishment of land grant colleges and universities. One of the primary purposes of these institutions was to emphasize education in agriculture and the mechanical arts in order to improve the social and economic conditions of rural people. (Bender, McCormick, Woodin, Cunningham & Wolf, 1972)

Other legislative acts of significance for adult education in agriculture followed the Morrill Act. The Hatch Act of 1887 established agricultural experiment stations to provide for problem solving and the creation of new knowledge through scientific investigation at land grant colleges. As a consequence, a need to have agricultural knowledge and research findings disseminated to the farming populace became increasingly apparent. The Smith-Lever Act of 1914 established the Cooperative Extension Service, as a tripartite arrangement with operational cost shared among
federal, state and local units of government. The cooperative extension clientele was specified by the Smith-Lever Act of 1914 as the people of the United States, its possessions and territories who are not formally enrolled in or residents of colleges (Smith-Lever Act of 1914).

Another major legislative act--the Smith-Hughes Act of 1917--with implications for adult education in agriculture was directed at vocational education, which was regarded by the Congress as essential for national welfare. As such, federal funds were needed to stimulate and assist the states in making adequate provisions for this program. The report from the Commission on National Aid to Vocational Education in 1914 which addressed the aforementioned concern was the basis for the Smith-Hughes Act of 1917. This act, though directed toward the education of young people in public schools, did not exclude the education of adults. The Smith-Hughes Act of 1917 stated that:

...such education shall be of less than college grade and be designated to meet the needs of persons over 14 years of age who have entered or who are preparing to enter upon work of the farm or of the farm home. (Smith-Hughes Act of 1917, p. 935)

In further specifying the conditions for funding "schools or classes", the Smith-Hughes Act suggested agricultural education for adult farmers as well as youth.
Other principal legislative enactments, namely, the George-Deen Act of 1937 and the George-Barden Act of 1946, designated other occupational categories in which training could be supported by federal funds. These acts further increased monetary allotments to the then existing programs and undergirded the support for adult education in agriculture provided by the Smith-Hughes Act.

The 1963 Vocational Education Act had even greater implications for vocational agriculture adult programs than did earlier acts. The rapid decline in the number of farm jobs had created social conditions which necessitated major revisions of the Smith-Hughes Act. The 1963 legislation established a new focus for vocational education and further specified the clientele for vocational programs as persons of all ages in all communities in each state. Specific groups to be addressed were high school youth, post-high school youth and adults enrolled in other courses, and people with special needs. Venn (1970) summed the major ideas of legislative acts prior to 1968 which had implications for adult vocational education as: "...supporting (1) vocational education for adults who need training or retraining to achieve stable employment and advancement, (2) special training for persons having academic or socioeconomic handicaps that may prevent them from succeeding in regular vocational programs" (p. 477).

Further support for the continuing education of adults came from the Vocational Education Amendments of 1976. One
of the purposes of this act was "to extend, improve, and where necessary, maintain existing programs of vocational education" (p. 2,169). The act provided for a high quality of vocational training or retraining for several groups including "...those who have already entered the labor market, but need to upgrade their skills or learn new ones" (Vocational Education Amendments of 1976, p. 2,169).

The need for continuing education in agriculture has received growing recognition since the passage of the Smith-Hughes Act. Both the cooperative extension service and vocational agriculture are legislatively authorized to work with adults. However, each agency may be uniquely equipped to perform certain specialized functions.

Extension less frequently involves the use of systematic courses of instruction. Extension, to a larger extent, addresses special problems of a farm or a rural community which include the application and follow-up of the details of practice (Phipps 1980). Systematic instruction, as defined by Phipps (1980), requires courses of at least two weeks duration with related supervision of practice, and occurs

...when a series of meetings or classes is provided on related topics; when the content dealt with in different meetings is unified, interacting, and interdependent; when the various meetings are designed to contribute to the same predetermined objectives; and when understanding
of the instruction provided at a meeting is based to a large extent on the instruction provided at previous meetings. (p. 380)

Apart from their experience in providing systematic instruction, vocational agriculture teachers are in a somewhat unique position to provide other services to the agricultural community. First, they usually live and teach in the same community, which is often a small one, as opposed to the larger area normally served by county extension agents. As a result of living in a smaller community, teachers are likely to better understand the agriculturally related problems peculiar to that group or community. Second, vocational agriculture instructors may have easier access to facilities such as school buildings or classrooms, workshops and greenhouses.

Even though much has been accomplished by agricultural extension and vocational agriculture, young and adult farmers in the South are in dire need of educational assistance. A report compiled by Frank A. Fratoe (1979) disclosed that members of the farm population generally lag behind their non-farm counterparts in years of school completed, proportions of persons completing high school and college, functional literacy rates, and frequency of participation in adult education programs.
Further, with three-fourths of the total number of farms classified as small farms, operators of these farms deserve special attention. The Food and Agriculture Act of 1977 defines a small farm as one having less than $20,000 gross annual income from the sale of agricultural products (Myers, 1977).

Several studies (Hall and Smith, 1977; Collette, 1978; Lewis and Emerson, 1980) have profiled the small farm operators as resistant to change, strong supporters of traditional values, and generally with little education. A 1978 study revealed that fifty percent of the small farmers in the South had eight years or less of formal education (Murray and Coughenour, 1978). According to Collette, the availability of information is one of the main factors limiting the economic growth of small farmers. In recognition of these profiles, agricultural educators have used continuing education as an instrument in attempts to alleviate many of the farm problems.

Need for this Study

A marked absence of young and adult farmer education programs exist in many school districts in the South although some educators advance a strong need for these programs. In addition, there has been a decline in such programs in some Southern states over the past four decades. In Kentucky, every vocational agriculture teacher was
responsible for adult classes during the early postwar period (Miller, 1976). Iverson (1975) examined empirical data and reported:

In many states, the number of adults served today as compared with the early 1960's has remained the same or declined. Nationally, there has been a steady decline in the actual numbers served and in the percentage of adults enrolled compared to secondary and post-secondary students (p. 8).

A 1979 study revealed that only 30% of the high school vocational agriculture programs in Louisiana had adult education classes (Kotrlik & Felter, 1981). Another 1979 evaluation of 17 of Louisiana's 66 parish/city school systems identified, as weaknesses in the vocational agriculture program, an insufficient number of adult and young farmer classes in the departments examined. (Louisiana State Department of Education, 1980). It was also recommended in this report that young/adult classes in agriculture be organized in an effort to improve these programs.

Lee (1981) was concerned that adult education programs in agriculture do not have the same priority as they did some years ago. He urged that this aspect of vocational agriculture needs to be given careful study and placed in proper perspective. Miller (1981) urged that teacher educators in agriculture be prepared to meet the inservice
needs of a clientele which was heavily engaged in adult education and further recommended that research into adult education in agriculture should proceed immediately (p. 4).

Statement of the Problem

Young/adult agricultural education programs should constitute an important part of the total agricultural education program. However, there may be certain indications of marked dissimilarities in the types and content offerings of these young/adult education programs in agriculture. In many instances, these programs may be non-existent, even in communities where there is a recognized and indisputable need.

Vocational agriculture instructors may differ in the amount of pre- and in-service preparation and experiences in dealing with young/adult farmers/agribusinessmen. Preparation and experiences may influence the manner in which vocational agriculture instructors view their roles and responsibilities for selected aspects of young/adult farmer programs. Furthermore, the degree of preparation and the range of experience may influence vocational agriculture instructors' perceptions of those educational activities that are considered essential to the success of young/adult education programs in agriculture.

The main purposes of this study were to determine vocational agriculture instructors' perceptions of selected educationally related activities of young/adult agricultural education programs in the South and to identify the
characteristics of these programs.

Objectives of the Study

The following specific objectives were formulated to guide the researcher:

1. Determine vocational agriculture teachers' perceptions of their roles and responsibilities for young/adult education programs.

2. Determine vocational agriculture teachers' perceptions of the importance of selected program related factors for young/adult programs.

3. Identify significant differences in perceptions between vocational agriculture teachers with young/adult programs and vocational agriculture teachers without young/adult programs, regarding their roles and responsibilities for these programs.

4. Identify significant differences between teachers with young/adult programs and teachers without young/adult programs regarding their perceptions of the importance of selected program related factors for these programs.

5. Determine the influence of selected (teacher) demographic variables on vocational agriculture teacher's perceptions of their roles and responsibilities for young/adult programs.

6. Determine the influence of selected teacher demographic variables on vocational agriculture teacher's perceptions of the importance of selected young/adult program related factors.
7. Determine the characteristics of young/adult education programs in agriculture in the South.

Significance of the Study

The benefits derived from adult education programs in agriculture are immense. Bundy (1974) reported "An adult education program for farm operators can return as much as $1 million of business to a community" (p. 274).

Yet, young/adult education programs in agriculture have been slow to develop. The following are among several probable causes; (a) Vocational agriculture teachers may have had insufficient preservice preparation in adult education; or (b) Perhaps the roles and responsibilities of vocational agriculture teachers for young/adult education programs in agriculture had not been consistently emphasized by teacher educators and state supervisors. As such, this study addressed the aforementioned issues with the results to provide assistance to agricultural educators and state supervisors in identifying some elements which are associated with vocational agriculture teachers' effectiveness with young/adult education programs in agriculture in the South. In addition, the results of this study may provide state supervisors of vocational agricultural education with a basis for comparing and evaluating young/adult programs in their school districts.

Further, teacher educators and program planners in adult education in agriculture should find the results of this study useful as they anticipate and plan for the
preservice and in-service needs of vocational agriculture teachers.

Those supervisors of adult education programs in agriculture may be able to use the results of this study to identify misperceptions in the assumed responsibilities, and the importance which vocational agriculture teachers attach to related aspects of these programs.

Limitations of the Study

1. This study was limited by the ability of the instrument to obtain accurate perceptions from vocational agriculture teachers.

2. The items included on the instrument for investigation may not have constituted an exhaustive list of roles and responsibilities or program factors related to young/adult education in agriculture.

3. The criteria by which vocational agriculture teachers were asked to compare their programs may have been different from the standards for young/adult programs established by their respective states, and these differences could have influenced teacher’s responses.

Assumption

The assumption was made that the sample of respondents were professional educators and had a common understanding of the educationally related terminology used on the instrument.
Definition of Terms

Some of the most frequently used terms in the study are operationally defined as follows:

Association Meetings (Only). Young/adult farmers or agribusinessmen with a common interest in agriculture meeting voluntarily to promote their combined interest. Systematic instruction is not a major part of association meetings.

The South. All member states in the Southern Region of the American Association of Teacher Educators in Agriculture. These states are Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas and Virginia.

Statistical Significance. Does not necessarily imply practical significance. The alpha level selected for determining significance was the .05 level.

Systematic Instruction. Characterized by specific units taught to specific enrollees for each course, and by a definite sequence of courses providing continuity between courses (Wolfe, 1970).

Young/Adult Education in Agriculture. (This term was used interchangeably with Young/Adult Farmer Education and Young/Adult Agricultural Education) All activities with an educational purpose involving the use of systematic instruction designed for persons 18 years or older who are involved in production agriculture and/or agribusiness on a full or part-time basis.
CHAPTER II

Review of Literature

Lifelong learning in agriculture is made imperative by the "knowledge explosion" and its implications for agricultural development. The cumulative efforts of Agricultural Experiment Stations, Colleges of Agriculture, U. S. Department of Agriculture and commercial entities have generated knowledge at such exponential rates that agriculture as a vocation is becoming ever more specialized and complex. However, according to Bender et al. (1972) the generation of new knowledge in itself is not particularly valuable to the agricultural producer or any other personnel in the agribusiness spectrum; it is the application of this new knowledge and the integration of these findings into the operational aspects of agriculture which has its impact on society. (p. 3)

The literature review for this study was oriented around a conceptual framework of agricultural education as an instrument for interpreting and disseminating this new knowledge. However, this literature review is limited by the availability of empirical references on adult education in agriculture. The following issues were examined:

1. A theoretical framework for this study.
3. A rationale for young/adult education in agriculture.
4. Responsibilities of vocational agriculture for adult education.
5. Components of an effective young/adult education program in agriculture.
6. The scope of young/adult education programs in agriculture.

A Theoretical Framework for this Study

Several important aspects of vocational agriculture teachers' perceptions of young/adult education programs in agriculture may be revealed in a study of this nature. The manner in which teachers perceive aspects of the young/adult programs may provide an insight into their attitudes and offer some explanation of their behavior in this regard.

Perceptions are defined by Wilson, Robeck and Michael (1969) as "The process by which sensory data are received, transduced and integrated for storage in the brain" (p. 575). The process of perceiving an object must involve making a mental representation of that object in the mind (Travers, 1970).

Behavioral intentions may be determined further, by studying attitudes. Borg and Gall (1979) conceded that attitudes are often measured in educational research because of their predictive value. Attitudes are defined as a learned predisposition to react in a consistent, emotionally toned way towards a particular person, thing, or idea.
These authors described attitudes as being direction-oriented and explained further that:

Attitudes towards an object leads to friendliness and acceptance of it, partisanship on its behalf and willingness to take in information favorable to it and reject information that is not. The attitude "against" an object carries feelings of opposition, hostility, and aggression. It leads to acceptance of information that is derogatory of the object and degrading to it and to rejection of supportive or complimentary information. (p. 325)

In light of the aforementioned, this study examines the perceptions of vocational agriculture teachers toward selected program and educationally related factors of young/adult education in agriculture. These practitioners in agricultural education have varying degrees of practical and theoretical experiences in working with adults. The study of teachers' perceptions regarding adult programs may not only identify those priorities assigned to selected aspects of these programs, but may identify set patterns of perceptions which may be associated with the occurrence or non-occurrence of these programs.

In addition, understanding teachers' attitudes may assist in predicting the levels of involvement and consequently, the time spent with, and quality of service rendered to young/adult programs in agriculture. As Mouly
(1968) stated, "Attitudes underlie behavior in a fundamental way that it is necessary to understand attitudes if we are to understand behavior" (p. 452).

Therefore, the potential for improving the quality of young/adult programs may be aligned with developing positive attitudes or changing derogatory attitudes of teachers toward certain aspects of these programs. Mouly (1968) pointed out that attitudes can be produced, by way of deliberate cultivation. Moreso, desirable attitudes may be best developed through meaningful participation in worthwhile activities designed to influence attitudes.

An investigation of teachers' perceptions of, and attitudes toward selected program factors may produce evidence of associations between perceptions and selected teacher demographic variables. According to Mouly (1968) attitudes are developed as a by-product of one's day-to-day experiences. He explained that the extent to which attitudes are developed "...in the process of the attainment of one's purpose, differences in attitudes can be expected with differences in age, sex, socioeconomic status, and cultural and experiential background" (p. 453). This may indicate that teachers' perceptions of young/adult work can be associated with and/or influenced by their level of college education and/or by preservice and in-service courses in adult education. Therefore, it was with this theoretical framework underlying attitudes and perceptions that this study was undertaken.
A Philosophy for Young/Adult Education in Agriculture

The major responsibility of adult education is to maintain a state of equilibrium between people and the environment. This responsibility is hinged on the premise that people have control over their destinies, and through the process of education can anticipate, plan and direct changes through material and social inventions. Hallenbeck (1960) interpreted this as a function of helping people to understand the basis of order and security in a world of rapid change, and building their goals realistically in fitting terms. Further, adult education can assist people to understand their problems, to use available resources to solve these problems, and to attain their goals within the prevailing circumstances.

In agriculture, adult education is responsible for developing and updating the agricultural competencies of persons whose interest or vocation relates to production agriculture or agribusiness. Adult education in agriculture encompasses all those activities with an educational purpose, and certainly the use of systematic instruction is an essential element in this process. Systematic instruction, as stipulated by Phipps (1980) requires courses of at least two weeks duration. It is that characteristic that distinguishes adult agricultural education from extension education. If systematic instruction is provided, according to Wolfe (1970), there must be specific enrollees for each course, specific units taught as a part of each
course, and a definite sequence of courses providing continuity between courses.

Brown and Starling (1968) criticized adult education in agriculture for its "shot-gun" approach to instruction. They felt that with this type of instruction "...each of a series of ten to twenty meetings deals with a different topic and frequently has only minor significance to the real needs of farm operators" (p. 34). Miller (1979) identifies several problems resulting from this type of instruction. Attendance may be haphazard and irregular since program participants attend only those meetings with topics of interest to them. Fluctuation in attendance makes it difficult for the vocational agriculture instructor to become familiar enough with the participants to make meaningful follow-up farm visits. The quality of the program is further reduced when topics are dealt with superficially and lack depth in content. "Relevant substantive instruction is needed if the teacher expects repeaters among the participants" (Miller, 1979, p. 101).

Many agricultural educators make a strong plea for quality in young/adult education programs in agriculture. Lee (1981) acknowledges that systematic, substantive instruction is essential if vocational agriculture will meaningfully improve the agricultural efficiency and welfare of the individuals who participate. The answers provided to the following questions raised by White (1970) can have a significant impact on the offerings for adult education in
agriculture: "(1) Who, in the adult population, should learn? (2) Who should be responsible for adult learnings? (3) What should adults learn? (4) How should adults learn?"

(p. 123)

Adult education in agriculture should be provided for any person needing or seeking knowledge and/or skills in agriculture for vocational or avocational interests. The adult clientele for vocational agriculture would therefore include persons preparing to enter, or engaged in production agriculture or agribusiness as an occupation and those adults pursuing agriculture for personal growth and enjoyment. While some adults upgrade their job knowledge or receive initial career training, many enroll in classes for personal satisfaction or enjoyment (Henderson, 1981). Home landscaping, lawnmower repair, flower arranging, tree identification, and basic woodworking can be offered as some avocational courses by vocational agriculture to the latter group.

Vocational agriculture can also meet the educational needs of the part-time farmer. Auville (1981) opined that since most adult education programs in agriculture are designed for full-time farmers, vocational agriculture may be missing a select group of farmers who need systematic instruction in agriculture as much as full-time farmers. Instruction provided to part-time farmers can equip them to make optimum use of available resources and limited capital,
minimize their demand for labor, and enhance their knowledge of production agriculture and farm business management. An increase in the number of part-time farmers is anticipated with the "back to the earth" movement of the migrating urbanites, hobbyists and professionals eager to invest extra time and money in farming. Auville contended that vocational agriculture must be flexible and consider this group when planning adult programs.

This author postulates that the responsibilities for adult education in agriculture can be adequately met by agriculturally oriented agencies. Vocational agriculture, cooperative extension, agribusiness and agricultural corporations should be vanguards in meeting the educational needs of the agricultural community. Each agency may be uniquely equipped to provide a specific educational service. Major, though not exclusive, responsibility for organizing and coordinating adult education programs can be one of the tasks borne by vocational agriculture. Among other functions, cooperative extension may be primarily responsible for providing technical and material assistance to young/adult classes and also for maintaining a bank of the latest production, management and marketing information. Agribusinesses, agricultural corporations, and credit agencies may bear major responsibility for furthering the safe and economical use and maintenance of the products or equipment which are promoted by the aforementioned; and, in addition, contribute materials and finances for young/adult
educationally related activities. However, a significant amount of cooperation will be necessary among all the agencies which provide educational services for interested individuals since there cannot be a distinct demarcation in their educational responsibilities for young/adult programs.

The curriculum for young/adult agricultural programs should be developed after the agricultural education needs of the community have been surveyed and the agencies which provide educationally related services consulted. The interests of farmers and agribusinessmen must be major considerations in determining what should be taught. Several content areas are suggested in the literature but the actual lesson objectives should be constructed in collaboration with the clientele to be served and agricultural enterprises which prevail in the economy of that community. Organizationally, young/adult programs might be grouped into four areas of work as suggested by Forsythe and Reece (1981). These areas are education, community service, recreation, and leadership development.

Wolfe (1970) emphasizes that an advisory committee is extremely important for detail planning and is essential for most programs whether on an informal, short-term basis or on a formal, highly-organized basis. An advisory council or a "community task force" made up of growers, agribusiness personnel, members of the farm labor service, university extension staff, with the vocational agriculture teacher having major responsibility for promotion and coordination
could be a motivational tool towards establishing the need for adult courses (Lawrence, Thomas & Jeffery, 1970).

General agreement exists in the literature regarding those characteristics of adults which affect their learning and which differentiate adults from children and youth (Bender et al., 1972; Morgan et al., 1976; Darkenwald and Merriam, 1982). As such, Krebs (1967) identifies some major factors which require adaptations and variations in the teaching procedures used for andragogy (the art and science of helping adults learn) from those procedures used for that of pedagogy (the art and science or profession of teaching). The adult farm program participant is more motivated to learn, can assume greater responsibility for the educational effort, and can bring more to the educational environment in the wealth of agricultural knowledge and experience than his/her adolescent counterpart. However, the vocational agriculture teacher must recognize that adult learning rates and reaction times may be slower, adult habits may become more rigid with advances in age, and behavior change may be slow and may contribute to greater impatience and discouragement (Bender et al., 1972).

A Rationale for Young/Adult Education in Agriculture

Adult education in agriculture is an integral part and not just an appendage to the total vocational agriculture program. The authors of the Smith-Hughes Act in 1917 in their wisdom, recognized the need for continuing education
for vocational agriculture program completers and included provisions for adult education.

Adult farmer education was one of the principal objectives, if not the principal objective, of the Smith-Hughes Act. Adult and young farmer courses were organized soon after the Smith-Hughes Act was passed, and there has been a steady growth in courses and enrollment. (Phipps, 1980, p. 381)

Subsequent enactments—the George-Barden Act in 1946, the Vocational Education Act in 1963, and the 1968 Vocational Education amendments—continued to endorse the Smith-Hughes Act as the legal base for youth and adults of all ages to have access to tuition free vocational training or retraining for enhancing employment opportunities (Venn, 1970).

Many of the legislative enactments with implications for vocational agriculture were initiated in situations of socioeconomic deprivation and rapid technological growth and change in agriculture. Persons (1981) describes farm businesses of today as highly specialized, capital intensive, and having a ravenous appetite for new technology and an amazing capacity to produce. Lee (1981) urged "We must realize that the agriculture industry of the 1980's is quite different from that of the previous 25 years" (p. 3). Persons (1981) submits that with almost 588,000 medium to large farms being served by millions of "non-farmers" in the agricultural industry, a rationale for developing and
improving their occupational competencies becomes even more pronounced. The need for adult education in agriculture is intensified further by the 898,000 small farmers who produce 16.4% of U.S. agricultural goods and still depend on the transfer and adoption of appropriate technology within the context of the whole farm business. These small farms are rapidly becoming extinct as their operators depend more on non-farm sources for as much as 80% of their income. One factor contributing to this demise is that small farmers have been unable to keep abreast of the technological changes which have revolutionized agriculture. Powell (1971) commented that no industry has changed more rapidly, nor has new technology come faster anywhere than in the broad field of agriculture. As such, the demand for continuing education in agriculture will grow with the increasing complexities of a rapidly expanding agricultural industry.

The time limitation of the four-year high school program in vocational agriculture provides another rationale for offering programs of adult education in agriculture. In many instances, the four years of high school available to educate a student for a leadership role in agriculture is insufficient time to develop that student to the full extent (Dietz, 1979). Considering the fact that students have many academic and social obligations, they are bounded by the amount of time which can be devoted to acquisition of agricultural knowledge and skills.
Miller (1981) postulates that with enrollment trends indicating a decline of high school students in the future, there may be accommodation for more students in vocational programs. If this happens, he projects that secondary and post-secondary enrollments can reach the point where personnel will be cut, and attention to adult programs may finally be forthcoming.

Another rationale for adult education in agriculture programs can be found in the benefits which are bestowed on the following: (a) program participants, (b) the community and nation at large, (c) the total vocational agriculture program, and (d) the individual vocational agriculture teacher who conducts the adult program.

The farmer/agribusinessman participating in young/adult education programs should be the principal beneficiary of these programs, which are designed to meet their individual needs and interests. Phipps (1980) advocates that the courses and programs offered by secondary schools must be based on the specific problems of the adults in the local community. Adults are more likely to attend meetings if the content areas covered in an educational program can help them to improve their businesses or become more successful farmers. Program participants may acquire new ideas and improved farming techniques which, if used properly, will make their enterprises more economically viable. A Minnesota study, which attempted to measure the economic benefits of adult education, reported the cost-benefit ratio
for farm operators enrolled for six years in the state's vocational agriculture farm management education program. Persons' (1968) interpretation of one of the findings of this study was:

For each dollar invested by the farm operator in the business management program either in actual cash expense or in hours of classroom, group, and individual instruction, the operator received $4.20 in increased return to labor and management.

(p. 43)

Further, the participants of adult education programs in agriculture usually have the opportunity to share experiences, and exchange ideas and knowledge before, during, and after meetings. Participants are able to meet and socialize on an informal basis. Recreational activities provided at these meetings create a climate for the development of warm personal relationships among farm families. This may result in a close-knit agricultural community (Grady, 1979).

The community also benefits from the adult program primarily through the improved rapport with the school. A good community-school relationship stimulates adult program participants to be more interested and involved in the total vocational agriculture program. With greater awareness of the objectives and the problems facing vocational agriculture, the community can influence the policies of education at the local level and thereby increase the
effectiveness of the local vocational program. Greater educational effectiveness at the local level can result in increased prosperity for the community and the nation at large. In the Minnesota study, Persons' (1968) summation of the economic returns to the community was: "For every dollar expended in conducting a farm business management education program, the community can expect to generate nine dollars in increased business activity" (p. 43). Persons further advocated that rural communities wishing to build community affluence, prevent erosion of the tax base, and improve the standard of living of farm families should examine the feasibility of expanding vocational agriculture in the local school to include intensive adult instruction in farm business management education.

The total vocational agriculture program can benefit tremendously from an active young/adult farmer education program. Price (1955) conducted a study of the occurrence or non-occurrence of young farmer education programs in Oklahoma and Pennsylvania, and reported one of its conclusions as "...teachers teaching out-of-school courses for young farmers also provide equal or superior programs of vocational agriculture and FFA Chapter activities of all-day students" (p. 250). In an example given by Grady (1979), participants in his adult education program included county leaders in agricultural conservation, county commissioners, and county school board members. These public officials and other agricultural businessmen were benevolent contributors
of incentives and monetary awards to the total school as well as to the Future Farmers of America program.

Vocational agriculture benefits further from the community leaders' understanding of local educational problems. "This improves the school-community relations and gains the sympathy for budgets (so often needed) along with sound educational programs" (Woodard, 1979, p. 99). A summary of the benefits accrued from successfully incorporating adult agricultural education into the total vocational agriculture program are:

1. A high level of school-community communication and relationship;
2. Fuller utilization of the school facilities;
3. Indirect instructional upgrading of the day high school classes;
4. A most viable community support base with built-in public relations program;
5. Direct articulation with the needs and demands of industry. (Lawrence, 1973, p. 91)

Finally, the individual vocational agriculture instructor can realize several advantages acquired from direct contact with the many agricultural occupations in the community. Grady (1979) lauded the "first-name relationships" which he had developed with the agribusinessmen who participated in his program. These contacts had made it easier for him to arrange community field trips for his students. Since some adult program
participants were retired farmers, soil conservationists and federal farm program leaders, they were valuable as resource persons, as well as sources of excellent career orientation information and advice to high school students. Grady testified about the adult education program that, "My contact with varied people and improved techniques and practices provides me with annual renewal experiences in the field of agriculture" (p. 103). Some benefits analogous to Grady's aforementioned experiences were noted by Albracht (1968) in an earlier publication. According to Albracht (1968), the vocational agriculture instructors' "...regular lessons could be enriched with experiences obtained and.....his judgemental decisions could be tempered and enhanced by associations with the leading producers in his community" (p. 44). Perhaps, one of the most significant benefits derived from teaching adults may be the innovative modifications to the high school program which the adult education program may make accessible to the teacher.

Responsibilities of Vocational Agriculture for Adult Education

Vocational agriculture has borne a responsibility for the continuing education of adults since 1917. However, this responsibility was broadened with the passing of the Vocational Education Act of 1963. According to Lawrence (1968), it became "mandatory that continuing education be provided for those adults who are employed in all agricultural occupations" (p. 27). After pointing out that
most programs prior to the 1963 Act were devised primarily for persons engaged in, or preparing for, work on the farm, Lawrence (1968) charged vocational agriculture with developing broader based programs for skilled and technical workers.

Sleight (1978) found from a study of "Responsibilities of Agricultural Education Agencies for Adult Farmer Education in Iowa," that vocational agriculture bore greater responsibilities for systematic instruction in a variety of subjects, than any of the other agencies investigated. The other agencies studied were area community colleges and/or vocational schools and the cooperative extension service. However, teachers perceived their responsibility for young farmer programs as being greater than that for the other farming populations such as adult farmers, low-income farmers, and average farmers. Sleight reported also that vocational agriculture had an average responsibility to cooperate with area schools and the extension service on adult and young farmer classes, field demonstrations, short courses and field trips.

Vocational agriculture departments in many states have recognized their responsibility for young/adult education in agriculture and have developed programs which provide these educational services. Faust (1975) acknowledged that serving out-of-school persons was an integral part of the total vocational agriculture program. Todd (1975) held the philosophy that:
A teacher committed to serving the needs of agriculture in a local area would include adult education activities in the total vocational agriculture program. Offering adult education to those employed in agriculture is inherent to the aims and purposes of vocational agriculture (p. 34).

Vocational agriculture educators in Oklahoma appear to support the preceding philosophy by requiring at least 20 hours of young/adult instruction in agriculture each year as part of the local agriculture teachers' responsibility. As a consequence, 3,500 program participants were served by local high school vocational agriculture programs across that state (Forsythe & Reece, 1981). Again, local vocational agriculture teachers in Georgia had to project in their annual programs of work, the course offerings for adults in their respective communities (Powell, 1971).

The level of priority which vocational agriculture departments attach to adult education in agriculture varies among school systems and among states as well. Todd (1975) points out that some school systems employ a director to supervise or coordinate all adult education programs. This form of administrative support affords the vocational agriculture instructor more time allocation for other educationally related functions, such as providing systematic instruction. Nevertheless, Todd cautioned that in such instances, some effort should be made to utilize the
expertise of the vocational agriculture teacher in conducting the adult program.

In some instances, a school system may utilize additional vocational agriculture personnel who devote all, or part, of their time to adult education in agriculture. Albracht (1968) recognized that a great deal of growth in adult education could be obtained by employing additional teachers for adult programs. Georgia, for example, employed area adult teachers of vocational agriculture who devoted 65% of their time to teaching adults. These area adult teachers were assigned a given number of regular vocational agriculture teachers and school systems with whom they worked (Powell, 1971). However, the researcher interpolates that the aforementioned organizational patterns were not designed to relieve the local vocational agriculture instructor of the responsibility for the education of adults. Instead, the agricultural instructor should be able to concentrate on providing quality instruction which meets the participants' needs and interests and improves the economic efficiency of their enterprises.

Bender et al. (1972) suggested that because participation in adult education is essentially voluntary, the agricultural educator is challenged to develop programs which are relevant to today's problems in agriculture and assist the participants in making appropriate management decisions. The success of the adult program in agriculture is dependent upon how these challenges are approached.
Powell (1971) challenged the vocational agriculture instructor with such responsibilities as reviewing local needs and choosing the course offerings in conjunction with his program advisory committee. He stated that "it is the responsibility of the local regular teacher to arrange for a meeting place, laboratory facilities, demonstration sites, etc., in addition to organizing and inviting the group" (p. 302). Todd (1975) supported those responsibilities proposed by Powell and added other important functions such as scheduling class time, arranging for instructors and resource personnel, publicizing the adult program through mass media sources, preparing or reviewing teaching plans, arranging supplementary classroom activities to furnish additional experiences, and evaluating the program and individual courses or activities. Finally, as a word of caution, Ahn (1978) urged the vocational agriculture instructor to carefully consider the kind of farm and the local agriculturally related problems before assuming the lead in planning for the young/adult organization.

Components of an Effective Young/Adult Education Program in Agriculture

In spite of the technological revolution which has enveloped the agricultural industry, the situation regarding the world's availability of food and fiber remains a precarious one. Much of the technological innovations have not trickled down to the masses of impoverished farmers, especially in the third world countries where the need is
most dire. Busia wrote (quoted in Darkenwald & Merriam, 1982):

Old techniques handed down to the farmers are no longer adequate. They are now required to produce more, to learn to use new tools, to improve the soil by new methods of drainage or fertilization, or water supply and soil conservation, or grow new crops, or join others in cooperative farming and mechanization... These are the tasks of adult education. (p. 215)

Some of these tasks may be engendered if vocational agriculture ensures that this technological information is transferred from the laboratories and experimental plots, where it was derived, to the fields for implementation. Even in American agriculture, where in 1973 each farmer was producing food for 51 persons, Bundy (1974) contended that there was a tremendous need for the increased production of food and fiber which made vocational agricultural education an absolute essential to the welfare of all Americans.

Therefore, the task of the agricultural educator is to identify research findings with implications for agriculture, and to interpret and simplify this new information for consumption by the farming/agribusiness community. This task involves effectuating the information delivery process by selecting instructional methods which are effective with the target audience.
Bender et al. (1972) formulated the following criteria to serve as a guide for efficient planning and evaluating of educational programs in agriculture:

1. It is based on research in agriculture.
2. It is based on the needs and interest of the learners and society.
3. It reflects the adults' most important educational problems or opportunities.
4. It involves the student in planning.
5. It is consistent with the philosophy and objectives of the organization.
6. It is within the limits of resources available.
7. The outcomes of the program are profitable to individuals or communities. (p. 57)

Before organizing a young/adult education program in agriculture, the vocational instructor must understand the interest and agriculturally related needs of the community. This may not be very easy since sometimes the farmers themselves are unable to identify their real needs. Beastrom (1978) agrees that:

Meeting individual needs can become an exhausting challenge because of the variety of needs to be met. In one class there may be young farmers who need much help in basic information, and established farmers who need updated information and refinement of their management skills. (p. 22)
Showman (1973) had emphasized earlier that the specific and immediate needs of the target clientele must be identified before planning a helpful series of instructional meetings. It, therefore, follows that an accurate assessment of the local agricultural interest is imperative for the successful implementation of a sound educational program. Because adults have such highly personal and varied interests, a reliable technique for identifying these interests should be devised. Henderson (1981) recommended that if money and time were available, the community survey was an invaluable technique for determining the agriculturally related needs of the local community. Wolfe (1970), who supported the community survey procedure, added that personal observations and discussions with farmers, community leaders, and personnel of community and governmental agencies should also be used to establish and determine the needs of farmers/agribusinessmen.

Vocational agriculture instructors (and the area adult supervisor, if the school employs one) should bear the responsibility for organizing the young/adult agricultural education program. Some examples of administrative tasks which Henderson (1981) considered necessary for efficient program delivery are:

...recruiting and training qualified adult leaders and teachers, providing adequate physical facilities for productive instruction, promoting specific class offerings by a variety of media,
i.e., newspaper ads, radio announcements, printed brochures, conducting systematic registration and keeping accurate records for budgeting purposes. (p. 12)

Choosing appropriate facilities in order to maximize the educational experience for the adult program participant is crucial to a successful adult education program. However, the vocational agriculture instructor should have little difficulty in selecting appropriate facilities. The high school classroom and/or the vocational agriculture workshop may be appropriate facilities if minor modifications and rearrangements are made. The conventionally arranged high school classroom may have to be reorganized for a physical environment conducive to adult participation and interaction. Comfortable chairs and tables may be arranged in seminar fashion to create a more open atmosphere. High school facilities usually have adequate provisions for parking. Satisfactory arrangements for coffee or some kind of refreshments may facilitate socialization before and after meetings. As Faust (1975) advised, "Have refreshments after each meeting. Adults enjoy the chance to eat and visit with each other after the class has adjourned. Some recreation may be desired" (p. 40). Dietz (1979) suggested that recreational activities should involve the entire family, especially the spouse, who should be a participant in the adult program, since the spouse is frequently a full working partner of a farm
situation. At least one family night or other kind of family activity can be organized each year. Companies or businesses may be approached to provide resources or food and refreshments for adult activities, but excessive advertisements by dealers or companies must be avoided. (Faust, 1975)

A significant amount of time and energy must be invested in the planning phase in order to establish an outstanding adult education program. However, the process can be made less arduous and more assured of success when considerations for decisions are legitimized through an advisory committee. An actively functioning committee will avoid advising the teacher to develop programs around minor enterprises, special interest groups or the whims or fantasies of a few vocal people. The advisory committee members may be chosen from the farming community, agribusinesses and school administration personnel. Membership from the agricultural community should be representative of the area enterprises on which the programs will be focused. Committee members should serve the community long enough to make a contribution but still not so long that they may become stagnant. Most of all, members must be knowledgeable and highly respected in the communities which they represent. They should be able to empathise with the problems and needs of the agricultural community.
The educational activities of the vocational agriculture instructor regarding adult education programs is not limited to systematic instruction in the classroom. In fact, Phipps (1980) argued that, "Part of this systematic instruction must be the supervision of practice in the farming activities for which instruction is being offered in a school or class" (p. 380). Supervision of practice is synonymous with follow-up visits or on-farm instruction. This may occur on the farm when the focus is on production or in the office when attention is directed to farm management or agribusiness instruction. Miller (1976) submitted that follow-up instruction on the farm, in the office, and during organized class study tours are really where the most effective teaching occurs. Through this form of instruction, participants can be reminded of points raised in the classroom and encouraged to adopt many of the agricultural practices recommended in the earlier discussions. Atherton (1978) advocated a need for follow-up instruction for the entire group. This instruction, according to Wolfe (1970), should be limited to one or two improvements at any one time. Farmers/agribusinessmen can be encouraged to visit other farms, to attend meetings or demonstrations with the vocational instructor, and to observe the operations of their farming/agribusiness peers. Showman (1973) esteemed the real personal satisfaction and the returns in friendships and accomplishments which, in his opinion, outweighed the cost of time and effort for
individualized on-farm instruction in adult education in agriculture.

Many adult education programs in agriculture can be undergirded further by frequent and proper use of resource persons. Albracht (1968) points out that specialists are usually good speakers at adult class meetings when adequate preparations have been made. However, the vocational instructor has to be certain that the resource person is qualified and capable of making an informative and meaningful presentation to the group. Faust (1975) urged the vocational agriculture instructor as coordinator to be prepared to ask questions at the proper time that will stimulate good discussions. It is far better, according to Paulus, (1975) to bring in help now and then than to limit the undertaking to what the teacher can handle. However, he warned that improper or excessive use of resource personnel can weaken the vocational instructor's leadership in the program. "Don't turn your class over or you'll lose it" (Paulus, 1975, p. 45).

Probably the most important element of a successful program of adult education in agriculture is the committed agriculture teacher. Price (1955), from a study of the factors associated with the occurrence or non-occurrence of young farmer educational programs in Oklahoma and Pennsylvania, concluded:

The implication is quite strong that, as far as the
local teacher of vocational agriculture is concerned, the occurrence of young adult farmer programs is due to some motivating force that is much stronger and more deeply seated than the opinions held by the individual (p. 248).

Todd (1975) wrote, "The opportunities for adult education exists and the teacher must decide how much commitment to make for conducting such programs" (p. 34). After being preoccupied with the regular daytime high school students, the vocational agriculture teacher must be committed and highly motivated to meet again for evening or weekend classes with adults. For many vocational agriculture teachers, the continuing education of adults is not stipulated by their states' vocational agriculture offices as mandatory programs. Warmbrod (1968) rationalized that with relatively few high school teachers of agriculture having contractual responsibilities for teaching adults,

Many teachers who conduct adult programs do so because of their commitment to the belief that adult education is part of a complete program of vocational education in agriculture (p. 27).

Some teacher and program variables may be associated with a quality young/adult education program in agriculture. In a study of the "Factors Associated with Vocational Use of Adult Instruction in Horticulture", Reneau (1980) found that teachers with more years of teaching experience in horticulture had greater success in the vocational use of
instruction made by adults in Virginia. However, other variables such as type of program (comprehensive high school or vocational center), size of school (secondary student enrollment), and teacher years of education were not associated to vocational use in Kentucky, Ohio, and Virginia.

The support of educators and secondary school administrators for young/adult programs in the local district is of paramount importance. However, from a recent Missouri study of young/adult farmer education competencies needed by vocational agriculture teachers, Gott and Claycomb (1982) concluded that:

Beginning teachers are taught to emphasize the area of adult/young farmer education; however, the local administrators evaluating them may not expect adult/young farmer education to be a part of the regular programming and may, therefore, not support the teachers' efforts in adult young/farmers education. (p. 56)

The findings from this study led Gott and Claycomb to recommend that the attitudes of local school administrators and teachers must be changed if adult/young farmer programming is to be impacted.

The committed vocational agriculture instructor continuously seeks ways to improve the quality of the total adult education in agriculture program. As such, every effort will be made to determine the effectiveness of all
Appraisals will be made intermittently as each activity progresses and again at its conclusion. The total adult education program in agriculture should be evaluated and appraised by the vocational agriculture teacher and his program advisory committee. Morgan et al., (1976) conceded that evaluation should be an integral part of any plan for adult education and it should be applied to the planning, to the execution, and to the results of the program. Through the process of evaluation, the vocational instructor can identify the procedures and outcomes that are of greatest significance, and then make wiser decisions regarding the future course of the program. The vocational agriculture instructor and the program advisory committee should establish the appropriate criteria by which programs are to be evaluated. These criteria should ensure fairness and objectivity in evaluations and contribute to worthwhile improvements in the total adult education program in agriculture. (Bender et al., 1972)

Several procedures for evaluating adult education in agriculture are reported in the literature. The criteria set by Humphrey (1962) emphasizes participant interest, attendance and responses. Approaches by Verner and Booth, (1964) measure both the program and the participants against certain preset constructs. Sutherland (1966) proposed a comprehensive plan which is formative in nature and based on Stufflebeam's C.I.P.P. (context, input, process, and
product) model. However, Bender et al. (1972) stressed that no one method is foolproof, nor are the standards infallible, and he recommended that, "teachers and leaders of continuing education programs in agriculture should evaluate their programs using a wide variety of evaluative procedures" (p. 217).

The Scope of Young/Adult Education Programs in Agriculture

The Vocational Education Act of 1963 extended the latitude of vocational education programs in agriculture to include education in off-farm occupational areas. Production agriculture was the central focus of adult education programs in agriculture prior to 1963. As such, the adult education programs in agriculture have been described traditionally as adult farmer education. Recognizing the inadequacy of this traditional nomenclature, Warmbrod wrote in 1968:

We continue to talk and write of adult education in agriculture as young farmer and adult farmer education. If adult education in agriculture is to be what it can and should be, greater effort must be made toward developing programs specifically oriented toward adults preparing for or employed in off-farm occupations. (p. 28)

The preceding concern was supported by Lawrence (1968) who charged that as farms become more industrialized, the key word for instructional programs for farm owners and operators will be "management".
Recent trends towards greater specialization of agricultural enterprises further intensifies the need for management training. Kleen (1980), in a study of the profitability factors for selected farming types, found that specialized farm types comprised almost half of the clientele served by Minnesota's vocational agriculture farm management education program.

The need for vocational agriculture to expand continuing education to include the agri-industry, was advocated again by Miller (1979). Vocational agriculture can distend its offerings to include adults in areas such as sales, supplies and service, agricultural mechanics, horticulture, agriculture products processing, forestry and natural resources. (Lee, 1981; Miller, 1979)

Many of the areas listed in the preceding paragraph continue to be neglected in vocational agriculture instruction. Agricultural supplies was one such area identified by Dillner (1968) for which instructional programs were developed in two communities of Pennsylvania. Program participants included owners, managers, department supervisors, field representatives, salesmen, and key workers in feed, seed, fertilizer, agricultural chemicals, and farm and industrial machinery businesses. In spite of the heterogenous backgrounds of the participants, they all had a desire to learn and to participate in discussions. The course "Human Factors in Management", for example, consisted of the following problem areas:
- What are the functions involved in managing an agricultural supplies business?

- What is a successful business? What factors contribute most to its success?

- What factors most frequently cause business failure?

- How can problems encountered in the agricultural supplies business be identified and simplified?

- What human factors are most important in managing and operating an agricultural supplies business? (Dillner, 1968, p. 30)

The program had as its objectives to define, develop, and improve the attitudes, values, and skills necessary in managing oneself, other personnel and the trade or business. The success of the program was attested by the responses on the course evaluation sheet and the 80% return registration ratio on the programs which followed. (Dillner, 1968).

Significant latitude in instruction exists also in the area of farm/agribusiness management. Jewell and Oliver (1968) acknowledged that a pressing need for farm management instruction existed in adult education programs in agriculture. They stated that, "With the continuing increase in the cost of production and a narrower margin of net profit, the necessity for making wise decisions constitutes the most critical aspect of the successful operation of a farm" (p. 37).
The proof of the economic efficiency of farm management education was substantiated by a Minnesota study in which Persons (1968) reported that "One fact is clear: The farm business management education program as taught in Minnesota public schools offers a high return on the investment to both individuals who enroll and the sponsoring community" (p. 43). Management education was stressed again more than a decade later by Persons (1981) who acknowledge a dire need for technology transfer and adaption among small farmers, and stressed further the need for improvements in marketing, the use of credit, and management of labor and material resources. Addressing the same subject, Miller (1981) anticipated that small business management, selling, marketing, distribution, and advertising may become familiar topics in the curricula of vocational agriculture.

Farm business management is recommended for the rapidly growing number of part-time farmers who need to develop efficiency in keeping records, using credit, and managing money. These part-time farmers/agribusinessmen, like their counterparts in the rest of the industry, need to make intricate decisions such as the rationalizing of machinery purchases and comparisons between owning, leasing, and renting livestock, land, and equipment. As such, broad based vocational agriculture programs can meet the management education needs of part-time farmers and agribusinessmen by assisting them in decision-making pertaining to farm business investments.
Vocational agriculture departments can increase the range of their offerings through providing meaningful programs which meet the avocational needs of the community and create new career interests and opportunities for enrollees. Henderson (1981) provided examples of programs through which vocational agriculture can reach the avocational interest of adults. These included an eight week course on small engines, a one-day small engines workshop, a once-a-week seminar on attracting birds to a home, and a two-evening program on beekeeping. These constructive alternatives provided by vocational agriculture can assist adults to make beneficial uses of their leisure time.

Expanding the range of vocational agriculture programs to meet the needs of the agribusinessman, the part-time farmer, or the avocational program participant may help to develop a working relationship between the vocational agriculture teacher and the aforementioned groups. Through associations with these groups, the vocational agriculture teacher can develop greater insight into all facets of the local community and the agricultural industry at large.
This research is most appropriately classified as a descriptive study. According to Gay (1981), "typical descriptive studies are concerned with collecting data in order to test hypotheses or answer questions concerning the current status of the study and...assessing attitudes or opinions toward individuals, organizations, events or procedures" (p. 10). This definition indicates fact-gathering and status description. Many techniques, including the questionnaire survey, may be used to yield descriptive data.

**Population and Sample**

The population for the study was secondary vocational agriculture teachers in the 13 states making up the Southern Region of the American Association of Teacher Educators in Agriculture. Of these 13 states comprising the Southern region, four states were randomly selected. These states were Georgia, Louisiana, Oklahoma and Virginia. The sample for this study was selected using a stratified sampling technique.

From data collected in a 1983 National Summer Programs study conducted by the Vocational Agricultural Education Department of Louisiana State University, the total number of vocational agriculture instructors in the Southern Region was estimated to be 5,308. According to the Krejcie and Morgan (1970) sample size table, the required sample size
for the aforementioned population estimate is 361.

A directory of vocational agriculture teachers with their mailing addresses was secured from the state supervisors of agricultural education in each of the four states sampled. These four directories served as the frame of the accessible population for the study. The same correspondence (see Appendix A) which requested the directories also sought the respective state supervisors' signatures which appeared on the cover letters for the study.

Using these directories and a table of random numbers, a proportional random sample of 25.4% of the vocational agriculture teacher population in the four states was selected. The sample was stratified by states as follows:

Georgia - 72 teachers (20.0% of total sample) selected from a list of 284;
Louisiana - 73 teachers (20.2% of total sample) selected from a list of 289;
Oklahoma - 118 teachers (32.7% of total sample) selected from a list of 467;
Virginia - 98 teachers (27.1% of total sample) selected from a list of 381.

Instrument Construction

The instrument used for collecting data for this study had two major purposes. These were to determine vocational agriculture instructors' perceptions of their responsibilities for and the importance of selected
educationally related activities of young/adult education programs in agriculture, and also to gather descriptive information about young/adult education programs in agriculture.

The items contained in the instrument were gleaned from the literature reviewed for the study and from consultations with Vocational Agriculture Teacher Educators at Louisiana State University. Although no single source could be identified, articles in the Agricultural Education Magazine were the most helpful. The items in Schedule B were then randomly arranged within the appropriate sections of the instruments.

The two parts of the instrument were identified as Schedule A and Schedule B. Each schedule was divided into Section I and Section II. Schedule A, Section I recorded the participants' responses to eight teacher demographic variables. Schedule A, Section II was designed for only those vocational agriculture instructors who had conducted young/adult education programs in agriculture since July, 1981 and sought responses to five descriptive program variables (See Appendix B).

Schedule B, Section I sought the respondents' perceptions of their responsibilities for 16 selected young/adult educationally related activities, and Schedule B, Section II sought vocational agriculture instructors' perceptions of the importance of 28 program related factors associated with young/adult programs (see Appendix B).
Scale selection and use

The response framework for Schedule B of the instrument was provided by the Certainty Method (Warren, Klonglan, and Sabri, 1969). Teachers were presented with a statement followed by an 11-point continuum and were asked to circle the number on the scale that best described their opinions based on the descriptions presented by the researcher. The participants' response to the 11-point continuum was then transformed to a 0 to 16 certainty scale based on the following system:

Row 1 - Numerical Value

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>To a little</td>
<td>To some</td>
<td>To a large extent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Row 2 - Transformed Values

| 0 | 3 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 13 | 16 |

For example, a response of 1 becomes 0 on the transformed scale, a response of 6 becomes 8 on the transformed scale and a response of 11 becomes 16 on the transformed scale. According to Warren et al. (1969), the transformed value "spreads" the ends of the original scale and thereby increases the reliability of the instrument. They stated also that there is a greater difference between a respondent who rates an item "1" and a respondent who rates an item "2" than there is between a respondent who rates an item "5" and another who rates an item "6".

Section 1 of Schedule B requested participants to
record their perceptions of their roles and responsibilities for 16 selected young/adult educationally related activities according to the aforementioned framework. Section II of Schedule B requested participants to record their perceptions of the importance of 28 program related factors associated with the success of young/adult education programs in agriculture. The responses to the entire instrument provided the data from which the findings of the study were derived.

Testing the instrument

To ensure clarity and understanding of the statements contained in the instrument, the initially developed form was validated. The sample selected for the instrument validation process consisted of:
1. Vocational education teacher educators at Louisiana State University (LSU).
2. Cooperative extension program specialists and extension education personnel from LSU.
3. Graduate students of the School of Vocational Education at LSU.

Criticisms and suggestions resulting from this procedure were used to develop the final form of the instrument.

Data Collection

The following procedures were used to collect data for the study.
1. A cover letter which outlined the objectives of the study was attached to each questionnaire and mailed to
participants on March 23, 1983 (See Appendix C). The cover letter bore the signatures of the researcher, the respective state supervisor for vocational agriculture, and the Chairman of the doctoral committee. The participants were requested to respond to the items on the instrument as directed, and asked to return their completed instruments in the stamped self-addressed envelopes provided. The initial mailing netted a total of 135 (37.4%) responses.

2. Follow-up postcards were mailed to the non-responding vocational agriculture teachers in the four states two weeks after the initial mailout (Appendix D). This procedure raised the response rate to 173 or 47.9%.

3. The second follow-up procedure involved the reprinting of instruments to which another cover letter (Appendix E) was attached. This cover letter urged participants to return their responses and was signed by the researcher and the chairman of the doctoral committee. The second questionnaires were mailed out approximately three weeks after the first follow-up procedure. A 71.7% return rate was achieved to this point.

4. The third follow-up procedure involved mailing another postcard to all non-respondents (Appendix F). This postcard urged non-respondents to forward their completed instruments since the study was near termination.
The tally of the responses up to this point revealed that a 76.5% return rate had been attained. Then, a 25% random sample of the non-respondents was selected by states to participate in an intensive follow-up procedure. Each non-respondent in this sample was contacted by telephone; and after indicating their willingness to participate in this procedure, each non-respondent was mailed another copy of the instrument with a cover letter attached (Appendix G). After a 100% return rate from the intensive follow-up group was attained, their responses were statistically compared with those of the earlier respondents using a series of t-tests. The intensive follow-up group were not found to be significantly different (at the .05 level) in their responses when compared with the responses of the earlier sample. Since the intensive follow-up group was an unbiased (random) sample, their responses were combined with the responses of the original sample for analysis.

Of the 361 questionnaires sent out, a total of 306 (84.8%) were returned. However, seven questionnaires were determined unusable since these were returned void of responses, thus dropping the overall return rate of usable questionnaires to 299 or 82.8%.

Reliability

After data were collected, reliability coefficients were computed for each section of Schedule B on the questionnaire. Section I of Schedule B, which consisted of 16 items representing "Roles and Responsibilities", had a
reliability coefficient of .93 (Cronbach's alpha). Section II of Schedule B, which consisted of 28 items representing "Program Factors", attained a reliability coefficient of .89 (Cronbach's alpha).

**Analysis of Data**

Upon receipt, each survey instrument was reviewed by the researcher. Data were then coded on 80-column code sheets and keypunched to data cards. All missing data were coded as such and not averaged into the findings. Analyses were done using LSU's computer facilities.

The computer programs used in analyzing the data were selected from Statistical Package for the Social Sciences: SPSS (Nie, Hull, Jenkins, Steinbrenner and Bent, 1975). Statisticians in the Experimental Statistics Department of the College of Agriculture, Louisiana State University provided advice on statistics most appropriate to attain the objectives of the study. The mean, standard deviation and percentages were the descriptive statistics used to tabulate and report data. The t-test and analysis of variance procedures were used to compare groups with the Tukey's test used for post hoc analysis. The Tukeys' test was selected over other multiple comparison tests (Scheffe' and Duncan's) for post-hoc analysis, as a result of a personal interview with Dr. Steve Buco, Assistant Professor, Department of Experimental Statistics, Louisiana State University. Dr. Buco indicated in the interview that although there are certain limitations to the use of the Tukey's test (i.e.
range values are approximate for unequal sample sizes), the advantages of increased power and the reduction of type II error outweighed the limitations. (S. Buco, personal communication, July 22, 1983).
CHAPTER IV

Findings and Discussions

The data analyses will address the specific objectives identified for this study. The results are reported in the following sections:
1. Demographic Data.
2. Perceived Roles and Responsibilities.
4. Differences in Perceived Roles and Responsibilities.
5. Differences in Perceived Importance of Program Factors.
6. Differences in Perceptions of Roles and Responsibilities by Levels of Selected Demographic Variables.
7. Differences by Levels of Selected Demographic Variables and Perceived Importance of Program Factors.
8. Characteristics of Young/Adult Education Programs.

Demographic Data

Table 1 represents the level of education attained by the participants of the study. The largest percentage of the respondents (57.4%) had completed the Bachelor of Science Degree only, while 24.8% had completed the Masters of Science Degree. The remaining 17.8% were distributed between holders of the Masters plus 30 hours, the Education Specialist Certificate and the Doctoral Degree.

The data depicted in Table 2 reveals that the majority (55.8%) of the respondents were employed in one-teacher departments. An additional 32.8% of the respondents were
Table 1

Educational Level of the Respondents

<table>
<thead>
<tr>
<th>Education</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>BS</td>
<td>171</td>
<td>57.4</td>
</tr>
<tr>
<td>MS</td>
<td>74</td>
<td>24.8</td>
</tr>
<tr>
<td>MS + 30</td>
<td>43</td>
<td>14.5</td>
</tr>
<tr>
<td>Eds.</td>
<td>7</td>
<td>2.3</td>
</tr>
<tr>
<td>Doctorate</td>
<td>3</td>
<td>1.0</td>
</tr>
<tr>
<td>Non-Respondents</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Note. Non-respondents were not included in the calculations.

aN=299

Table 2

Number of Teachers in Vocational Agriculture Departments

<table>
<thead>
<tr>
<th>Teachers</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>167</td>
<td>55.8</td>
</tr>
<tr>
<td>2</td>
<td>98</td>
<td>32.8</td>
</tr>
<tr>
<td>3</td>
<td>23</td>
<td>7.7</td>
</tr>
<tr>
<td>4 or more</td>
<td>11</td>
<td>3.7</td>
</tr>
</tbody>
</table>

aN=299
found in two-teacher departments. The remaining 11.4% of the respondents worked in vocational agriculture departments of three or more teachers.

Table 3 shows the years of teaching experience of the respondents. The largest group of teachers (23.1%) had from four to seven years of teaching experience, while 15.1% and 14.7% had from 12 to 15 years and 8 to 11 years respectively. In addition, 14% of the respondents had less than three years of experience, and 11% had more than 27 years of teaching experience.

The respondents age levels by categories are presented in Table 4. The categories of teachers younger than 40 years of age amounted to 64.8% of the respondents, with the lowest percentage (5.4%) categorized below 25 years of age. In addition, 11.7% of the respondents were above 55 years of age.

The data presented in Table 5 reveals that 90 (30.1%) of the respondents did not have any college course work in adult education. However, 28.8% of the respondents indicated that they had from one to six hours. The mean number of total college credits in adult education was 8.59.

An examination of Table 6 reveals that 147 (49.2%) of the respondents did not have an undergraduate course in adult education, whereas 164 (54.9%) did not have any graduate courses in adult education. The largest number of respondents were in the one-to-six hours category for both undergraduate and graduate level courses (30.1% and 22.6%
Table 3

Respondents' Years of Teaching Experience

<table>
<thead>
<tr>
<th>Years</th>
<th>N\textsuperscript{a}</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-3</td>
<td>42</td>
<td>14.0</td>
</tr>
<tr>
<td>4-7</td>
<td>69</td>
<td>23.1</td>
</tr>
<tr>
<td>8-11</td>
<td>44</td>
<td>14.7</td>
</tr>
<tr>
<td>12-15</td>
<td>45</td>
<td>15.1</td>
</tr>
<tr>
<td>16-19</td>
<td>32</td>
<td>10.7</td>
</tr>
<tr>
<td>20-23</td>
<td>19</td>
<td>6.4</td>
</tr>
<tr>
<td>24-27</td>
<td>15</td>
<td>5.0</td>
</tr>
<tr>
<td>Above 27</td>
<td>33</td>
<td>11.0</td>
</tr>
</tbody>
</table>

\textsuperscript{a}N=299
Table 4  

Age of Respondents

<table>
<thead>
<tr>
<th>Age</th>
<th>N^a</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 25</td>
<td>16</td>
<td>5.4</td>
</tr>
<tr>
<td>25-29</td>
<td>76</td>
<td>25.5</td>
</tr>
<tr>
<td>30-34</td>
<td>56</td>
<td>18.8</td>
</tr>
<tr>
<td>35-39</td>
<td>45</td>
<td>15.1</td>
</tr>
<tr>
<td>40-44</td>
<td>26</td>
<td>8.7</td>
</tr>
<tr>
<td>45-49</td>
<td>24</td>
<td>8.1</td>
</tr>
<tr>
<td>50-55</td>
<td>20</td>
<td>6.7</td>
</tr>
<tr>
<td>Above 55</td>
<td>35</td>
<td>11.7</td>
</tr>
<tr>
<td>Non-respondents</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Note. Non-respondents were not calculated with data.

^aN=299
Table 5

Combined Graduate and Undergraduate Hours in Adult Education

<table>
<thead>
<tr>
<th>Semester Hours (Graduate and Undergraduate)</th>
<th>N&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>90</td>
<td>30.1</td>
</tr>
<tr>
<td>1-6</td>
<td>86</td>
<td>28.8</td>
</tr>
<tr>
<td>7-12</td>
<td>56</td>
<td>18.7</td>
</tr>
<tr>
<td>13-18</td>
<td>23</td>
<td>7.7</td>
</tr>
<tr>
<td>19-24</td>
<td>20</td>
<td>6.7</td>
</tr>
<tr>
<td>25-32</td>
<td>14</td>
<td>4.7</td>
</tr>
<tr>
<td>Above 32</td>
<td>10</td>
<td>3.3</td>
</tr>
<tr>
<td>Mean</td>
<td>8.59</td>
<td></td>
</tr>
<tr>
<td>S.D.</td>
<td>10.15</td>
<td></td>
</tr>
</tbody>
</table>

Note: Means were able to be calculated since raw data were collected. Data were categorized to facilitate interpretation.

<sup>a</sup><sub>N=299</sub>
Table 6

Semester Hours of College Credits in Adult Education Earned by Respondents

<table>
<thead>
<tr>
<th>Semester Hours</th>
<th>N(^a)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Undergraduate</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>147</td>
<td>49.2</td>
</tr>
<tr>
<td>1-6</td>
<td>90</td>
<td>30.1</td>
</tr>
<tr>
<td>7-12</td>
<td>38</td>
<td>12.7</td>
</tr>
<tr>
<td>13-18</td>
<td>10</td>
<td>3.3</td>
</tr>
<tr>
<td>19-24</td>
<td>8</td>
<td>2.7</td>
</tr>
<tr>
<td>25-32</td>
<td>5</td>
<td>1.7</td>
</tr>
<tr>
<td>Above 32</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Mean</td>
<td>4.19</td>
<td></td>
</tr>
<tr>
<td>S.D.</td>
<td>6.17</td>
<td></td>
</tr>
</tbody>
</table>

| **Graduate** |       |            |
| 0            | 164    | 54.9       |
| 1-6          | 68     | 22.7       |
| 7-12         | 35     | 11.7       |
| 13-18        | 13     | 4.4        |
| 19-24        | 12     | 4.0        |
| 25-32        | 6      | 2.0        |
| Above 32     | 1      | 0.3        |
| Mean         | 4.40   |            |
| S.D.         | 6.78   |            |

Note: Means were able to be calculated since raw data were collected. Data were categorized to facilitate interpretation.

\(^a\)N=299
respectively). A slightly larger amount of college credits in adult education was at the graduate level as indicated by a graduate mean of 4.40 and an undergraduate mean of 4.19.

Table 7 reports the number of workshops in adult education which the respondents had attended. The mean number of workshops attended was 2.93. More than one-third of the respondents (35.8%) had never participated in an inservice workshop on adult education. It was observed, however, that 35.8% had participated in from one to three workshops and 28.4% attended more than three inservice workshops on adult education. In addition, 8% had participated in 10 or more workshops in adult education.

Table 8 reveals that 151 teachers (50.7% of the respondents) had recently conducted young/adult education programs in agriculture. Of the 147 respondents who had not conducted young/adult education programs, two indicated they had served as guest speakers/resource persons at such programs.

Perceived Roles and Responsibilities

The means and standard deviations were computed for 16 selected "Roles and Responsibilities" items related to young/adult education programs in agriculture. The results of these analyses, as reported in Table 9, are ranked in order of the highest means.

The responding vocational agriculture teachers (N=292) rated all 16 "Roles and Responsibilities" items above the midpoint on the 0 to 16 continuum.
Table 7

Adult Education Workshops Attended by Respondents

<table>
<thead>
<tr>
<th>Workshop</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>107</td>
<td>35.8</td>
</tr>
<tr>
<td>1-3</td>
<td>107</td>
<td>35.8</td>
</tr>
<tr>
<td>4-6</td>
<td>45</td>
<td>15.1</td>
</tr>
<tr>
<td>7-9</td>
<td>16</td>
<td>5.3</td>
</tr>
<tr>
<td>10-12</td>
<td>12</td>
<td>4.0</td>
</tr>
<tr>
<td>13-15</td>
<td>7</td>
<td>2.4</td>
</tr>
<tr>
<td>16 and over</td>
<td>5</td>
<td>1.6</td>
</tr>
<tr>
<td>Mean</td>
<td>2.93</td>
<td></td>
</tr>
<tr>
<td>S.D.</td>
<td>3.98</td>
<td></td>
</tr>
<tr>
<td>Minimum-Maximum</td>
<td>0-21</td>
<td></td>
</tr>
</tbody>
</table>

aN=299

Table 8

Respondents' Participation in Young/Adult Education Programs

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conducted programs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>151</td>
<td>50.7</td>
</tr>
<tr>
<td>No</td>
<td>147</td>
<td>49.3</td>
</tr>
<tr>
<td>Non-respondents</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Note. Non-respondents were not used in calculations.
Table 9
Means, Standard Deviations and Ranks for Perceived Roles and Responsibilities

<table>
<thead>
<tr>
<th>Roles and Responsibilities</th>
<th>Mean</th>
<th>S.D.</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providing instructional facilities for young/adult classes</td>
<td>11.18</td>
<td>3.28</td>
<td>1</td>
</tr>
<tr>
<td>Soliciting resource personnel</td>
<td>10.93</td>
<td>3.42</td>
<td>2</td>
</tr>
<tr>
<td>Providing instruction in agricultural mechanics</td>
<td>10.69</td>
<td>2.97</td>
<td>3</td>
</tr>
<tr>
<td>Surveying community needs to develop curriculum for young/adult programs</td>
<td>10.60</td>
<td>3.02</td>
<td>4</td>
</tr>
<tr>
<td>Securing visual and teaching aids</td>
<td>10.47</td>
<td>3.01</td>
<td>5</td>
</tr>
<tr>
<td>Conducting follow-up visits to young/adult program participants</td>
<td>10.41</td>
<td>3.59</td>
<td>6</td>
</tr>
<tr>
<td>Organizing advisory committees</td>
<td>10.33</td>
<td>3.44</td>
<td>7</td>
</tr>
<tr>
<td>Planning and organizing young/adult farmer educational programs</td>
<td>10.09</td>
<td>3.15</td>
<td>8</td>
</tr>
<tr>
<td>Providing instruction in production agriculture</td>
<td>10.03</td>
<td>3.05</td>
<td>9</td>
</tr>
<tr>
<td>Providing instruction in farm management</td>
<td>10.01</td>
<td>3.20</td>
<td>10</td>
</tr>
<tr>
<td>Coordinating all young/adult educational programs in the school district</td>
<td>9.54</td>
<td>3.47</td>
<td>11</td>
</tr>
<tr>
<td>Supervising field demonstration plots for the young/adult program</td>
<td>9.16</td>
<td>3.27</td>
<td>12</td>
</tr>
<tr>
<td>Conducting short courses on the procurement of financial assistance for small farm operators</td>
<td>8.90</td>
<td>3.37</td>
<td>13</td>
</tr>
<tr>
<td>Organizing demonstration plots as teaching aids to the young/adult program</td>
<td>8.89</td>
<td>3.59</td>
<td>14</td>
</tr>
<tr>
<td>Developing printed informative materials for young/adult farmers</td>
<td>8.64</td>
<td>3.30</td>
<td>15</td>
</tr>
<tr>
<td>Budgeting for and financing all young/adult educational activities</td>
<td>8.11</td>
<td>3.66</td>
<td>16</td>
</tr>
</tbody>
</table>

Note. N=292
The "Roles and Responsibilities" item "Providing and organizing instructional facilities for young/adult classes" received the highest mean rating (11.18). The items "Soliciting resource personnel" and "Providing instruction in agricultural mechanics" had mean ratings of 10.93 and 10.69 respectively, thereby ranking second and third.

Those items related to providing instruction in production agriculture, farm management, and the procurement of finance were ranked lower (9th, 10th, and 13th, respectively) than the item related to providing instruction in agricultural mechanics (ranked 3rd). This observation may indicate that vocational agriculture teachers had placed providing adults with instruction in agricultural mechanics above providing instruction in production agriculture, farm management and financial procurement for small farm operators.

The item "Budgeting for and financing all young/adult education activities" was rated lowest (8.11) among the 16 items representing "Roles and Responsibilities". This may indicate that vocational agriculture teachers felt they were less responsible for this activity than the other activities.

**Perceived Importance of Program Factors**

The means and standard deviations for the 28 selected young/adult program related factors were calculated. The results of these analyses as reported in Table 10 are presented in rank order of the means.
Table 10

Means, Standard Deviations and Ranks for Perceived Importance of Program Factors

<table>
<thead>
<tr>
<th>Program Factors</th>
<th>Mean</th>
<th>S.D.</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using vocational agriculture shop facilities to instruct farmers in agriculture</td>
<td>12.22</td>
<td>2.89</td>
<td>1</td>
</tr>
<tr>
<td>mechanics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improving rapport between the school and the community through young/adult</td>
<td>11.88</td>
<td>3.08</td>
<td>2</td>
</tr>
<tr>
<td>activities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Publicizing young/adult programs to make school administrators or school board</td>
<td>11.85</td>
<td>3.38</td>
<td>3</td>
</tr>
<tr>
<td>members more aware of the total vocational education program</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surveying small farmers to determine their educational needs</td>
<td>11.15</td>
<td>2.82</td>
<td>4</td>
</tr>
<tr>
<td>Providing systematic instructions in a variety of subjects</td>
<td>11.05</td>
<td>2.94</td>
<td>5</td>
</tr>
<tr>
<td>Organizing classes for systematic instruction</td>
<td>11.01</td>
<td>2.88</td>
<td>6</td>
</tr>
<tr>
<td>Using feedback from the young/adult program to improve the total vocational</td>
<td>11.01</td>
<td>2.88</td>
<td>6</td>
</tr>
<tr>
<td>agriculture program</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using young/adult programs to identify the problems of the farm and farm</td>
<td>10.83</td>
<td>3.02</td>
<td>8</td>
</tr>
<tr>
<td>managers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Developing specific programs to serve the needs of small farmers</td>
<td>10.73</td>
<td>3.16</td>
<td>9</td>
</tr>
<tr>
<td>Surveying agribusinessmen to help determine educational needs of young/adult</td>
<td>10.41</td>
<td>3.39</td>
<td>10</td>
</tr>
<tr>
<td>farmers</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Drawing advisory committee candidates from young/adult classes</td>
<td>10.34</td>
<td>3.25</td>
<td>11</td>
</tr>
<tr>
<td>Integrating young/adult education into the total vocational agriculture program</td>
<td>10.03</td>
<td>3.61</td>
<td>12</td>
</tr>
<tr>
<td>Encouraging young/adult program participants to volunteer the services of their</td>
<td>9.90</td>
<td>3.02</td>
<td>13</td>
</tr>
<tr>
<td>equipment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assigning primary responsibilities for establishing young/adult programs to</td>
<td>9.88</td>
<td>3.59</td>
<td>14</td>
</tr>
<tr>
<td>vocational agriculture teachers</td>
<td></td>
<td></td>
<td></td>
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</table>

(table continues)
<table>
<thead>
<tr>
<th>Program Factors</th>
<th>Mean</th>
<th>S.D.</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requiring young/adult program participants to pay for materials only</td>
<td>9.72</td>
<td>3.51</td>
<td>15</td>
</tr>
<tr>
<td>Using advisory committees for evaluating young/adult programs</td>
<td>9.65</td>
<td>3.47</td>
<td>16</td>
</tr>
<tr>
<td>Placing emphasis on young/adult programs during the summer months</td>
<td>9.61</td>
<td>3.68</td>
<td>17</td>
</tr>
<tr>
<td>Developing specific programs for agribusiness employees</td>
<td>9.22</td>
<td>3.11</td>
<td>18</td>
</tr>
<tr>
<td>Providing recreational and social activities</td>
<td>9.20</td>
<td>3.41</td>
<td>19</td>
</tr>
<tr>
<td>Providing incentives to young/adult farmers to participate in educational programs</td>
<td>8.85</td>
<td>3.51</td>
<td>20</td>
</tr>
<tr>
<td>Conducting young/adult programs with vocational agriculture teachers serving only as resource personnel</td>
<td>8.72</td>
<td>3.19</td>
<td>21</td>
</tr>
<tr>
<td>Employing a director to coordinate all adult education programs</td>
<td>8.49</td>
<td>4.41</td>
<td>22</td>
</tr>
<tr>
<td>Funding young/adult programs through tuition fees paid by participants</td>
<td>7.63</td>
<td>3.86</td>
<td>23</td>
</tr>
<tr>
<td>Delimiting adult education programs to intensive short courses</td>
<td>7.56</td>
<td>3.86</td>
<td>24</td>
</tr>
<tr>
<td>Dividing young and adult farmers into groups according to their educational needs</td>
<td>7.55</td>
<td>4.22</td>
<td>25</td>
</tr>
<tr>
<td>Assigning responsibilities for young/adult education to extension education personnel for establishing young/adult programs</td>
<td>6.67</td>
<td>4.02</td>
<td>26</td>
</tr>
<tr>
<td>Using vocational agricultural budgets for financing young/adult activities</td>
<td>6.23</td>
<td>4.50</td>
<td>27</td>
</tr>
<tr>
<td>Soliciting donations as the primary source of financing young/adult programs</td>
<td>6.21</td>
<td>3.87</td>
<td>28</td>
</tr>
</tbody>
</table>

Note. N=292
The sample of vocational agriculture instructors (N=292) rated 22 of the 28 "Program Factors" items above mid-point on the 0 to 16 scale. This observation indicates that vocational agriculture teachers considered these program factors as important components of young/adult education programs in agriculture.

The three items with the highest means were "Using vocational agriculture shop facilities to instruct farmers in agricultural mechanics" (12.22), "Improving rapport between the school and the community through young/adult activities" (11.88), and "Publicizing young/adult programs to make school administrators or school board members more aware of the total vocational education program" (11.85).

The three items rated lowest among the 28 items representing the "Program Factors" were "Assigning primary responsibilities for establishing young/adult programs to extension education personnel" (6.67), "Using vocational agriculture budgets for financing young/adult activities" (6.23), and "Soliciting donations as the primary source of financing young/adult programs" (6.21). The "Program Factors" item "Using vocational agriculture shop facilities to instruct farmers in agriculture mechanics" and the "Perceived Roles and Responsibilities" item "Providing instruction in agricultural mechanics" were both rated among the top three items in their respective sections. This observation may indicate that vocational agriculture teachers considered young/adult education in agricultural
mechanics an important part of the adult education program in agriculture. It is observed also that the "Program Factors" item "Using vocational agriculture budgets for financing young/adult activities" and the "Perceived Roles and Responsibilities" item "Budgeting for and financing young/adult education activities" were both rated among the two lowest items in their respective sections.

The item "Assigning primary responsibility for establishing young/adult programs to extension personnel" was rated among the three lowest means (6.67), whereas the item "Assigning primary responsibility for establishing young/adult programs to vocational agriculture teachers" had its mean rating (9.88) above midpoint on the 0 to 16 continuum. In addition, a comparatively higher mean rating (10.03) was assigned to the item "Integrating young/adult education into the total vocational agriculture program" than the mean rating of 8.72 assigned to the item "Conducting young/adult programs with vocational agriculture teachers serving only as resource speakers." This may suggest that teachers were not content with a mere peripheral role regarding young/adult programs in agriculture.

Further, the two items "Surveying small farmers to determine their educational needs" (ranked 4th) and "Developing specific programs to serve the educational needs of small farmers" (ranked 9th) were given relatively high means (11.15 and 10.73, respectively).
The sample of teachers assigned high mean ratings also to such items as "Improving rapport between the school and the community through young/adult activities" (ranked second, mean=11.88), "Publicizing young/adult programs to make school administrators or school board members more aware of the total vocational education program" (ranked third, mean=11.85); and "Using feedback from young/adult programs to improve the total vocational agriculture program" (ranked sixth, mean=11.01). These items are highly esteemed in the literature among the activities which yield benefits to the vocational agriculture program and the community as a whole. The high mean ratings assigned to the aforementioned items may indicate that the sample of vocational agriculture instructors recognized some advantages of having young/adult education programs in agriculture.

Generally, vocational agriculture teachers perceived most of the items representing "Program Factors" as being from "of some importance" to "of great importance" in the attainment of successful young/adult programs. However, a few items such as "Employing a director to coordinate all young/adult education programs" (mean=8.49), and "Funding young/adult programs through tuition fees paid by participants" (7.63) were ranked just above or below midpoint on the continuum which indicated that these items had less priority in young/adult education programs in agriculture.
Differences in Perceived Roles and Responsibilities

The t-test statistic was computed on the 16 items representing "Roles and Responsibilities" to determine if there were significant differences in the perceptions of vocational agriculture teachers who have conducted young/adult programs since July 1981, and vocational agriculture teachers who had not conducted such programs. The results of these analyses are reported in Table 11.

The three items rated highest (Table 11) by vocational agriculture teachers with young/adult education programs were "Providing and organizing instructional facilities for young/adult classes" (12.06), "Soliciting resource personnel" (11.63), and "Surveying community needs to develop curriculum for young/adult programs" (11.23). The two lowest rated items for the same group of teachers were "Budgeting for and financing all young/adult educational activities" (8.82), and "Organizing demonstration plots as teaching aids to young/adult programs" (9.04).

Vocational agriculture teachers without programs were in agreement with their colleagues in their ranking of the first two items. However, teachers without programs rated the item "Providing instruction in agricultural mechanics" third (mean of 10.12). The two items rated lowest by teachers without programs were "Developing printed informative materials for young/adult farmers" (7.95), and "Budgeting for and financing all young/adult educational
Table 11

Differences in Perceived Roles and Responsibilities

<table>
<thead>
<tr>
<th>Roles and Responsibilities</th>
<th>Group 1 Mean</th>
<th>S.D.</th>
<th>Rank</th>
<th>Group 2 Mean</th>
<th>S.D.</th>
<th>Rank</th>
<th>Differences Between Group Means</th>
<th>t-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providing and organizing instructional facilities for young/adult classes</td>
<td>12.06</td>
<td>2.95</td>
<td>1</td>
<td>10.25</td>
<td>3.37</td>
<td>1</td>
<td>1.81</td>
<td>4.85*</td>
</tr>
<tr>
<td>Soliciting resource personnel</td>
<td>11.63</td>
<td>2.93</td>
<td>2</td>
<td>10.18</td>
<td>3.74</td>
<td>2</td>
<td>1.45</td>
<td>3.70*</td>
</tr>
<tr>
<td>Surveying community needs to develop curriculum for young/adult programs</td>
<td>11.23</td>
<td>2.98</td>
<td>3</td>
<td>9.91</td>
<td>3.13</td>
<td>4</td>
<td>1.32</td>
<td>3.80*</td>
</tr>
<tr>
<td>Providing instruction in agricultural mechanics</td>
<td>11.22</td>
<td>2.90</td>
<td>4</td>
<td>10.12</td>
<td>2.94</td>
<td>3</td>
<td>1.10</td>
<td>3.22*</td>
</tr>
<tr>
<td>Conducting follow-up visits to young/adult program participants</td>
<td>11.20</td>
<td>2.95</td>
<td>5</td>
<td>9.52</td>
<td>4.01</td>
<td>7</td>
<td>1.68</td>
<td>4.07*</td>
</tr>
<tr>
<td>Secure visual and teaching aids</td>
<td>11.13</td>
<td>2.58</td>
<td>6</td>
<td>9.80</td>
<td>3.27</td>
<td>6</td>
<td>1.35</td>
<td>3.93*</td>
</tr>
<tr>
<td>Organizing advisory committees</td>
<td>10.83</td>
<td>3.23</td>
<td>7</td>
<td>9.80</td>
<td>3.59</td>
<td>5</td>
<td>1.03</td>
<td>2.56*</td>
</tr>
<tr>
<td>Planning and organizing young/adult education programs</td>
<td>10.76</td>
<td>2.73</td>
<td>8</td>
<td>9.37</td>
<td>3.42</td>
<td>10</td>
<td>1.39</td>
<td>3.82*</td>
</tr>
<tr>
<td>Providing instruction in production agriculture</td>
<td>10.53</td>
<td>2.69</td>
<td>9</td>
<td>9.49</td>
<td>3.42</td>
<td>9</td>
<td>1.04</td>
<td>2.93*</td>
</tr>
<tr>
<td>Providing instruction in farm management</td>
<td>10.50</td>
<td>3.14</td>
<td>10</td>
<td>9.50</td>
<td>3.16</td>
<td>8</td>
<td>1.00</td>
<td>2.69*</td>
</tr>
<tr>
<td>Coordinating all young/adult programs school district</td>
<td>10.28</td>
<td>3.49</td>
<td>11</td>
<td>8.75</td>
<td>3.28</td>
<td>12</td>
<td>1.53</td>
<td>3.84*</td>
</tr>
<tr>
<td>Developing printed informative materials for young/adult farmers</td>
<td>9.26</td>
<td>3.18</td>
<td>12</td>
<td>7.95</td>
<td>3.30</td>
<td>15</td>
<td>1.31</td>
<td>3.44*</td>
</tr>
<tr>
<td>Supervising demonstration plots for young/adult programs</td>
<td>9.18</td>
<td>3.20</td>
<td>13</td>
<td>9.12</td>
<td>3.35</td>
<td>11</td>
<td>0.06</td>
<td>0.08</td>
</tr>
<tr>
<td>Conducting short courses on the procurement of financial assistance for small farm operators</td>
<td>9.18</td>
<td>8.29</td>
<td>14</td>
<td>8.59</td>
<td>3.46</td>
<td>14</td>
<td>0.59</td>
<td>1.48</td>
</tr>
</tbody>
</table>

(table continues)
<table>
<thead>
<tr>
<th>Roles and Responsibilities</th>
<th>Group 1 Mean</th>
<th>Group 2 Mean</th>
<th>Differences Between Group Means</th>
<th>t-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizing demonstration plots as teaching aids to young/adult programs</td>
<td>9.04, 3.35 15</td>
<td>8.75, 3.42 13</td>
<td>0.29</td>
<td>0.82</td>
</tr>
<tr>
<td>Budgeting for and financing all young/educational activities</td>
<td>8.82, 3.64 16</td>
<td>7.36, 3.54 16</td>
<td>1.46</td>
<td>3.46*</td>
</tr>
</tbody>
</table>

*Group 1 = Teacher with young/adult education programs in agriculture (n=151);
Group 2 = Teacher without young/adult education programs in agriculture (n=141).

*p<0.05
activities" (7.36). The last two items mentioned were the only items in this section that were rated below midpoint on the 0 to 16 scale.

The t-tests revealed significant differences ($p < .05$) between teachers with programs and teachers without programs for 13 of the 16 "Roles and Responsibilities" items. Teachers with programs had assigned higher mean ratings than teachers without programs to all of the items for which significant differences were observed.

The item with the largest difference was "Providing and organizing instructional facilities for young/adult classes" (difference of 1.81). The items "Conducting follow-up visits to young/adult program participants" and "Coordinating all young/adult programs in the school district" also had relatively large differences between group means (1.68 and 1.53 respectively).

The items on which teachers with programs and teachers without programs were most similar were "Supervising demonstration plots for young/adult programs" (difference of 0.06) and "Organizing demonstration plots as teaching aids to young/adult programs" (difference of 0.29). Both of these items were non-significant at the .05 level and rated by both groups of teachers among the lowest in this section.

The mean scores for teachers with programs were higher than those of the teachers without programs for all the "Roles and Responsibilities" items. These observations may indicate that the former group (with programs) of teachers
perceived themselves as being more responsible for young/adult education in agriculture than the latter group (without programs).

Differences in Perceived Importance of Program Factors

The t-test statistic was computed for the 28 items representing "Program Factors" to determine significant differences in the means between vocational agriculture teachers with young/adult education programs in agriculture and vocational agriculture teachers without young/adult programs, regarding their perceptions of the importance of selected program related factors.

The data presented in Table 12 reveals that both vocational agriculture teachers with programs and vocational agriculture teachers without programs were in agreement in ranking their perceptions of the three highest rated items representing "Program Factors". Teachers with programs and teachers without programs assigned the highest mean scores to "Using vocational agriculture shop facilities to instruct farmers in agricultural mechanics" (12.64 and 11.75, respectively), "Improving rapport between the school and the community through young/adult activities" (12.62 and 11.08 respectively), and "Publicizing young/adult programs to make school administrators and school board members more aware of the total vocational agriculture program" (12.58 and 11.05 respectively). However, the two groups of teachers differed
Table 12

Differences Between Group Means for Perceived Importance of Program Factors

<table>
<thead>
<tr>
<th>Program Factors</th>
<th>Group I Mean</th>
<th>Group II Mean</th>
<th>Differences Between Group Means</th>
<th>t-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using vocational agriculture shop facilities to instruct farmers in agricultural mechanics</td>
<td>12.64</td>
<td>11.75</td>
<td>1.09</td>
<td>2.60*</td>
</tr>
<tr>
<td>Improving rapport between the school and the community through young/adult activities</td>
<td>12.62</td>
<td>11.08</td>
<td>1.54</td>
<td>4.34*</td>
</tr>
<tr>
<td>Publicizing young/adult programs to make school administrators and school board members more aware of the total vocational agriculture program</td>
<td>12.58</td>
<td>11.05</td>
<td>1.53</td>
<td>3.90*</td>
</tr>
<tr>
<td>Organizing classes for systematic instruction</td>
<td>11.74</td>
<td>10.22</td>
<td>1.52</td>
<td>4.46*</td>
</tr>
<tr>
<td>Providing systematic instruction in a variety of subjects</td>
<td>11.50</td>
<td>10.65</td>
<td>1.15</td>
<td>3.38*</td>
</tr>
<tr>
<td>Using feedback from the young/adult program to improve the total vocational agriculture program</td>
<td>11.48</td>
<td>10.49</td>
<td>0.99</td>
<td>2.92*</td>
</tr>
<tr>
<td>Using young/adult programs to identify the problems of the farm and farm managers</td>
<td>11.44</td>
<td>10.17</td>
<td>1.27</td>
<td>3.62*</td>
</tr>
<tr>
<td>Surveying small farmers to determine their educational needs</td>
<td>11.51</td>
<td>10.86</td>
<td>0.55</td>
<td>1.66</td>
</tr>
<tr>
<td>Developing specific programs to serve the needs of small farmers</td>
<td>11.05</td>
<td>10.38</td>
<td>0.67</td>
<td>1.81</td>
</tr>
<tr>
<td>Assigning primary responsibilities for establishing young/adult programs to vocational agriculture teachers</td>
<td>11.04</td>
<td>8.60</td>
<td>2.44</td>
<td>6.08*</td>
</tr>
</tbody>
</table>

(table continues)
<table>
<thead>
<tr>
<th>Program Factors</th>
<th>Group I Mean</th>
<th>S.D.</th>
<th>Rank</th>
<th>Group II Mean</th>
<th>S.D.</th>
<th>Rank</th>
<th>Differences Between Group Means</th>
<th>t-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrating young/adult education into the total vocational agriculture program</td>
<td>11.02</td>
<td>3.08</td>
<td>11</td>
<td>8.93</td>
<td>3.84</td>
<td>18</td>
<td>2.09</td>
<td>5.10*</td>
</tr>
<tr>
<td>Drawing advisory committee candidates from young/adult classes</td>
<td>11.00</td>
<td>3.10</td>
<td>12</td>
<td>9.62</td>
<td>3.27</td>
<td>12</td>
<td>1.38</td>
<td>3.66*</td>
</tr>
<tr>
<td>Surveying agribusinessmen to help determine the needs of young/adult farmers</td>
<td>10.86</td>
<td>2.87</td>
<td>13</td>
<td>9.91</td>
<td>3.82</td>
<td>10</td>
<td>0.95</td>
<td>2.40*</td>
</tr>
<tr>
<td>Using advisory committees for evaluating young/adult programs</td>
<td>10.14</td>
<td>3.13</td>
<td>14</td>
<td>9.12</td>
<td>3.75</td>
<td>16</td>
<td>1.02</td>
<td>2.51*</td>
</tr>
<tr>
<td>Requiring young/adult program participants to pay for materials only</td>
<td>9.99</td>
<td>3.59</td>
<td>15</td>
<td>9.43</td>
<td>3.41</td>
<td>13</td>
<td>0.56</td>
<td>1.34</td>
</tr>
<tr>
<td>Placing emphasis on young/adult programs during the summer months</td>
<td>9.92</td>
<td>3.60</td>
<td>16</td>
<td>9.28</td>
<td>3.74</td>
<td>15</td>
<td>0.64</td>
<td>1.46</td>
</tr>
<tr>
<td>Encouraging young/adult program participants to volunteer the services of their equipment</td>
<td>9.90</td>
<td>2.87</td>
<td>17</td>
<td>9.91</td>
<td>3.18</td>
<td>10</td>
<td>-0.01</td>
<td>-0.03</td>
</tr>
<tr>
<td>Providing recreational and social activities</td>
<td>9.43</td>
<td>3.07</td>
<td>18</td>
<td>8.95</td>
<td>3.74</td>
<td>17</td>
<td>0.48</td>
<td>1.19</td>
</tr>
<tr>
<td>Developing specific programs for agribusiness employees</td>
<td>9.10</td>
<td>2.78</td>
<td>19</td>
<td>9.35</td>
<td>3.44</td>
<td>14</td>
<td>-0.25</td>
<td>-0.66</td>
</tr>
<tr>
<td>Providing material incentives to farmers for participating in educational programs</td>
<td>8.94</td>
<td>3.41</td>
<td>20</td>
<td>8.75</td>
<td>3.68</td>
<td>19</td>
<td>0.19</td>
<td>0.45</td>
</tr>
<tr>
<td>Conducting young/adult programs with vocational agricultural teachers serving only as resource speakers</td>
<td>8.69</td>
<td>3.22</td>
<td>21</td>
<td>8.75</td>
<td>3.18</td>
<td>20</td>
<td>-0.06</td>
<td>-0.16</td>
</tr>
<tr>
<td>Employing a director to coordinate all young/adult educational programs</td>
<td>8.27</td>
<td>4.65</td>
<td>22</td>
<td>8.73</td>
<td>4.14</td>
<td>21</td>
<td>-0.46</td>
<td>-0.74</td>
</tr>
</tbody>
</table>

(table continues)
<table>
<thead>
<tr>
<th>Program Factors</th>
<th>Group I&lt;sup&gt;1&lt;/sup&gt; Mean S.D. Rank</th>
<th>Group II&lt;sup&gt;2&lt;/sup&gt; Mean S.D. Rank</th>
<th>Differences Between Group Means</th>
<th>t-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding young/adult programs through tuition fees paid by participants</td>
<td>7.47 3.95 23</td>
<td>7.81 3.76 24</td>
<td>-0.34</td>
<td>-0.74</td>
</tr>
<tr>
<td>Delimiting young/adult education programs to intensive short courses</td>
<td>7.14 3.86 24</td>
<td>7.03 3.82 26</td>
<td>0.11</td>
<td>1.94</td>
</tr>
<tr>
<td>Dividing young and adult farmers into groups according to their educational needs</td>
<td>7.08 4.41 25</td>
<td>8.03 3.82 23</td>
<td>-0.95</td>
<td>-1.98*</td>
</tr>
<tr>
<td>Using vocational agriculture budgets for financing young/adult programs</td>
<td>6.40 4.41 26</td>
<td>6.03 4.59 28</td>
<td>0.37</td>
<td>0.70</td>
</tr>
<tr>
<td>Soliciting donations as the primary source of financing young/adult programs</td>
<td>6.27 3.99 27</td>
<td>6.15 3.75 27</td>
<td>0.12</td>
<td>0.26</td>
</tr>
<tr>
<td>Assigning primary responsibilities for establishing young/adult programs</td>
<td>5.81 3.89 28</td>
<td>7.62 3.96 25</td>
<td>-1.81</td>
<td>-3.89*</td>
</tr>
</tbody>
</table>

<sup>1</sup> Group 1 = Teachers with programs (n=151). <sup>2</sup> Group 2 = Teacher without programs n=141.

<sup>*</sup><sub>p < .05.</sub>
somewhat in their perceptions as to which items were rated lowest.

The three items which teachers with programs assigned the lowest means were "Using vocational agriculture budgets for financing young/adult programs" (6.40), "Soliciting donations as the primary source of financing young/adult programs" (6.27), and "Assigning primary responsibilities for establishing young/adult programs to extension education personnel" (5.81). Teachers without programs assigned the lowest means to "Delimiting young/adult education programs to intensive short courses" (7.03), "Soliciting donations as the primary source of financing young/adult programs" (6.15), and "Using vocational agriculture budgets for financing young/adult programs" (6.03). It was observed that vocational agriculture teachers with programs rated the item "Assigning primary responsibilities for establishing young/adult programs to extension education personnel" lowest (5.81), while teachers without programs rated the item "Using vocational agriculture budgets for financing young/adult programs" lowest (6.03).

An examination of the raw mean scores revealed that vocational agriculture teachers with programs assigned higher mean scores than their colleagues without programs to 21 of the 28 items representing "Program Factors". Conversely, teachers without programs assigned higher mean scores than teachers with programs to seven of the "Program Factors" items. In addition, the t-tests revealed
significant differences ($p<.05$) between teachers with programs and teachers without programs, for 14 of the 28 items representing "Program Factors". Vocational agriculture teachers with programs rated 12 items significantly higher ($p<.05$) than teachers without programs, whereas the latter group rated only two items significantly higher ($p<.05$) than the former.

An examination of Table 12 reveals also the differences in the means between teachers with programs and teachers without programs for the 28 items representing "Program Factors". Vocational agriculture teachers with programs had rated the item "Assigning primary responsibilities for establishing young/adult programs to vocational agriculture teachers" comparatively higher ($p<.05$) than teachers without programs (a difference of 2.44 between group means). In addition, this item was ranked 10th by teachers with programs and 22nd by their colleagues without programs. These observations may indicate that teachers with programs felt that they bore greater responsibility for establishing young/adult education programs in agriculture than did their colleagues without programs. The items "Integrating young/adult education into the total vocational agriculture program" (difference of 2.09 between group means), and "Improving rapport between the school and the community through young/adult activities" (difference of 1.54 between group means) also had significant differences between the
means of teachers with programs (higher means) and teachers without programs.

The items on which teachers with programs and teachers without programs were most similar were "Encouraging young/adult program participants to volunteer the services of their equipment" (difference of 0.01), and "Conducting young/adult education programs with vocational agriculture teachers serving as resource speakers only" (difference of 0.06).

The two items which teachers without programs had rated significantly higher ($p < .05$) than their colleagues with programs were "Assigning primary responsibilities for establishing young/adult programs to extension education personnel" (difference of 1.81) and "Dividing young and adult farmers into separate groups depending on their educational needs" (difference of 0.95).

In general, vocational agriculture teachers with programs assigned higher mean scores than teachers without programs to the majority of the items representing "Program Factors". These observations may indicate that teachers with programs had perceived most of the program related factors as being of more importance than did their colleagues without programs.

Differences in Perceptions of Roles and Responsibilities by Levels of Selected Demographic Variables

This section reports the results of data analysis
pertaining to significant differences and relationships between selected demographic variables and vocational agriculture teachers' perceptions of their roles and responsibilities for young/adult education programs. The demographic variables investigated may have some influence on teachers' perceptions of their roles and responsibilities for these programs.

These findings are reported in the following subsections: (a) Significant differences in perceived roles and responsibilities by levels of selected demographic variables, and (b) Relationships between selected demographic variables and perceived roles and responsibilities.

Significant differences in perceived roles and responsibilities by levels of selected demographic variables.

One-way analysis of variance was used to determine the significant differences in vocational agriculture teachers' perceptions of their roles and responsibilities by levels of the demographic variables.

The demographic variables investigated include respondent's level of education, the number of teachers in the vo-ag departments, respondent's level of teaching experience, and respondent's age. Once a significant $F$ ratio ($p<.05$) was observed, a post hoc procedure (Tukey's) was used to identify the significantly different group means.
Examination of Table 13 reveals that based on these comparisons, significant differences ($p < .05$) on two "Perceived Roles and Responsibilities" items were observed among the groups by "Educational Level." These items were "Planning and organizing young/adult educational programs" and "Conducting follow-up visits to young/adult program participants". However, the Tukey test failed to detect any significantly different pairs of means (at the .05 level of significance) on the aforementioned items.

Significant differences ($p < .05$) on two "Perceived Roles and Responsibilities" items were observed among group means by "Number of Teachers in Vo-ag Department". Tukey's test again failed to detect a significant difference among any pair of means on one of these items (Budgeting for and financing all young/adult educational activities). The other item, "Soliciting resource personnel", was rated significantly higher by teachers in two-teacher departments (11.57) than by teachers in one-teacher departments (10.35).

There were five "Perceived Roles and Responsibilities" items on which significant differences were observed among groups by "Teaching Experience". The item "Coordinating all young/adult programs in the school district" was rated significantly higher ($p < .05$) by teachers with more than 27 years of experience than by teachers with four to seven years of experience.

Significant differences ($p < .05$) on the item "Surveying community needs to develop curriculum for young/adult
Table 13

Summary Table of Significant Differences in Perceived Roles and Responsibilities by Levels of Selected Demographic Variables

<table>
<thead>
<tr>
<th>Perceived Importance</th>
<th>Level of Education</th>
<th>No. of Teachers in Vo. Ag. Dept.</th>
<th>Teaching Experience</th>
<th>Respondent's Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budgeting for and financing all young/adult educational activities</td>
<td>-</td>
<td>*</td>
<td>-</td>
<td>*</td>
</tr>
<tr>
<td>Coordinating all young/adult programs in the school district</td>
<td>-</td>
<td>-</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Developing printed informative material for young/adult farmers</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>*</td>
</tr>
<tr>
<td>Surveying community needs to develop curriculum for young/adult program</td>
<td>-</td>
<td>-</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Soliciting resource personnel</td>
<td>-</td>
<td>*</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Planning and organizing young/adult educational programs</td>
<td>*</td>
<td>-</td>
<td>*</td>
<td>-</td>
</tr>
<tr>
<td>Organizing advisory committees</td>
<td>-</td>
<td>-</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Conducting follow-up visits to young/adult program participants</td>
<td>*</td>
<td>-</td>
<td>*</td>
<td>-</td>
</tr>
</tbody>
</table>

Note. A dash (-) denotes no significant differences among group means.

*a Level of Education: Group 1 = BS (n=171); Group 2 = MS (n=74); Group 3 = MS+30 hours (n=43); Group 4 = Eds and Doctorate (n=10).

*b Number of teachers in Vo-Ag. Dept: Group 1 = 1 teacher (n=167); Group 2 = 2 teachers (n=98); Group 3 = 3 teachers (n=23); Group 4 = 4 or more teachers (n=11).

*c Teaching Experience: Group 1 = 0-3 (n=42); Group 2 = 4-7 (n=69); Group 3 = 8-11 (n=44); Group 4 = 12-15 (n=45); Group 5 = 16-19 (n=32); Group 6 = 20-23 (n=19); Group 7 = 24-27 (n=15); Group 8 = above 27 (n=33).

*d Respondent's Age: Group 1 = below 25 (n=16); Group 2 = 25-29 (n=76); Group 3 = 30-34 (n=56); Group 4 = 35-39 (n=45); Group 5 = 40-44 (n=26); Group 6 = 45-49 (n=24); Group 7 = 50-55 (n=20); Group 8 = above 55 (n=35).

*p<.05.
programs" were observed among categories by "Teaching Experience". The post hoc analysis showed that the mean for teachers with more than 27 years of experience (11.94) was significantly higher than both means for teachers with 12 to 15 years of experience (9.56) and teachers with four to seven years of experience (9.88).

Significant F values (p<.05) were identified for the items "Planning and organizing young/adult farmer educational programs" and "Organizing advisory committees". However, the Tukey test failed to detect any pair of significantly different means on the aforementioned items.

The final item, for which significant differences (p<.05) were observed among categories by "Teaching experience", was "Conducting follow-up visits to young/adult program participants". The category of teachers with more than 27 years of experience rated this item significantly higher (p<.05) than the category of teachers with four to seven years experience (11.81 and 9.47 respectively).

Two of the three "Perceived Roles and Responsibilities" items with significant differences identified by Tukey's test were observed among the same categories of teaching experience. It was noted that for each item with a significant difference (p<.05), Tukey's test indicated that the group means for teachers with more than 27 years experience was higher than that of teachers with four to seven years of experience.
Significant differences (p < .05) on five "Perceived Roles and Responsibilities" items were observed among categories by "Respondent's Age". Tukey's post hoc test was unable to detect any pair of groups with significant differences at the .05 level for the items "Budgeting for and financing all young/adult educational activities" and "Coordinating all young/adult educational programs in the school district". However, Tukey's test showed that the item "Developing printed informative materials for young/adult farmers" was rated significantly higher (p < .05) by teachers 55 years and older (10.22), than by teachers 40 to 44 years of age (7.28).

In addition, significant differences (p < .05) on the item "Surveying community needs to develop curriculum for young/adult program participants" were observed among categories by "Respondent's Age". Tukey's test revealed that teachers 55 years of age and older rated this item significantly higher than their younger colleagues from 25 to 29 years old.

Finally, the item "Organizing advisory committees" was rated significantly higher (p < .05) by teachers 50 to 54 years of age than by teachers 25 to 29 years old.

The observation was made that all items with significant differences among categories by age were rated higher by teachers in the older age categories (above 50 years) than by teachers of the younger age categories (below 44 years).
Relationships between selected demographic variables and perceived roles and responsibilities

Correlation coefficients were computed to determine if significant relationships existed between selected demographic variables and the 16 items representing "Perceived Roles and Responsibilities". Data were analyzed using Pearson product-moment correlations. The findings are reported in Table 14.

Pearson product-moment correlation coefficient, symbolized by r, is interpreted as a measure of association indicating the strength of the linear relationship between two variables. The relationship is expressed in a relative manner on a scale ranging from -1.00 to +1.00. A value of r close to zero implies a weak or negligible relationship between two variables. However, an r value approaching ±1.00 implies a strong linear relationship (Nie et al., 1975).

A uniform scale of practical significance was developed by the researcher, in order to facilitate presentation and interpretation of the correlation coefficients. The following guidelines were used:

<table>
<thead>
<tr>
<th>Correlation Range</th>
<th>Interpretation of Practical Significance by Researcher</th>
</tr>
</thead>
<tbody>
<tr>
<td>.00 to ±.19</td>
<td>Independent or negligible association</td>
</tr>
<tr>
<td>±.20 to ±.39</td>
<td>Associations present but weak or low</td>
</tr>
</tbody>
</table>
- Substantial or marked association
- High to very high association

Table 14 shows that many significant relationships existed between the selected demographic variables and some "Perceived Roles and Responsibilities" items. Statistically significant but low positive relationships (p<.05) were observed between "Total College Credits" and 14 of the 16 items representing "Perceived Roles and Responsibilities".

The three "Roles and Responsibilities" items most correlated (p<.05) with "Total College Credits" were "Coordinating all young/adult programs in the school district" (r=.26), "Conducting follow-up visits to young/adult program participants" (r=.23), and "Organizing advisory committees" (r=.21).

"Undergraduate Credits" was correlated (p<.05) with seven "Perceived Roles and Responsibilities" items. The three items with the highest correlation coefficients were "Coordinating all young/adult programs in the school district" (r=.16), "Budgeting for and financing all young/adult educational activities" (r=.14), and "Organizing advisory committees" (r=.14). Correlation coefficients for nine of the 16 "Perceived Roles and Responsibilities" items associated with "Undergraduate Credits" were non-significant.

"Graduate Credits" was significantly correlated (p<.05) with 13 of the 16 items representing "Perceived Roles and Responsibilities". The two "Perceived Roles and
Table 14

Correlations of Selected Demographic Variables with Perceived Roles and Responsibilities

<table>
<thead>
<tr>
<th>Roles and Responsibilities</th>
<th>Total College Credit</th>
<th>Undergraduate Credit</th>
<th>Graduate Credit</th>
<th>No. of Workshops</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coordinating all young/adult programs in the school district</td>
<td>.26*</td>
<td>.16*</td>
<td>.23*</td>
<td>.19*</td>
</tr>
<tr>
<td>Conducting follow-up visits to young/adult program participants</td>
<td>.23*</td>
<td>.12*</td>
<td>.24*</td>
<td>.28*</td>
</tr>
<tr>
<td>Organizing advisory committees</td>
<td>.21*</td>
<td>.14*</td>
<td>.19*</td>
<td>.26*</td>
</tr>
<tr>
<td>Providing instruction in production agriculture</td>
<td>.18*</td>
<td>.12*</td>
<td>.17*</td>
<td>.24*</td>
</tr>
<tr>
<td>Planning and organizing young/adult educational programs</td>
<td>.18*</td>
<td>.07</td>
<td>.21*</td>
<td>.20*</td>
</tr>
<tr>
<td>Budgeting for and financing all young/adult educational activities</td>
<td>.18*</td>
<td>.14*</td>
<td>.14*</td>
<td>.16*</td>
</tr>
<tr>
<td>Securing visual and teaching aids</td>
<td>.18*</td>
<td>.09</td>
<td>.18*</td>
<td>.22*</td>
</tr>
<tr>
<td>Developing printed informative materials for young/adult farmers</td>
<td>.16*</td>
<td>.09</td>
<td>.16*</td>
<td>.15*</td>
</tr>
<tr>
<td>Providing and organizing instructional facilities for young/adult classes</td>
<td>.16*</td>
<td>.03</td>
<td>.21*</td>
<td>.19*</td>
</tr>
<tr>
<td>Providing instruction in farm management</td>
<td>.15*</td>
<td>.08</td>
<td>.14*</td>
<td>.22*</td>
</tr>
<tr>
<td>Supervising demonstration plots for young/adult programs</td>
<td>.14*</td>
<td>.10*</td>
<td>.12*</td>
<td>.12*</td>
</tr>
<tr>
<td>Surveying community needs to develop curriculum for young/adult programs</td>
<td>.13*</td>
<td>.04</td>
<td>.15*</td>
<td>.21*</td>
</tr>
<tr>
<td>Soliciting resource personnel</td>
<td>.13*</td>
<td>.05</td>
<td>.15*</td>
<td>.18*</td>
</tr>
<tr>
<td>Organizing demonstration plots as teaching aids to young/adult programs</td>
<td>.13*</td>
<td>.11*</td>
<td>.08</td>
<td>.12*</td>
</tr>
</tbody>
</table>

*(table continues)*
## Roles and Responsibilities

<table>
<thead>
<tr>
<th>Roles and Responsibilities</th>
<th>Total College Credit&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Undergraduate Credit&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Graduate Credit&lt;sup&gt;a&lt;/sup&gt;</th>
<th>No. of Workshops&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providing instruction in agricultural mechanics</td>
<td>.09</td>
<td>.06</td>
<td>.07</td>
<td>.18*</td>
</tr>
<tr>
<td>Conducting short courses on the procurement of financial assistance for small farm operators</td>
<td>.05</td>
<td>.05</td>
<td>.03</td>
<td>.11*</td>
</tr>
</tbody>
</table>

*<sup>a</sup>Credit = Semester hours;  <sup>b</sup>Workshops = Inservice workshops.

*<sup>p</sup><.<05.

Note. N=292
Responsibilities" items that were most correlated with "Graduate Credits" were "Conducting follow-up visits to young/adult program participants" (r=.24), and "Coordinating all young/adult programs in the school district" (r=.23).

Significant, but low or negligible correlation coefficients (p<.05) for "Workshops" with "Perceived Roles and Responsibilities" were observed for all of the 16 "Roles and Responsibilities" variables. The three "Perceived Roles and Responsibilities" items with the highest correlation coefficients were "Conducting follow-up visits to young/adult program participants" (r=.28), "Organizing advisory committees" (r=.26), and "Providing instruction in production agriculture" (r=.24).

An examination of the Table 14 shows that no negative relationships existed for any of the selected demographic variables correlated with the 16 items representing "Perceived Roles and Responsibilities". "Graduate Credits" with "Perceived Roles and Responsibilities" had six additional significant correlation coefficients (p<.05) than "Undergraduate Credits" with "Perceived Roles and Responsibilities". The significant and positive relationships between "Inservice workshops" and all the "Perceived Roles and Responsibilities" items indicate that the number of workshops attended had weak positive associations with teachers' perceptions of their roles and responsibilities for young/adult education.
Differences in Perceived Importance of Program Factors by Levels of Selected Demographic Variables

This section reports the findings pertaining to significant differences and relationships between selected demographic variables and vocational agriculture teachers' perceptions of the importance of selected program related factors for young/adult programs. Some of the demographic variables may have some influence on teachers' perceptions of the value of selected program factors to young/adult programs.

These findings are reported in the following subsections: (a) Significant differences in "Program Factors" by levels of selected demographic variables, (b) Correlations of selected demographic variables with "Program Factors".

Significant differences in program factors by levels of selected demographic variables

One-way analysis of variance was used to determine differences in vocational agriculture teachers' perceptions of the importance of selected program related factors by levels of the selected demographic variables. The demographic variables investigated included respondent's level of education, number of teachers in the vo-ag. department, respondent years of teaching experience, and the respondent's age. Once a significant $F$ ratio was observed ($p \leq .05$) a post hoc test (Tukey's, .05) was used to identify the significantly different group means.
Table 15 reports the "Program Factors" items on which significant differences were observed among groups by the selected demographic variables. Significant differences ($p < .05$) on three "Program Factors" items were observed among categories of educational level. The item "Using vocational agriculture budgets for financing young/adult activities" was rated significantly higher ($p < .05$) by teachers with the Masters plus 30 or more hours (8.24) than by both teachers with the Bachelors only (5.73) and Masters (5.74) degrees.

A significant $F$ value ($p < .05$) was observed for the item "Providing systematic instruction in a variety of subjects". However, Tukey's test (.05) did not identify significant differences in any pair of group means.

Significant differences ($p < .05$) on "Assigning primary responsibilities for establishing young/adult programs to vocational agriculture teachers" were observed also among categories by educational level. The post hoc analysis showed that both holders of the Masters degree and the Masters plus 30 hours (10.81 and 10.85 respectively), rated this item significantly higher than teachers with the Bachelors degree only (9.16).

There were six "Program Factors" items assigned significantly different means by the demographic variable "Number of Teachers in Vo-ag. Department". The two items "Providing recreational and social activities" and "Organizing classes for systematic instruction" were both rated significantly higher ($p < .05$) by teachers in
Table 15

Summary Table of Significant Differences in Perceived Importance of Program Factors by Levels of Selected Demographic Variables

<table>
<thead>
<tr>
<th>Program Factors</th>
<th>Level of Education</th>
<th>No. of Teachers in Vo. Ag. Dept.</th>
<th>Teaching Experience</th>
<th>Respondent's Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providing recreational and social activities</td>
<td>*</td>
<td>-</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Organizing classes for systematic instruction</td>
<td>*</td>
<td>gp 2&gt;1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Encouraging young/adult program participants to volunteer the services of their equipment</td>
<td>-</td>
<td>-</td>
<td>*</td>
<td>-</td>
</tr>
<tr>
<td>Using vocational agriculture budgets for financing young/adult programs</td>
<td>*</td>
<td>gp 3&gt;1,2</td>
<td>gp 8,6&gt;2,8&gt;4</td>
<td>8&gt;2,3</td>
</tr>
<tr>
<td>Using young/adult programs to identify the problems of the farm and farm managers</td>
<td>-</td>
<td>-</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Provide systematic instruction in a variety of subjects</td>
<td>*</td>
<td>gp 4&gt;3</td>
<td>gp 8,6&gt;5</td>
<td></td>
</tr>
<tr>
<td>Placing emphasis on young/adult programs during the summer months</td>
<td>-</td>
<td>-</td>
<td>*</td>
<td>-</td>
</tr>
<tr>
<td>Assigning primary responsibilities for establishing young/adult programs to vocational agriculture teachers</td>
<td>*</td>
<td>gp 2,3&gt;1</td>
<td>gp 2,4&gt;1</td>
<td>gp 8&gt;2</td>
</tr>
<tr>
<td>Using advisory committees for evaluating young/adult programs</td>
<td>-</td>
<td>-</td>
<td>*</td>
<td>-</td>
</tr>
<tr>
<td>Soliciting donations as the primary source of financing young/adult programs</td>
<td>-</td>
<td>-</td>
<td>*</td>
<td>-</td>
</tr>
<tr>
<td>Integrating young/adult education into the total vocational agriculture program</td>
<td>-</td>
<td>*</td>
<td>gp 8,6&gt;2,4</td>
<td>gp 8&gt;2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(table continues)
<table>
<thead>
<tr>
<th>Program Factors</th>
<th>Level of Education</th>
<th>No. of Teachers in Vo. Ag. Dept.</th>
<th>Teaching Experience</th>
<th>Respondent's Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Publicizing young/adult programs to make school administrators and school board members more aware of the total vocational education program</td>
<td>-</td>
<td>*</td>
<td>*</td>
<td>-</td>
</tr>
<tr>
<td>Survey small farmers to determine their educational needs</td>
<td>-</td>
<td></td>
<td>*</td>
<td>gp 6&gt;4</td>
</tr>
<tr>
<td>Assigning primary responsibilities for establishing young/adult programs to extension education personnel</td>
<td>-</td>
<td>-</td>
<td>*</td>
<td>* gp 1,5,2&gt;8</td>
</tr>
</tbody>
</table>

Note. A dash (-) denotes no significant differences among group means.

*a Level of Education: Group 1 = BS (n=171); Group 2 = MS (n=74); Group 3 = MS+30 hours (n=43); Group 4 = Eds and Doctorate (n=10).

*b Number of teachers in Vo-Ag. Dept: Group 1 = 1 teacher (n=167); Group 2 = 2 teachers (n=98); Group 3 = 3 teachers (n=23); Group 4 = 4 or more teachers (n=11).

*c Teaching Experience: Group 1 = 0-3 (n=42); Group 2 = 4-7 (n=69); Group 3 = 8-11 (n=44); Group 4 = 12-15 (n=45); Group 5 = 16-19 (n=32); Group 6 = 20-23 (n=19); Group 7 = 24-27 (n=15); Group 8 = above 27 (n=33).

*d Respondents Age: Group 1 = below 25 (n=16); Group 2 = 25-29 (n=76); Group 3 = 30-34 (n=56); Group 4 = 35-39 (n=45); Group 5 = 40-44 (n=26); Group 6 = 45-49 (n=24); Group 7 = 50-55 (n=20); Group 8 = above 55 (n=35)

*p<.05.
two-teacher departments (9.87 and 11.52 respectively) than their colleagues in one-teacher departments (8.60 and 10.48 respectively).

Significant differences ($p < .05$) on the item "Providing systematic instruction in a variety of subjects" were observed also among categories by "Number of Teachers in Vo-ag. Department". Tukey's test (.05) indicated that the mean for teachers in four-or-more-teacher departments (13.09) was significantly higher than the mean for teachers in three-teacher departments (10.04).

The item "Assigning primary responsibilities for establishing young/adult programs to vocational agriculture teachers" was assigned significantly different means ($p < .05$) among groups by "Number of Teachers in Vo-ag. Department". The means for teachers in two- and in four-or-more-teacher departments (10.61 and 12.27 respectively) were significantly higher ($p < .05$) than the means of teachers in one-teacher departments.

A significant $F$ value ($p < .05$) was observed for the item "Integrating young/adult education into the total vocational agriculture program". However, Tukey's test failed to identify any pair of group means that were significantly different.

The final item on which significant differences ($p < .05$) were observed among groups by "Number of Teachers in Vo-ag. Department" was "Publicizing young/adult programs to make school administrators and school board members more aware of
the total vocational education program". The Tukey's test (.05) revealed that teachers in two-teacher departments assigned a significantly higher mean (12.64) to this item than did teachers in one-teacher departments (11.25).

The largest number of significantly different means ($p<.05$), on "Program Factors" items were noted among category means by teaching experiences. Significant differences among category means by teaching experience were observed for 13 of the 28 items representing "Program Factors". The two items "Organizing classes for systematic instruction" and "Encouraging young/adult program participants to volunteer the services of their equipment" were assigned mean scores which produced significant F-values ($p<.05$). However, Tukey's test did not detect any significantly different pairs of means for either of these items.

Significant differences ($p<.05$) on "Using vocational agriculture budgets for financing young/adult programs" were observed among categories by "Teaching Experience". Tukey's test (.05) indicated that both teachers with more than 27 years of teaching experience (mean of 9.06) and teachers with 20 to 23 years of teaching experience (mean of 8.41) rated this item significantly higher than teachers with four to seven years of teaching experience (mean of 4.75). Further, the aforementioned category of teachers with more than 27 years of experience rated this item significantly higher than their less experienced colleagues with 12 to 15
years experience (mean of 9.06). These observations indicate that the more experienced teachers attached greater importance to vocational agriculture budgeting for and financing young/adult programs than their less experienced colleagues.

The item "Using young/adult programs to identify the problems of the farm and farm managers" was assigned significantly higher means ($p<.05$) among categories by "Teaching Experience". The post hoc test showed that the means for both teachers with 20 to 23 years of teaching experience (12.52) and teachers with more than 27 years of teaching experience (12.28) were significantly higher than the mean for teachers with 12 to 15 years of teaching experience (9.88). The post hoc test showed also that the mean for the group of teachers with more than 27 years of teaching experience was significantly higher than the mean for teachers with four to seven years of teaching experience (10.33).

Significant differences ($p<.05$) for the item "Providing systematic instruction in a variety of subjects" was observed among categories by teaching experience. It was revealed that both teachers with 20 to 23 years of teaching experience (mean of 12.76) and teachers with more than 27 years of teaching experience (mean of 12.00) rated this item significantly higher than teachers with 16 to 19 years of teaching experience (mean of 9.67).
The three items "Placing emphasis on young/adult programs during the summer months", "Using advisory committees for evaluating young/adult programs", and "Soliciting donations as the primary source of financing young/adult programs" were found to have significantly different means (\(p < .05\)) among categories by teaching experience. However, Tukey's test failed to identify any pair of groups with significantly different means.

Significant differences (\(p < .05\)) on the item "Assigning primary responsibilities for establishing young/adult programs to vocational agriculture teachers" were observed among categories by teaching experience. Teachers with more than 27 years of teaching experience assigned a significantly higher mean score to this item than did teachers with four to seven years of experience (means of 11.62 and 8.94 respectively).

The item "Integrating young/adult education into the total vocational agriculture program" was rated significantly higher (\(p < .05\)) by both teachers with more than 27 years of experience and teachers with 20 to 23 years of experience (11.87 and 12.76 respectively) than by teachers with four to seven years of teaching experience and teachers with 12 to 15 years of teaching experience (means of 9.11 and 9.18 respectively). These observations indicate that those more experienced teachers attached greater importance to young/adult education as a component of the total
vocational agriculture program than their lesser experienced colleagues.

Significant differences ($p<.05$) on the item "Publicizing young/adult programs to make school administrators and school board members more aware of the total vocational agriculture program" were observed among categories of "Teaching Experience". The mean for teachers with more than 27 years of experience (13.12) was significantly higher than the mean for teachers with 12 to 15 years of teaching experience (10.61).

A significant difference was detected between categories (teachers with 20 to 23 years experience higher than teachers with 12 to 15 years of teaching experience) for the item "Surveying small farmers to determine their educational needs". Here again, a factor was perceived as being more important to the more experienced group than to the less experienced group (means of 12.88 and 10.25 respectively).

The final item with significant differences in means ($p<.05$) among the categories of "Teaching Experience" was noted for "Assigning primary responsibilities for establishing young/adult programs to extension education personnel". This is the only item in Table 15 which was assigned higher means by the less experienced categories than by the most experienced category. The means for teachers with less than three years of teaching experience (7.92), teachers with 16 to 19 years of teaching experience
(7.35) and teachers with four to seven years of teaching experience (7.20) were significantly higher than teachers with more than 27 years of teaching experience (4.09). These observations may suggest that the most experienced teachers perceived that agricultural extension should bear marginal responsibility for young/adult education, while the lesser experienced teachers preferred agricultural extension to have primary responsibility for young/adult education programs in agriculture.

Only four "Program Factors" items were assigned significantly different means among categories by respondents' age. Significant differences were observed ($p<.05$) on the item "Using vocational agriculture budgets for financing young/adult farmer activities". This item was assigned a higher mean by teachers of 55 years and above, (8.97) than by both teachers between 25 to 29 years of age (4.92) and teachers between 30 to 34 years of age (5.51).

Significant differences ($p<.05$) on the item "Using young/adult programs to identify the problems of the farm and farm managers" were observed among categories by respondents' age. Tukey's test indicated that the mean for teachers in the age category 55 and above (12.20), was significantly higher than that of teachers in the age category 30 to 34 years old (10.05).

Several categories of teachers by respondents' age assigned significantly different means ($p<.05$) to the item "Integrating young/adult education into the total vocational
agriculture program". Teachers 55 years and older rated this item significantly higher than their younger colleagues from 25 to 29 of age (means of 11.50 and 9.22 respectively). Again, teachers of ages 45 to 49 years old assigned this item a significantly higher mean (12.13) than both teachers of 25 to 29 years of age (9.22) and teachers of 35 to 39 years of age (9.29).

Finally, the item "Assigning primary responsibilities for establishing young/adult programs to extension education personnel" was rated significantly higher (p<.05) by teachers in the younger age categories than by teachers in the oldest age category. Teachers in three age groups (below 25 years; 40 to 44 years; and 25 to 29 years) assigned significantly higher means (7.30, 8.24, and 8.46 respectively) to this item than did their older colleagues above 55 years of age. The pattern of rating this item by the categories of respondents' age was similar to the ratings of the same item by categories of years of teaching experience. Therefore, since it may be postulated that the most experienced teachers were in the older-age categories, the influence of experience may be greater than that of age.

In general, teachers' perceptions of the importance of selected program related factors tended to be higher with increased levels of a particular demographic variable. There was only one item among all the "Program Factors" items with significantly different means, where this trend was reversed. The largest number (13) of significantly
different means on "Program Factors" items were observed among the levels of "Teaching experience". These observations may indicate that increased levels of the demographic variable "Teaching Experience" can have a slightly positive association with teachers' perceptions of some related factors to young/adult programs.

**Relationships between selected demographic variables and perceived importance of program factors**

Correlation coefficients were computed to determine if significant relationships existed between selected demographic variables and the 28 items representing "Perceived Importance of Program Factors". Data were analyzed using the Pearson product-moment correlation. The findings are reported in Table 16 and discussed in this sub-section.

A correlation coefficient (r) close to zero implies a weak or negligible relationship between the independent and dependent variable. An r value approaching ± 1 implies a strong linear relationship. The r values reported in this section were found to be low and negligible.

Data presented in Table 16 indicates that several significant but weak relationships exist between the selected demographic variables and some "Program Factors" items. Significant (p<.05) and positive relationships exist between "Total Credits" and 16 of the 28 items representing "Program Factors". One significantly negative relationship was observed at the .05 level.
Table 16

Correlations Between Selected Demographic Variables and Perceived Importance of Program Factors

<table>
<thead>
<tr>
<th>Program Factors</th>
<th>Total College Credit</th>
<th>Undergraduate Credit</th>
<th>Graduate Credit</th>
<th>Workshops b</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assigning primary responsibilities for establishing young/adult programs to vocational agriculture teachers</td>
<td>.28*</td>
<td>.15*</td>
<td>.28*</td>
<td>.25*</td>
</tr>
<tr>
<td>Using vocational agriculture budgets for financing young/adult programs</td>
<td>.27*</td>
<td>.23*</td>
<td>.19*</td>
<td>.14*</td>
</tr>
<tr>
<td>Using advisory committees for evaluating young/adult programs</td>
<td>.26*</td>
<td>.22*</td>
<td>.18*</td>
<td>.24*</td>
</tr>
<tr>
<td>Integrating young/adult education into the total vocational agriculture program</td>
<td>.20*</td>
<td>.15*</td>
<td>.16*</td>
<td>.23*</td>
</tr>
<tr>
<td>Organizing classes for systematic instruction</td>
<td>.19*</td>
<td>.11*</td>
<td>.19*</td>
<td>.19*</td>
</tr>
<tr>
<td>Placing emphasis on young/adult programs during the summer months</td>
<td>.19*</td>
<td>.19*</td>
<td>.11*</td>
<td>.14*</td>
</tr>
<tr>
<td>Provide systematic instruction in a variety of subjects</td>
<td>.18*</td>
<td>.10*</td>
<td>.17*</td>
<td>.22*</td>
</tr>
<tr>
<td>Employing a director to coordinate all young/adult education programs</td>
<td>.16*</td>
<td>.16*</td>
<td>.09</td>
<td>-.04</td>
</tr>
<tr>
<td>Using feedback from the young/adult program to improve the total vocational agriculture program</td>
<td>.16*</td>
<td>.11*</td>
<td>.15*</td>
<td>.14*</td>
</tr>
<tr>
<td>Soliciting donations as the primary source of financing young/adult programs</td>
<td>.15*</td>
<td>.13*</td>
<td>.10*</td>
<td>.02</td>
</tr>
<tr>
<td>Drawing advisory committee candidates from young/adult classes</td>
<td>.13*</td>
<td>.16*</td>
<td>.06</td>
<td>.23*</td>
</tr>
<tr>
<td>Publicizing young/adult programs to make school administrators and school board members more aware of the total vocational education program</td>
<td>.13*</td>
<td>.07</td>
<td>.13*</td>
<td>.15*</td>
</tr>
</tbody>
</table>

(table continues)
<table>
<thead>
<tr>
<th>Program Factors</th>
<th>Total College Credit</th>
<th>Undergraduate Credit</th>
<th>Graduate Credit</th>
<th>Workshops</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improving rapport between the school and the community through young/adult activities</td>
<td>.12* .07</td>
<td>.12* .17*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using young/adult programs to identify the problems of the farm and farm managers</td>
<td>.11* .06</td>
<td>.11* .15*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Developing specific programs for agribusiness employees</td>
<td>.10* .05</td>
<td>.10* .03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surveying agricultural businessmen to help determine the needs of young/adult farmers</td>
<td>.10* .07</td>
<td>.09 .13*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using vocational agriculture shop facilities to instruct farmers in agricultural mechanics</td>
<td>.08 .03</td>
<td>.10* .17*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Providing recreational and social activities</td>
<td>.08 .06</td>
<td>.06 .13*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Survey small farmers to determine their educational needs</td>
<td>.07 .06</td>
<td>.05 .06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Encouraging young/adult program participants to volunteer the services of their equipment</td>
<td>.04 .03</td>
<td>.04 .11*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Developing specific programs to serve the needs of small farmers</td>
<td>.07 .05</td>
<td>.06 .00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Requiring young/adult program participants to pay for materials only</td>
<td>.03 -.01</td>
<td>.05 .05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delimiting young/adult educational programs to intensive short courses</td>
<td>-.03 .04</td>
<td>-.09 .00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conducting young/adult programs with vocational agriculture teachers serving only as resource speakers</td>
<td>.03 .05</td>
<td>.00 .01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dividing young and adult farmers into separate groups according to their educational needs</td>
<td>.03 .10*</td>
<td>-.04 -.03</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(table continues)
<table>
<thead>
<tr>
<th>Program Factors</th>
<th>Total College Credit</th>
<th>Undergraduate Credit</th>
<th>Graduate Credit</th>
<th>Workshops</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providing material incentives to farmers for participating in educational programs</td>
<td>.02</td>
<td>.06</td>
<td>-.02</td>
<td>.07</td>
</tr>
<tr>
<td>Funding young/adult programs through tuition fees paid by participants</td>
<td>-.05</td>
<td>-.03</td>
<td>-.04</td>
<td>-.06</td>
</tr>
<tr>
<td>Assigning primary responsibilities for establishing young/adult programs to extension education personnel</td>
<td>-.15*</td>
<td>-.06</td>
<td>-.17*</td>
<td>-.09</td>
</tr>
</tbody>
</table>

Note: \( N=292 \)

\(^a\)Credit = Semester credit hours; \(^b\)Workshops = Inservice Workshop

\(^*p<.05.\)
The three "Program Factors" items with which "Total College Credits" were most correlated at the .05 level of significance were "Assigning primary responsibilities for establishing young/adult programs to vocational agriculture teachers" (r=.28), "Using vocational agriculture budgets for financing young/adult programs" (r=.27), and "Using advisory committees for evaluating young/adult programs" (r=.26).

Three negative correlations were observed for "Total College Credits" with "Program Factors", but only one was significant at the .05 level. This negative and significant correlation coefficient was observed for the item "Assigning primary responsibilities for establishing young/adult programs to extension education personnel" (r=-.15).

Low correlation coefficients were observed for "Undergraduate Credits" with some "Program Factors" items at the .05 level of significance. The three items with the highest correlation coefficients were "Using vocational agriculture budgets for financing young/adult programs" (r=.23), "Using advisory committees for evaluating young/adult programs" (r=.22), and "Placing emphasis on young/adult programs during the summer months" (r=.19).

Weak significant relationships (p<.05) for "Graduate Credits" with "Program Factors" were observed for 15 of the 28 items. Five negative correlation coefficients were computed for "Graduate Credits" with "Program Factors". One of these negative correlation coefficients was significant at the .05 level. Positive correlation coefficients were
reported for 23 items with 13 values being significant at the .05 level.

The three items with the highest correlation coefficients for "Graduate Credits" with "Program Factors" were "Assigning primary responsibilities for establishing young/adult programs to vocational agriculture teachers" (r=.28), "Using vocational agriculture budgets for financing young/adult programs" (r=.19), and "Organizing classes for systematic instruction" (r=.19).

The highest negative correlation coefficient (r=-.17) was computed for the item "Assigning primary responsibilities for establishing young/adult programs to extension education personnel" while the highest positive correlation coefficient (r=.28), was observed for the item "Assigning primary responsibilities for establishing young/adult programs to vocational agriculture teachers".

"In-service Workshops" had significant but low correlation coefficients with 15 of the 24 "Program Factors" items on which positive relationships were observed. Negligible and negative correlation coefficients were found for four "Program Factors" items. No significant relationship was observed for any item with negative values.

The five items with the highest correlation coefficients were "Assigning primary responsibilities for establishing young/adult programs to vocational agriculture teachers" (r=.25), "Using advisory committees for evaluating young/adult programs" (r=.24), "Drawing advisory committee
candidates from young/adult classes" (r=.23), "Integrating young/adult education into the total vocational agriculture program" (r=.23), and "Providing systematic instruction in a variety of subjects" (r=.22).

No substantial relationships were observed for any of the selected demographic variables correlated with the 28 items representing "Program Factors". However, several significant relationships (p<.05) were observed among some items with positive correlation coefficients. Fewer items with negative values were found to have significant relationships at the .05 level. Only three additional significant relationships were observed for "Graduate Credits" with "Perceived Importance of Program Factors" than for "Undergraduate Credits" with "Perceived Importance of Program Factors".

Characteristics of Young/Adult Education Programs

Vocational agriculture teachers who indicated that they had conducted young/adult education programs in agriculture since July, 1981 were presented with three elements by which to describe their programs. These elements were: (a) Enrollment of 10 or more participants above 18 years of age (b) Consisting of eight or more systematic instructional meetings, and (c) Conducting on-the-farm instructional visits.

One hundred and fifty-one respondents reported that they had conducted young/adult education programs in agriculture since July, 1981. Table 17 reveals that among
the respondents who conducted programs, 90.1% of them had programs in which 10 or more participants were enrolled in classes, 83.4% of the respondents implemented eight or more instructional meetings, and 75.5% of the respondents carried out on-the-farm instructional visits.

Table 18 presents the percentage of work time (by categories) which vocational agriculture teachers allotted to young/adult education programs. It was revealed that 89 respondents devoted 10% or less of their total work time to young/adult programs. It was observed also that four respondents had spent above 50% of their total work time to young/adult programs. On the average, vocational agriculture teachers with programs had allotted 14.4% of their total work time to young/adult education programs in agriculture.

The data presented in Table 19 reveals the number of programs which respondents had conducted since July, 1981. The largest group of teachers (49.7%) had conducted from one to five young/adult programs while 22.8% had conducted from 11 to 20 programs. The mean number of programs conducted since July, 1981 was 11.29.

The percentages of young/adult education program participants above 35 years of age are categorized in Table 20. The largest group of teachers (55 or 37.4%) reported that 26 to 50% of their program participants were older than 35 years of age, whereas 40 respondents (27.2%) reported that 1 to 25% of their program participants were older than
### Table 17

**Characteristics of Young/Adult Programs Conducted by Respondents**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>n</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Enrollment of 10 or more per class</td>
<td>136</td>
<td>90.1</td>
</tr>
<tr>
<td>2. Eight or more instructional meetings</td>
<td>126</td>
<td>83.4</td>
</tr>
<tr>
<td>3. On-the-farm instructional visits</td>
<td>114</td>
<td>75.5</td>
</tr>
</tbody>
</table>

*Note.* 151 teachers indicated that they had conducted young/adult programs since July, 1981.

### Table 18

**Total Work Time (by Percentages) Allotted to Young/Adult Programs**

<table>
<thead>
<tr>
<th>Percent of Work Time</th>
<th>n(^a)</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 or less</td>
<td>89</td>
<td>60.5</td>
</tr>
<tr>
<td>11-25</td>
<td>47</td>
<td>32.0</td>
</tr>
<tr>
<td>26-50</td>
<td>7</td>
<td>4.8</td>
</tr>
<tr>
<td>Above 50</td>
<td>4</td>
<td>2.7</td>
</tr>
<tr>
<td>Non-respondents</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>14.4</td>
<td></td>
</tr>
<tr>
<td>Minimum-Maximum</td>
<td>1-90</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Means were able to be calculated since raw data were collected. Non-respondents were not computed with rest of data.

\(^{a}_n=151\)
Table 19

**Number of Programs Conducted Since July, 1981**

<table>
<thead>
<tr>
<th>Programs (Categories)</th>
<th>n(^a)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5</td>
<td>74</td>
<td>49.7</td>
</tr>
<tr>
<td>6-10</td>
<td>16</td>
<td>10.7</td>
</tr>
<tr>
<td>11-20</td>
<td>34</td>
<td>22.8</td>
</tr>
<tr>
<td>21-30</td>
<td>15</td>
<td>10.1</td>
</tr>
<tr>
<td>Above 30</td>
<td>10</td>
<td>6.7</td>
</tr>
<tr>
<td>Non-respondents</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>11.29</td>
<td></td>
</tr>
<tr>
<td>Minimum-Maximum</td>
<td>1-78</td>
<td></td>
</tr>
</tbody>
</table>

Note. Means were able to be calculated since raw data were collected. Non-responses were not computed with data.

\(^a\)n = 151
Table 20

Program Participants Older than 35 Years

<table>
<thead>
<tr>
<th>Percent Participants Above 35 Years Old</th>
<th>na</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>8</td>
<td>5.5</td>
</tr>
<tr>
<td>1-25</td>
<td>40</td>
<td>27.2</td>
</tr>
<tr>
<td>26-50</td>
<td>55</td>
<td>37.4</td>
</tr>
<tr>
<td>51-75</td>
<td>30</td>
<td>20.4</td>
</tr>
<tr>
<td>Above 75</td>
<td>14</td>
<td>9.5</td>
</tr>
<tr>
<td>Non-responses</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td></td>
<td>42.6</td>
</tr>
<tr>
<td>Minimum-Maximum</td>
<td></td>
<td>0.98</td>
</tr>
</tbody>
</table>

Note. Means were able to be calculated since raw data were collected. Non-responses were not computed with data.

\[ a_n = 151 \]
Table 21

Means and Standard Deviations for Respondents' Use of Instructional Methods

<table>
<thead>
<tr>
<th>Instructional Methods</th>
<th>Rank</th>
<th>Means/SD</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructional meeting (only)</td>
<td>1</td>
<td>3.36/1.06</td>
<td>4.00</td>
</tr>
<tr>
<td>Shop/lab experiences (farm mechanics)</td>
<td>2</td>
<td>3.35/1.04</td>
<td>4.00</td>
</tr>
<tr>
<td>Resource persons (or speakers)</td>
<td>3</td>
<td>3.22/1.09</td>
<td>4.00</td>
</tr>
<tr>
<td>Combined instructional and association meetings</td>
<td>4</td>
<td>3.00/1.07</td>
<td>3.00</td>
</tr>
<tr>
<td>Social and recreational activities as part of the meetings</td>
<td>5</td>
<td>2.66/1.08</td>
<td>3.00</td>
</tr>
<tr>
<td>Field days or tours</td>
<td>6</td>
<td>2.58/0.87</td>
<td>3.00</td>
</tr>
<tr>
<td>Field trips</td>
<td>6</td>
<td>2.58/1.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Association meetings (only)</td>
<td>8</td>
<td>2.43/1.12</td>
<td>3.00</td>
</tr>
<tr>
<td>Recreational meetings (only)</td>
<td>9</td>
<td>2.13/0.94</td>
<td>2.00</td>
</tr>
</tbody>
</table>

Note. The response continuum ranged from 1 = never, 5 = always.

\(^a_n = 151\)
35 years. Only eight respondents (5.5%) indicated that none of their participants were older than 35 years of age. In addition, it was found that the mean number of program participants older than 35 years was 42.66%.

Table 21 reports nine selected instructional methods and the frequency with which vocational agriculture teachers used these instructional methods in their programs. Seven of the nine instructional methods were assigned means above midpoint on the five-point continuum (1 = never and 5 = always). The instructional methods "Instructional meetings (only)" and "Shop/lab experiences (farm mechanics)" were assigned the highest means (3.36 and 3.35 respectively) indicating that these were the most frequently used. The instructional methods "Resource persons (or speakers)" and "Combined instructional and association meetings" were used occasionally (means of 3.22 and 3.00 respectively). "Field days or tours" and "Field trips" were rated just above midpoint indicating that these were also used occasionally (2.58 for respective methods). "Association meetings (only)" and "Recreational meetings only" were rated below midpoint (2.43 and 2.13 respectively) indicating that the respondents rarely used these methods in their programs.

Supplementary Findings Concerning the Selected Teacher Demographic Variables and Whether Respondents Conducted Young/Adult Education Programs

This section reports additional findings regarding the selected demographic variables and whether the sample of vocational agriculture teachers had conducted young/adult
programs. These findings are beyond the objectives initially established for this study.

The chi square test of independence \( (x^2) \) was used to determine significant associations between the teacher demographic variables--level of education, number of teachers in the department, teaching experience, and respondent's age--and whether they had conducted young/adult programs in agriculture. The chi-square test is a measure of the departure of obtained frequencies from the frequencies expected by chance... The larger \( x^2 \) is the greater the obtained frequencies deviate from the expected chance frequencies. The value of \( x^2 \) ranges from 0, which indicates the no departure of obtained from expected frequencies, through a large number of increasing values (Kerlinger, p. 168).

Table 22 presents the cross-classification of respondents' level of education and whether they conducted young/adult education programs in agriculture. A non-significant \( (p > .05) \) chi square value of 5.58 indicated that the obtained results were close to the expected and therefore that the deviation of the obtained results from expectation might easily be a matter of chance.

An examination of Table 23 reveals the cross-classifications of the number of teachers in the vo-ag department and whether the teachers conducted young/adult education programs in agriculture. It was observed that the table frequencies departed significantly \( (p < .05) \) from the expected values and there may have been an association between the number of teachers in the vo-ag department and whether or not teachers conducted programs.
Table 22

Cross-Classification of Respondents' Level of Education and Whether they Conducted Young/Adult Programs

<table>
<thead>
<tr>
<th>Educational Level</th>
<th>Group 1&lt;sup&gt;a&lt;/sup&gt; N</th>
<th>Percent&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Group 2&lt;sup&gt;a&lt;/sup&gt; N</th>
<th>Percent&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>BS</td>
<td>76</td>
<td>44.4</td>
<td>95</td>
<td>55.6</td>
</tr>
<tr>
<td>MS</td>
<td>43</td>
<td>58.1</td>
<td>31</td>
<td>41.9</td>
</tr>
<tr>
<td>MS + 30</td>
<td>25</td>
<td>58.1</td>
<td>18</td>
<td>41.9</td>
</tr>
<tr>
<td>Eds. &amp; Ph.D.</td>
<td>6</td>
<td>60.0</td>
<td>4</td>
<td>40.0</td>
</tr>
</tbody>
</table>

<sup>a</sup>Group I = Teachers with programs (n=150); Group II = Teachers without programs (n=148): <br> <sup>b</sup>percent = Row percentages <br> $x^2 = 5.58 (p > .05)$ <br> DF = 3

Table 23

Cross-Classification of Number of Teachers in Vocational Agriculture Departments and Whether they Conducted Young/Adult Programs

<table>
<thead>
<tr>
<th>No. of Teachers in Vo. Ag. Dept.</th>
<th>Group 1&lt;sup&gt;a&lt;/sup&gt; N</th>
<th>Percent&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Group 2&lt;sup&gt;a&lt;/sup&gt; N</th>
<th>Percent&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>71</td>
<td>42.5</td>
<td>96</td>
<td>57.5</td>
</tr>
<tr>
<td>2</td>
<td>62</td>
<td>63.3</td>
<td>36</td>
<td>36.7</td>
</tr>
<tr>
<td>3</td>
<td>9</td>
<td>39.1</td>
<td>14</td>
<td>60.9</td>
</tr>
<tr>
<td>4</td>
<td>9</td>
<td>81.8</td>
<td>2</td>
<td>18.2</td>
</tr>
</tbody>
</table>

<sup>a</sup>Group I = Teachers with programs (n=151); Group II = Teachers without programs (n=148): <br> <sup>b</sup>percent = Row percentages <br> $x^2 = 16.15 (p < .05)$ <br> DF = 3
Close examination of the analysis revealed that two of the eight cells accounted for a large part of the calculated $x^2$ value of 16.15. The expected frequency for teachers who conducted programs in two-teacher departments was 49.49 when 62 teachers actually had programs (contribution of 3.16 to total $x^2$). The expected frequency for teachers in two-teacher departments who did not conduct programs was 48.51, when 36 actually did not have programs (contribution of 3.23 to total $x^2$).

Cross-classification presented in Table 24 reveals the teachers' years of experience with whether they conducted young/adult programs. A $x^2$ of 17.19 indicated that the obtained results are probably not chance results and that the association between the two variables was significant ($p < .05$). An examination of the cells revealed that four of the sixteen cells contributed to more than half of the calculated chi square value. The expected frequency for teachers with three or less years of experience was found to be 21.21 for teachers with programs and 20.80 for teachers without programs, whereas, the obtained frequencies were 14 and 28 respectively (contribution of 2.45 and 2.49 for respective cells to the total $x^2$). Additionally, 24 teachers with more than 27 years of experience had conducted programs when the expected frequency was 16.67 (contribution of 3.23 to total $x^2$). Nine teachers in the same experience category did not conduct programs when the expected frequency was 16.34 (contribution of 3.30 to total $x^2$).
Table 24

Cross-Classification of Respondents' Years of Experience and Whether they Conducted Young/Adult Education Programs

<table>
<thead>
<tr>
<th>Years of Experience</th>
<th>Group I*</th>
<th></th>
<th>Group II*</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Percent b</td>
<td>N</td>
<td>Percent b</td>
</tr>
<tr>
<td>0-3</td>
<td>14</td>
<td>33.3</td>
<td>28</td>
<td>66.7</td>
</tr>
<tr>
<td>4-7</td>
<td>32</td>
<td>46.4</td>
<td>37</td>
<td>53.6</td>
</tr>
<tr>
<td>8-11</td>
<td>26</td>
<td>59.1</td>
<td>18</td>
<td>40.9</td>
</tr>
<tr>
<td>12-15</td>
<td>18</td>
<td>40.0</td>
<td>27</td>
<td>60.0</td>
</tr>
<tr>
<td>16-19</td>
<td>20</td>
<td>62.5</td>
<td>12</td>
<td>37.5</td>
</tr>
<tr>
<td>20-23</td>
<td>9</td>
<td>47.4</td>
<td>10</td>
<td>52.6</td>
</tr>
<tr>
<td>24-27</td>
<td>8</td>
<td>53.3</td>
<td>7</td>
<td>46.7</td>
</tr>
<tr>
<td>Above 27</td>
<td>24</td>
<td>72.7</td>
<td>9</td>
<td>27.3</td>
</tr>
</tbody>
</table>

*Group I = Teachers with programs (n=151); Group II = Teachers without programs (n=148);
**percent = Row percentages

\[ x^2 = 17.19 \ (p<.05) \]

DF = 3
Table 25 depicts the cross-classification between respondents' age and whether they conducted young/adult programs. A $x^2$ of 7.36 was obtained which is statistically non-significant ($p > .05$). This observation indicated that the obtained results were close to the expected frequencies and there is no evidence of any real association between respondent's age and whether or not they conducted young/adult programs.

Data presented in Table 26 reveals that there were significant differences ($p < .05$) between teachers with programs and teachers without programs regarding the mean number of total college credits earned, undergraduate credits earned, graduate credits earned, and workshops attended. Teachers with programs had earned significantly higher total college credits, undergraduate credits and graduate credits. They had also attended significantly more workshops than their colleagues without programs. Teachers with programs had somewhat more graduate credits than undergraduate credits in adult education courses (means of 5.42 and 4.91 respectively). However, teachers without programs tended to have slightly more undergraduate credits than graduate credits in adult education courses (means of 3.46 and 3.36 respectively).
Table 25

Cross-Classification of Respondents' Ages and Whether they Conducted Young/Adult Programs

<table>
<thead>
<tr>
<th>Respondents' Ages</th>
<th>Group I&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Group II&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Percent</td>
</tr>
<tr>
<td>Below 25</td>
<td>5</td>
<td>31.3</td>
</tr>
<tr>
<td>25-29</td>
<td>34</td>
<td>44.7</td>
</tr>
<tr>
<td>30-34</td>
<td>30</td>
<td>53.6</td>
</tr>
<tr>
<td>35-39</td>
<td>20</td>
<td>44.4</td>
</tr>
<tr>
<td>40-44</td>
<td>15</td>
<td>57.7</td>
</tr>
<tr>
<td>45-49</td>
<td>14</td>
<td>58.3</td>
</tr>
<tr>
<td>50-54</td>
<td>12</td>
<td>60.0</td>
</tr>
<tr>
<td>Above 55</td>
<td>21</td>
<td>58.3</td>
</tr>
</tbody>
</table>

<sup>a</sup>Group I = Teachers with programs (n=151); Group II = Teachers without programs (n=148):  
<sup>b</sup>Percent = Row percentages  
χ² = 7.36 (p>0.05)  
DF = 7
Table 26

Differences Between Group Means for Selected Teacher Demographic Variables

<table>
<thead>
<tr>
<th>Demographic Variables</th>
<th>Group I Mean</th>
<th>Group II Mean</th>
<th>Differences Between Groups</th>
<th>t-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total College Credits</td>
<td>10.33</td>
<td>6.82</td>
<td>3.51</td>
<td>3.03*</td>
</tr>
<tr>
<td></td>
<td>16.68</td>
<td>9.29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Credits</td>
<td>5.42</td>
<td>3.36</td>
<td>2.06</td>
<td>2.65*</td>
</tr>
<tr>
<td></td>
<td>7.08</td>
<td>6.32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergraduate Credits</td>
<td>4.91</td>
<td>3.46</td>
<td>1.45</td>
<td>2.04*</td>
</tr>
<tr>
<td></td>
<td>6.49</td>
<td>5.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workshops Attended</td>
<td>3.80</td>
<td>2.03</td>
<td>1.77</td>
<td>3.92*</td>
</tr>
<tr>
<td></td>
<td>4.36</td>
<td>3.36</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Group 1 = Teachers with programs (n=151); Group II = Teachers without programs (n=148).

*p<.05
CHAPTER V

Summary, Conclusions, Implications and Recommendations

This study was designed to determine vocational agriculture teachers' perceptions of their roles and responsibilities, and the perceived importance of selected program related factors for young/adult education programs in agriculture. It was also the intent of the study to identify some characteristics of young/adult education programs in agriculture in the Southern states.

The population for the study was vocational agriculture teachers in the 13 states representing the Southern Region of the American Association of Teachers Educators in Agriculture (A.A.T.E.A.). Four states (Georgia, Louisiana, Oklahoma, and Virginia) were randomly selected from the list of 13 states in the region. A proportional stratified random sample of 361 vocational agriculture teachers was drawn from these four states. A four-part questionnaire was developed to record responses. An 82.8% usable return rate was attained after four follow-up procedures which included an intensive follow-up of non-respondents. Teachers recorded their responses to the 44 statements on an 11-point continuum which was transformed to a 0 to 16 certainty scale for data analysis.

The Statistical Package for the Social Sciences (SPSS) was utilized in conducting data analyses. The data were analyzed to:
1. Determine vocational agriculture teachers' perceptions of their roles and responsibilities for young/adult education programs.

2. Determine vocational agriculture teachers' perceptions of the importance of selected program related factors for young/adult programs.

3. Identify significant differences in perceptions between vocational agriculture teachers with young/adult programs and vocational agriculture teachers without young/adult programs regarding their roles and responsibilities for these programs.

4. Identify significant differences between teachers with young/adult programs and teachers without young/adult programs regarding their perceptions of the importance of selected program related factors for these programs.

5. Determine the influence of selected (teacher) demographic variables on vocational agriculture teacher's perceptions of their roles and responsibilities for young/adult programs.

6. Determine the influence of selected demographic variables on vocational agriculture teacher's perceptions of the importance of selected young/adult program related factors.

7. Identify characteristics of young/adult education programs in agriculture in the South.

**Summary of Findings**

The major findings from this study are reported in this
section. Demographic data regarding the population of vocational agriculture teachers are summarized as follows:

1. The majority of vocational agriculture teachers (57.4) were holders of baccalaureate degrees only, while 24% had Masters degrees.

2. Most vocational agriculture teachers (55.8%) worked in one-teacher departments, while 32.8% of the vocational agriculture teachers served in two-teacher departments.

3. The largest group (23.1%) of the vocational teachers had from four to seven years of teaching experience. It was noted that 14.0% had three or less years experience, and 11.0% had 27 or more years of teaching experience.

4. Nearly half (49.7%) of the vocational agriculture teachers in the South were younger than 35 years of age. In addition, 11.7% were 55 years or older and 5.4% were younger than 25 years old.

5. Vocational agriculture teachers completed an average of 8.59 semester hours of college credit in adult education courses. The average number of graduate credit hours (4.40) in adult education courses was slightly higher than the average number of undergraduate credit hours (4.19) in adult education courses. However, 30.1% of the teachers had no courses in adult education.

6. Vocational agriculture teachers, on the average, had attended 2.93 inservice workshops in adult education.
In addition, 35.8% had never participated in any inservice workshops in adult education.

7. More than half (50.7%) of the vocational agriculture teachers in the South had conducted young/adult education programs. Only two respondents had not conducted young/adult programs but had served as guest speakers/resource persons to such programs since July, 1981.

The findings pertaining to vocational agriculture teachers' perceptions are summarized as follows;

1. Vocational agriculture teachers rated all of the 16 items representing "Perceived Roles and Responsibilities" above midpoint on the 0 to 16 certainty scale. The three items with the highest means were:
   a. Providing and organizing instructional facilities for young/adult classes (11.18).
   b. Soliciting resource personnel (10.93).
   c. Providing instruction in agricultural mechanics (10.69).

The three "Perceived Roles and Responsibilities" items rated lowest were:
   a. Budgeting for and financing all young/adult education programs (8.11).
   b. Developing printed informative materials for young/adult farmers (8.64).
   c. Organizing demonstration plots as teaching aids to young/adult programs (8.89).
2. Vocational agriculture teachers rated 22 of the 28 "Program Factors" items above midpoint on the 0 to 16 certainty scale. The three items with the highest means were:

   a. Using vocational agriculture shop facilities to instruct farmers in agricultural mechanics (12.22).
   b. Improving rapport between the school and the community through young/adult activities (11.88)
   c. Publicizing young/adult programs to make school administrators more aware of the total vocational education programs (11.85).

The three items rated lowest were:

   a. Soliciting donations as the primary source of financing young/adult programs (6.21).
   b. Using vocational agriculture budgets for financing young/adult programs (6.23).
   c. Assigning primary responsibilities for establishing young/adult programs to extension education personnel (6.67).

3. Vocational agriculture teachers with young/adult programs rated all 16 "Roles and Responsibilities" items somewhat higher than vocational agriculture teachers without programs. In addition, significant differences (p < .05) were observed for 13 of these items.
The items with the largest differences between group means were:

a. Providing and organizing instructional facilities for young/adult classes (difference of 1.81).
b. Conducting follow-up visits to young/adult program participants (difference of 1.68).
c. Coordinating all young/adult programs in the school district (difference of 1.53).

4. Vocational agriculture teachers with young/adult programs in agriculture rated 21 of the 28 "Program Factors" items higher than vocational agriculture teachers without young/adult programs in agriculture. Conversely, the latter group rated seven items higher than the former. Significant differences ($p < .05$) in the group means were observed for 14 items. Teachers with programs rated 12 items significantly higher ($p < .05$) than teachers without programs. Conversely, the latter group rated only two items significantly higher than the former.

The largest differences between group means for teachers with programs (higher means) and teachers without programs were observed for the items:

a. Assigning primary responsibilities for establishing young/adult programs to vocational agriculture teachers (difference of 2.44).
b. Integrating young/adult education into the total vocational agriculture program (difference of 2.09).

c. Improving rapport between the school and the community through young/adult activities (difference of 1.54).

The two items which teachers without programs rated significantly higher than their colleagues with programs were:

a. Assigning primary responsibilities for establishing young/adult programs to extension education personnel (difference of 1.81).

b. Dividing young and adult farmers into separate groups depending on their educational needs (difference of 0.95).

5. Significant differences (p<.05) on some "Perceived Roles and Responsibilities" items were observed among levels by the selected demographic variables. Those demographic variables investigated were respondent's level of education, number of teachers in the vo-ag department, teaching experience, and respondent's age.

Only two "Perceived Roles and Responsibilities" items were found to be significantly different by categories of the respondent's level of education. However, Tukey's test failed to detect a significantly different pair of means for either of the two items.
Significant differences on two items were observed among group means by number of teachers in the vo-ag department. However, the only item with a significantly different pair of group means revealed by Tukey's test was "Soliciting resource personnel". Teachers in two-teacher departments rated this item significantly higher than teachers in one-teacher departments.

Significant differences among category means by teaching experience were observed for the following five items:

a. Planning and organizing young/adult educational programs.
b. Organizing advisory committees.
c. Coordinating all young/adult programs in the school district.
d. Conducting follow-up visits to young/adult program participants.
e. Surveying community needs to develop curriculum for young/adult programs.

Follow-up tests revealed that where pairs of groups were found to be different, the more experienced teachers rated the items higher.

Tukey's test detected significant differences among category means by respondent's age for the following items:

a. Developing printed informative materials for young/adult farmers.
b. Surveying community needs to develop curriculum for young/adult program participants.

c. Organizing advisory committees.

Where differences occurred, the older teachers rated the three items higher than younger teachers.

Weak but significant positive associations existed between "Total College Credits," "Undergraduate Credits," "Graduate Credits," and "In-service Workshops" and some of the 16 items representing "Perceived Roles and Responsibilities". No negative correlation coefficients were observed for any of the aforementioned demographic variables with the dependent variables.

Those items which had significant but weak associations with all of the aforementioned demographic variables were:

a. Coordinating all young/adult programs in the school district.

b. Conducting follow-up visits to young/adult program participants.

c. Organizing advisory committees.

d. Budgeting for and financing all young/adult educational activities.

e. Providing instruction in production agriculture.

f. Supervising demonstration plots for young/adult programs.
6. Significant differences ($p < .05$) on some "Program Factors" items were observed among categories by the selected demographic variables. These variables of interest were respondent's level of education, number of teachers in vo-ag departments, teaching experience, and respondent's age.

Tukey's test detected significant differences among category means for two items by categories of respondent's level of education and for five items among categories means by number of teachers in vo-ag departments.

Significant differences ($p < .05$) on 13 of the 28 "Program Factors" items were observed among categories by teaching experience.

The Tukey test detected significant differences among group means for several items including the following:

a. Using vocational agriculture budgets for financing young/adult programs.

b. Using young/adult programs to identify the problems of the farm and farm managers.

c. Providing systematic instruction in a variety of subjects.

d. Assigning primary responsibilities for establishing young/adult programs to vocational agriculture teachers.

e. Integrating young/adult education into the total vocational agriculture program.

All of the above items were rated higher by the more
experienced teachers than by the lesser experienced teachers. However, the item "Assigning primary responsibilities for establishing young/adult programs to extension education personnel" was the only item rated higher by the less experienced teachers than by the teachers in the most experienced group.

Significant differences ($p<.05$) on three "Program Factors" items were observed among categories by respondent's age.

The items with significantly different means were:

a. Using vocational agriculture budgets for financing young/adult educational activities.

b. Using young/adult programs to identify the problems of the farm and farm managers.

c. Integrating young/adult education into the total vocational agriculture programs.

Where differences occurred, all of the above items were assigned significantly higher mean scores by teachers in the older age groups than by teachers in the younger age groups. In addition, the item "Assigning primary responsibilities for establishing young/adult programs to extension education personnel" was the only one assigned greater means by teachers in the younger age groups than by teachers in the oldest age group.
No meaningful relationships existed for any of the selected demographic variables (Total College Credits, Undergraduate Credits, Graduate Credits, and In-service Workshops) with any of the 28 items representing "Program Factors". Several significantly positive relationships (p < .05) were observed but all of these were in the weak or negligible relationship ranges. Only one item with a negative r value was found to be significant at the .05 level.

Those items which had significant but weak positive associations with all of the above demographic variables were:

a. Assigning primary responsibilities for establishing young/adult programs to vocational agriculture teachers.

b. Using advisory committees for evaluating young/adult programs.

c. Integrating young/adult education into the total vocational agriculture program.

d. Using vocational agriculture budgets for financing young/adult programs.

e. Placing emphasis on young/adult programs during the summer months.

f. Organizing classes for systematic instruction.

g. Drawing advisory committee candidates from young/adult classes.
h. Using feedback from the young/adult program to improve the total vocational agriculture program.

The only item which had a significant but negative association with any of the demographic variables was "Assigning primary responsibilities for establishing young/adult programs to extension education personnel".

No substantial association was observed for any of the demographic variables correlated with "Program Factor" items. However, the demographic variable "Total College Credits" had significant associations with the largest number (16) of "Program Factors" items, whereas, "Inservice Workshops" had significant associations with 15 of the 28 "Program Factors" items. "Graduate Credits" had significant correlations with 14 items followed by "Undergraduate Credits" which was significantly correlated with 12 items.

8. Findings pertaining to the characteristics of young/adult education programs conducted in the South since July, 1981 are summarized as follows:

a. Of the 151 vocational agriculture teachers who have conducted programs, 90.1% had 10 or more participants enrolled in classes, 83.4% conducted eight or more instructional meetings, and 75.5% carried out on-the-farm instructional visits.
b. On the average, vocational agriculture teachers with young/adult programs devoted 14.4% of their total work time to young/adult programs.

c. Teachers had conducted, on the average, 11 young/adult education programs between July, 1981 and April, 1983.

d. The majority (57.4%) of the participants of young/adult programs were young farmers/agribusiness persons (i.e. below 35 years of age).

e. Shop/lab experiences (farm mechanics) and instructional meetings were the most frequently used instructional techniques in young/adult programs.

9. Respondents' age and level of education was independent of whether they conducted young/adult programs. However, both teachers in multiple teacher departments and teachers with more years of teaching experience were more likely to have young/adult programs than teachers in single teacher departments and those with less years of experience. Additionally, teachers who conducted programs had significantly more college credits and attended more workshops in adult education than teachers who did not conduct programs.
Conclusions

Based on the findings of the study, the following conclusions regarding vocational agriculture teachers' involvement in young/adult programs were drawn:

1. Teachers, in general, perceived that vocational agriculture should have some responsibility for young/adult education programs in agriculture; however, only about 50% indicated that they actually conducted programs.

2. As teachers earn more college credits or participate in inservice workshops on adult education, their perceptions of their roles, and the importance attached to young/adult education programs, increases slightly. In addition, graduate courses and in-service workshops on adult education may have a slightly stronger association with teachers' increased involvement in and support for young/adult programs than undergraduate courses.

3. The majority of teachers who conducted programs were found in multiple teacher departments and had more years of teaching experience than teachers without programs.

Implications of the Study

This study, although not designed to establish cause and effect relationships regarding the occurrence or non-occurrence of young/adult programs in agriculture, identified some differences in perceptions between teachers
who had programs and teachers who did not have programs. Many findings of this study may be aligned to findings of similar studies that were reported in the literature.

The finding that vocational agriculture teachers felt some or considerable responsibility for providing instruction to young/adult programs was congruent with the findings of an Iowa study. In the latter study, Sleight (1978) reported that vocational agriculture had above average responsibility to adult instruction. Therefore, it should be of interest to state supervisors and teacher educators that, generally, teachers considered themselves as being some to considerably responsible for instruction in young/adult education programs in agriculture, a level much below that common expected.

The conclusion was reached that teachers, whether or not they conducted programs, felt some responsibility for and considered as important, most aspects of young/adult education programs. Price (1955) found also that teachers with or without programs were favorably inclined towards such programs and acknowledged that the maintenance of such programs was a major responsibility of vocational agriculture. These findings may be of interest to area directors of adult programs and state supervisors of vocational agriculture, especially from those states which require teachers to conduct adult programs.

There was general agreement in the literature about the benefits and advantages accrued to the community, the total
vocational agriculture program, and the participants of the young/adult programs. The findings that comparatively high ranks were assigned to all items describing some benefits accrued from conducting programs many indicate that the sample of teachers also perceived these benefits as being of substantial or of great importance.

The finding that teachers considered systematic instruction as being of great importance to successful programs was congruent with the findings of an Iowa study. Sleight (1978) found that the responsibility of providing systematic instruction was an above average one. Systematic instruction was reported in many literature sources (Brown and Starling, 1968; Wolfe, 1970; and Phipps, 1980) as a necessary component for young/adult programs. Phipps (1980) identified systematic instruction as the most distinguishing factor between extension education and vocational adult education. These findings may be useful to school administrators and area supervisors of adult education in establishing standards for conducting or evaluating young/adult education programs in their school districts.

The indication that teachers without programs were somewhat less positive in their perceptions of their responsibilities and the program factors related to young/adult programs implies a relationship of their perceptions of these programs with whether or not they conducted programs. In a similar study Price (1955) found that administrators of schools without young/adult programs
held less positive opinions of these programs than administrators of schools with programs. This implication may be of value to teacher educators who are placing student-teaching interns, and consequently, may prefer to have their student teachers develop a more positive perception of young/adult programs in agriculture.

The finding that the more experienced teachers felt greater responsibility for some activities, assigned greater importance to some program factors, and in addition, conducted more programs than their less experienced colleagues may suggest some influence of years of experience on some aspects of young/adult programs. However, Price (1955) found that years of experience (and some other teacher demographic variables) had no association with the occurrence of young/adult farmer programs. These findings suggest that the association of years of experience and the occurrence of young/adult education programs should be further investigated.

The trend of a slightly positive relationship of college credit hours (graduate and undergraduate) and inservice workshops in adult education with teachers' perceptions of their responsibilities for and the importance of some aspects of young/adult programs should be of interest to teachereducators and state supervisors in those states which require teachers to conduct programs. A knowledge of a positive association of college credits in adult education with both positive perceptions and with
greater occurrences of programs may help to justify the inclusion of adult education courses in preservice and in-service teacher education programs in agriculture. Again, the Price study found sufficient evidence to justify increased effort on the part of teacher educators and state supervisors in planning for graduate study or additional workshops in young/adult education. Price reported that graduate study in young/adult education may function to the extent of encouraging teachers to implement young/adult programs.

**Recommendations for Further Research**

These include:

1. A study to determine the cost and benefits of young/adult education programs to the community and the total vocational agriculture program.

2. A causal study of teachers with young/adult programs and teachers without young/adult programs should be conducted to identify variables which can be associated with the occurrence of effective young/adult programs in agriculture.

3. Increased efforts towards developing a theoretical base, probably drawing from the behavioral sciences, should be made to guide future studies in vocational education.
References


Kotrlik, J., & Felter, C. (1981). The effective use of adult programs, occupational experience programs, and advisory committees in high school vocational agriculture agribusiness programs. School of Vocational Education College of Agriculture, Louisiana State University, 103, 106.


February 9, 1983

Ralph R. Dreessen,
State Sup. and FFA Advisor
Oklahoma Vocational Agriculture Department
Stillwater, Oklahoma 74074

Dear Sir:

I have recently undertaken a research project which has as its primary purpose to record the Vocational Agricultural Instructors' Perceptions of Selected Educationally Related Factors Concerning Young/Adult Farmer Programs in Southern States. As such, this letter is written to seek your assistance in surveying vocational agriculture teachers in your state.

Would you please furnish me with a directory of the names and official mailing addresses (including tele. no. if possible) of Vocational Agricultural teachers currently employed (1982/83) in your state. From this list, a sample of teachers will be randomly selected for the study.

Further, if you have no objections to the use of your name on the cover letter (to be attached to the questionnaire) please place your signature in the space provided and return this cover letter and all other materials in the enclosed stamped self-addressed envelope.

In appreciation of your cooperation and prompt attention to this matter, I will furnish you with a summary of the findings at the completion of the study.

Thanks in anticipation of your cooperation and prompt attention to the above requests.

Douglas Haynes, Project Director
Louisiana State University

Mike Burnett, Asst. Prof.
Louisiana State University
Tele. (504) 388-5748

J. C. Simmons, Section Chief
Louisiana State Dept. of Education
Tele. (504) 342-3435

*An identical letter was sent to the respective state supervisors for vocational agriculture in Georgia, Oklahoma, and Virginia.
APPENDIX B

This instrument is divided into Schedule A and Schedule B. Each schedule is further divided into Sections I and II. Please respond to all sections as directed. Only instructors who have conducted young/adult programs since July 1981 should respond to Section II, Schedule A.

SCHEDULE A
SECTION I. GENERAL INFORMATION
Fill in the blank or place a check ( ) in the appropriate set of brackets to describe your present situation.

1) Your highest level of education?
   ( ) B.S.
   ( ) M.S.
   ( ) M.S. plus 30 or more semester hours
   ( ) Ed. S.
   ( ) Doctorate
   Other (please specify)____________________

2. The number of teachers in your Vocational Agriculture department.
   ( ) One person
   ( ) Two persons
   ( ) Three persons
   ( ) Four persons
   ( ) Other, please specify____________________

3. Years of teaching experience.
   ( ) 0-3 ( ) 16-19
   ( ) 4-7 ( ) 20-23
   ( ) 8-11 ( ) 24-27
   ( ) 12-15 ( ) 28 and above

4. Age at last birthday.
   ( ) Under 25 ( ) 40-44
   ( ) 25-29 ( ) 45-49
   ( ) 30-34 ( ) 50-54
   ( ) 35-39 ( ) 55 and above

5. How many college credit hours in adult education* do you have?
   Undergraduate level_________ Graduate level_________

6. How many in-service workshops on adult education have you attended?

7. Do you presently have a young/adult program?

8. If you do not currently have a young/adult program have you been invited as a guest speaker/resource person for young/adult program related activities since July 1981?
   If so please describe activity/activities____________________

SECTION II. YOUNG/ADULT FARMER PROGRAMS
Complete this section ONLY if you are currently conducting a young/adult farmer education program, or have conducted such a program since July 1981. IF NOT, PROCEED TO SCHEDULE B.

1. Please indicate whether the young/adult farmer program you conducted or your current program meets the following criteria.

   Check

   a. Enrollment of 10 or more participants above 18 years of age.____________________

   b. Eight or more systematic instructional meetings.____________________

   c. On the farm instructional visits.____________________

2. About what percent of your total work time each month is spent with young/adult farmer work?____________________

*Adult education in agriculture is operationally defined as all activities with an educational purpose involving the use of systematic instruction designed for persons 18 years and above who are involved in production agriculture and/or agribusiness on full or part-time basis.
3. How many young/adult farmer programs have you conducted/coordinated since July, 1981? ____________

4. Approximately what percent of your young/adult farmer participants are over 35 years of age? ____________

5. Please circle the number in the column on the right which best describes the frequency with which you use each instructional technique.

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<th>Instructional Meetings (only)</th>
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<th>Combined Instructional and Association Meetings</th>
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<th>Farm Mechanics Session (work shop activities)</th>
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<th>Social and Recreational Activities as a part of the meetings</th>
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| Other, please specify | Occasionally | Often | Always |

SCHEDULE B

SECTION I. Responsibilities of Vocational Agriculture for selected young/adult educationally related activities.

This section solicits YOUR OPINION regarding the responsibilities of Vocational Agriculture for selected educationally related factors associated with young/adult farmer programs. After you have read each statement carefully, please respond using the scale below each statement and circle the number that best describes your opinion.

To what extent should vocational agriculture be responsible for the following young/adult farmer educationally related activities.

1. Budgeting for and financing all young/adult educational activities.

2. Coordinating all young/adult farmer educational programs in your school district.

3. Developing printed informative material for distribution to young/adult farmers.

4. Surveying the needs of the community in order to develop agricultural education curriculum for adults.

5. Soliciting resource personnel to instruct adult farmers in specialized subject areas.

6. Organizing and conducting demonstration plots as teaching aids to the young/adult farmer program.
16. Utilizing advisory committees in evaluating young/adult farmer programs.

1 2 3 4 5 6 7 8 9 10 11
Of Little Importance Of Some Importance Of Great Importance

17. Drawing advisory committee candidates from young/adult farmer classes.

1 2 3 4 5 6 7 8 9 10 11
Of Little Importance Of Some Importance Of Great Importance

18. Soliciting donations and contributions as the primary source of finance for young/adult farmer activities.

1 2 3 4 5 6 7 8 9 10 11
Of Little Importance Of Some Importance Of Great Importance

19. Integrating young/adult farmer education programs into the total vocational agriculture program of schools.

1 2 3 4 5 6 7 8 9 10 11
Of Little Importance Of Some Importance Of Great Importance

20. Publicizing young/adult farmer programs to make school administrators or school board members more aware of the total vocational education program.

1 2 3 4 5 6 7 8 9 10 11
Of Little Importance Of Some Importance Of Great Importance

21. Requiring young/adult farmer program participants to pay for materials only.

1 2 3 4 5 6 7 8 9 10 11
Of Little Importance Of Some Importance Of Great Importance

22. Developing specific programs to serve the needs of the small farm community. (Small farmers are those with annual farm sales income below $20,000 per year).

1 2 3 4 5 6 7 8 9 10 11
Of Little Importance Of Some Importance Of Great Importance

23. Surveying the small farm community to help in determining their educational needs.

1 2 3 4 5 6 7 8 9 10 11
Of Little Importance Of Some Importance Of Great Importance

24. Dividing young and adult farmers into separate groups depending on their educational needs.

1 2 3 4 5 6 7 8 9 10 11
Of Little Importance Of Some Importance Of Great Importance

25. Providing incentives (fertilizers, samples, etc.) to young/adult farmers for participating in educational programs in agriculture.

1 2 3 4 5 6 7 8 9 10 11
Of Little Importance Of Some Importance Of Great Importance

26. Delimiting adult education programs to intensive short courses (max. 3 days).

1 2 3 4 5 6 7 8 9 10 11
Of Little Importance Of Some Importance Of Great Importance

27. Assigning primary responsibility for establishing young/adult farmer education programs to agricultural extension personnel.

1 2 3 4 5 6 7 8 9 10 11
Of Little Importance Of Some Importance Of Great Importance

28. Developing specific programs to serve employees from agribusinesses, and agricultural corporations.

1 2 3 4 5 6 7 8 9 10 11
Of Little Importance Of Some Importance Of Great Importance
3. Employing an adult director to coordinate and supervise all adult education programs.

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4. Improving the total vocational agricultural program by utilizing feedback derived from the young/adult farmer education program.

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5. Conducting young/adult farmer educational programs with vocational agricultural instructors serving only as resource personnel.

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6. Encouraging participants of young/adult education programs to volunteer the services of machinery and equipment for use on demonstration plots.

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7. Improving rapport between the school and the community through adult/young farmer educational program.

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8. Funding young/adult farmer education programs through the payment of a tuition fee by participants.

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9. Using vocational agricultural budgets as the principal source of financing young/adult farmer activities.

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10. Using young/adult farmer programs to identify and/or acquire first hand knowledge of the problems of farmers and farm managers.

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11. Using vocational agriculture shop facilities to instruct farmers in agriculture mechanics (e.g. welding).

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12. Providing systematic instructions in a variety of subjects.

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13. Surveying agribusinessmen to help determine the educational needs of young/adult farmers.

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14. Placing emphasis on young/adult farmer programs during the summer months.

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15. Assigning primary responsibility for establishing young/adult farmer education programs to vocational agriculture instructors.

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7. Planning and organizing young adult farmer educational programs.

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   To a little extent To some extent To a large extent

8. Providing instruction in Agricultural mechanics (welding, diesel mechanics, farm electricity, etc.).

   1 2 3 4 5 6 7 8 9 10 11
   To a little extent To some extent To a large extent


   1 2 3 4 5 6 7 8 9 10 11
   To a little extent To some extent To a large extent

10. Providing and organizing for instructional facilities (classroom and building) for young/adult farmer classes.

    1 2 3 4 5 6 7 8 9 10 11
    To a little extent To some extent To a large extent

11. Organizing advisory committees from among the agribusiness and industrial community.

    1 2 3 4 5 6 7 8 9 10 11
    To a little extent To some extent To a large extent

12. Supervising field demonstration plots to illustrate the value of recommended practices to young/adult program participants.

    1 2 3 4 5 6 7 8 9 10 11
    To a little extent To some extent To a large extent

13. Conducting short courses on the availability and procurement of financial assistance specifically for small farm operators.

    1 2 3 4 5 6 7 8 9 10 11
    To a little extent To some extent To a large extent

14. Providing instruction in production (crop and livestock) agriculture.

    1 2 3 4 5 6 7 8 9 10 11
    To a little extent To some extent To a large extent

15. Providing instruction in farm management (farm record keeping, etc.).

    1 2 3 4 5 6 7 8 9 10 11
    To a little extent To some extent To a large extent

16. Conducting follow-up visits to members of young/adult farmer programs.

    1 2 3 4 5 6 7 8 9 10 11
    To a little extent To some extent To a large extent

SECTION II:

This set of statements is designed to solicit YOUR OPINION of the importance of selected young/adult farmer educational activities in the attainment of a successful program. When responding use the scale below each statement to circle the number that best describes your opinion.

To what extent do you consider the following activities important to the success of young/adult farmer educational programs?

1. Providing recreational and social activities for participants of young/adult farmers.

    1 2 3 4 5 6 7 8 9 10 11
    Of Little Importance Of Some Importance Of Great Importance

2. Organizing classes for systematic instruction in specific subject areas.

    1 2 3 4 5 6 7 8 9 10 11
    Of Little Importance Of Some Importance Of Great Importance
ADULT FARMER EDUCATION PROGRAMS IN THE SOUTH

We are seeking your help and advice on identifying the roles and responsibilities of vocational agriculture programs for young/adult farmer education in the South. As such, the enclosed questionnaire seeks your opinions of the importance of young/adult farmer programs and the factors which contribute to an effective and meaningful program.

We are convinced that whether you have conducted a young/adult farmer education program or not, your opinions will be of significant value in our efforts to improve the quality of these programs.

The enclosed questionnaire is sent to you and 400 other vocational agriculture teachers in Louisiana, Oklahoma, Virginia and Georgia. Your responses will be held in strictest confidence and will be combined with other responses and reported only in summary form.

Would you please take twenty minutes of your time to complete the enclosed questionnaire and return it in the enclosed self-addressed stamped envelope before April 20, 1983.

Your help is greatly appreciated.

Douglas M. Haynes
Douglas Haynes, Project Director
Louisiana State University
Baton Rouge, Louisiana

Mike Burnett
Mike Burnett, Asst. Prof.
Louisiana State University
Baton Rouge, Louisiana

J. C. Simmons
J. C. Simmons, Section Chief
Voc. Agriculture, Agribusiness/FFA
Louisiana State Department of Education
Baton Rouge, Louisiana

*An identical letter bearing the signatures of the researcher, the chairman of the doctoral committee, and the respective state supervisor for vocational agriculture education in each of the four states, was mailed to participants in Georgia, Louisiana, Oklahoma, and Virginia.
Recently an instrument seeking your opinions about Adult Farmer Programs in the South was mailed to you. We have not yet received your response. Your opinions are valuable and essential to the success of this study. Therefore, please spare some of your time to respond to and return the instrument.

If you have already returned the survey, please accept this note as our appreciation for your assistance and interest in improving the total Vo-Ag Program.

Sincerely,

Douglas M. Haynes

Michael F. Burnett
Dear

Several weeks ago, a survey instrument soliciting your opinions of Adult/Young Adult Agricultural Education programs in the South was mailed to you. To this date, we have not received your response. We have enclosed another questionnaire for your use if necessary.

You were randomly selected from the Vocational Agriculture teachers in your state to participate in this study. Your opinions are essential to the success of this project. Therefore, if you have not already done so, please take some time today to complete the questionnaire and return it as soon as possible in the envelope provided.

If you have already forwarded your responses please accept this letter as an expression of our appreciation for your assistance and interest in this project.

Yours sincerely,

Douglas Haynes
Project Director

Michael F. Burnett
Assistant Professor
Dear

We are currently trying to complete our study of Young Adult Agricultural Education Programs in the South. To this date we have not received your response. We realize this is a busy time of the year since you are presently completing this semester's reports and preparing for your summer programs. It is our hope that you will recognize the importance of completing this questionnaire since your input is vital to the success of this study.

Thank you for your interest in Young/Adult Agricultural Education Programs. If you have any questions please call me at (504) 388-5748.

Sincerely,

Douglas Hayes
Michael Burnett

Douglas Haynes
Michael Burnett
Dear

In reference to our telephone conversation regarding the study of Young/Adult Agricultural Education Programs in the South, we have enclosed another questionnaire for your use. We are about to conclude this study and as such, wish that you will be expedient in completing and returning the questionnaire in the self-addressed, stamped envelope.

Once again, thank you for your cooperation in assisting us to bring this study to a successful end.

Sincerely,

Douglas Haynes
Project Director

Michael F. Burnett
Assistant Professor

Enclosure
APPENDIX H

Comments

The following comments are arranged by state and recorded in the exact manner as the respondents made them on the questionnaire.

Louisiana

I feel the job of educating adult farmers is best left to the extension service.

It is hoped that this study may lead to agriculture being separated from all other vocational programs and the funds dispersed or disbursed per the Vo. Ag. program in accordance with the Voc. Act which stipulates funds for specific purposes from federal to individual school systems. Today some of the funding gets channeled into other programs which is not fair to Voc. Ag.

Thank you. It was a pleasure.

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Arkansas

Arkansas does a great job with their adult program. It is set up on a 20 hour and 20 hour program. The Vo. Ag. teacher obtains the instructor or does the work himself.

The instructor is paid from state funds whether it be the regular Vo. Ag. instructor or an approved person that teaches the course.

All courses are submitted three months in advance of the course and must be approved and funded by State
Supervisor of Vo. Agric. Education. A minimum is also assigned to keep class members up.

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I believe that in the total Voc. Ag. program there is a great need for young adult farmer classes. However, I think in one-teacher departments, especially, that teacher responsibility is his/her classroom (all day) students. Time allotment in most cases dictate there is not enough hours in a day to take care of all day students, as it is.

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The adult Ed. program in agriculture is one of the best public relations we have, and it should be taken more seriously insofar as funding, availability of materials, etc. is concerned. Instructor pay should be raised.

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Even though I do not presently have an adult education because of a lack of interest, I do think it is an important program for a community where it can be used.

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I feel that the State Department of Education should focus more attention to educating those still in high school.

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Oklahoma

I believe a good vocational agriculture instructor should give maximum attention and effort to his or her student. I believe in involving parents and other adults
in our program through a strong alumni organization. There is no question that adult education is important, but should not be the responsibility of Vo. Ag. departments in local high school. To me this could best be done through our Vo. Tech school extension personnel, colleges and, universities.

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The Vo. Ag. instructor lives in the community and is in daily contact with many of the sons and daughters of the adult member and is aware of many of the problems that extension personnel would not. The instructor and the adult can have a closed working relationship because of the situation.

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Our young farmer program consists of 55 members young and adult farmers and their wives. Our programs are set up yearly by our program committee which consists of six members and myself. We survey the group to determine the programs most desired and needed, and base our programs on needs and desires. The program committee contact resource personnel and set up meetings for 12 months of the year. We find this to be very successful.

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I feel that the name young farmers hurt their program. All farmers program. What young got to do with farming.

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Filled this out. Fits here mostly - we have a good young farmer program, my opinion would be, If you get too fancy with details you will lose your members. They come voluntarily and are mostly young people making all their living from farming. They enjoy being members of the Oklahoma Young Farmers, but if I started shoving a lot of paperwork and formal stuff at them we wouldn't last long. The way we have it set up, seems to bring them in. I enjoy working with them. There is quite a difference in the individual between 18 to 24 years of age. I believe the program should be organized for young farmers and supported and run by those same people. The Agri. teacher has enough to do without having to be responsible for finding speakers, resource personnel, and making arrangements for young farmer programs.

There is an ongoing need to be aware of needs of patrons. Varied and diverse programs cause us to use young farmer to work as a nucleus for bringing in most needed programs. Most programs are held in fall, winter and spring.

Georgia

Due to the efforts and the efficiency, our young farmer teacher, my work in the are is more limited now because of the workload and vocational agriculture
students in high school.

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Young adult farmer education program need to be re-structured. The computer age is upon us.

Informational meetings short courses rather than classes may attract more young farmers. A different approach should be tried. Farm management, records and marketing should be emphasized more and more. Surveys are good, advisory groups are also, but new approaches, incentives, and more public relation is a must for the remainder of the 80's and beyond. More audiovisuals, well trained lecturers, speakers, on-site preparations, and demonstrations could be utilized. Many times the right people are just not enrolled in adult program. Extension and agriculture could work together on some programs. Extension service has more audiovisuals, resource personnel, etc., than most Vo. Ag. Dept. Financing is often a problem also young farmer teachers are helpful in some areas.

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Since re-entering Vo. Ag. program I have done little in adult education. Before I had a very strong adult program which met regularly. They paid $12 a year dues. During June, July and August no meetings were held. To finance the program they raised money by sponsoring fish suppers, bar-b-q's, etc.

I think a good adult program is fine, if it doesn't
require too much of the regular teacher's time. Most of his time should be devoted to his students.

There are two other ag teachers in my county. We work closely together on our adult programs and help each other a lot. We also use the area adult teacher in our district as much as possible. Due to the cooperation from the other teachers the adult program has grown very strong in just the past year.

The first year I taught in Forsyth. Co. The largest number of adults attending one of my classes were 15. This year the largest number was 35, this is partially due to the great job done by the area adult teachers.

Virginia

Young adult program are great, but only when there is money budgeted for this purpose and not having to take 6 years away from the high school.

I am a firm believer that the young adult farmer program should be strictly designed to meet the needs of the group as opposed to the needs of the community. They should not be expected to compete in contest, as they do have a farm or business to run. This is their organization and what is necessary for them is what should be done.
Y. F. runs in coordination with VPI extension service county agent. The extension service in coordination with chemical companies putting on most of the programs.

The adult education program needs to be run by the people who have adequate time and facilities, and financial compensation to do the job right. Agri teachers including myself do not have those three at this time.

We support our young farmer with fund raising activities (Tractor Pull).

Social activities such as picnics help unite your total group including the family. On farm visitation is very important. Getting your senior Agri. students interested in the young farmer before they graduate can really help membership.

Young Farmer Contest and aware are fairly important.

Young farmers will participate and attend more meetings if they are involved in the planning, the subject relates to them and they get some return from the time they have invested. The young farmers know themselves where their weak points and interests lie. They can do a good job of developing a program of work.

Vocational agricultural instructors are trained teachers, whereas, most extension agents are not. For this and numerous other reasons, I feel that the Ag.
teacher should continue to supervise young farmer programs.

As far as feedback is concerned the best way to obtain it is through home visits. They are an important part of any vocational agriculture program.

In the case of young farmers, they are most needed during the summer months when attending classes would prove to be a hardship with all the other work they have during that time.
Vita

Douglas Malcolm Haynes, son of Doris Haynes and the late Claude E. Haynes, was born on October 7, 1949 in Georgetown Guyana, South America. After completing high school, he enrolled in the Guyana School of Agriculture and completed a two-year Diploma in agriculture program in 1970.

In September of 1970 he was employed by the Extension Division of the Ministry of Agriculture, where he held several rural assignments over a six-year period.

In September of 1976, he was awarded a Government of Guyana Scholarship to pursue the Bachelor of Science degree in Agricultural Education at Tuskegee Institute, Alabama, U.S.A. After completing work towards the Bachelor's degree in December 1979, he enrolled in the Master of Science program in Vocational Agricultural Education. He earned the Masters degree in August of 1980, and entered Louisiana State University to pursue studies towards a Doctor of Philosophy degree in Agricultural Education.

Douglas is a member of the West Indian Students Association, the Louisiana Vocational Association, the American Vocational Association and the Gamma Sigma Delta, the honor society of Agriculture. He co-authored an article in The Agricultural Education Magazine.
EXAMINATION AND THESIS REPORT

Candidate: Douglas Malcolm Haynes

Major Field: Vocational Agricultural Education

Title of Thesis: Vocational Agriculture Teacher's Perceptions of Young/Adult Education Programs in the Southern Region of the United States

Approved:

Michael J. Barnett
Major Professor and Chairman

William Ayers
Dean of the Graduate School

EXAMINING COMMITTEE:

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Date of Examination: February 22, 1984