CHARACTERISTICS AND INFLUENCE PATTERNS OF STUDENTS ENROLLING IN AGRICULTURAL CURRICULA AT MICHIGAN STATE UNIVERSITY

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LaVern Adam Freeh

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OF STUDENTS ENROLLING IN AGRICULTURAL CURRICULA
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LaVern Adam Freeh

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ABSTRACT

CHARACTERISTICS AND INFLUENCE PATTERNS OF STUDENTS
ENROLLING IN AGRICULTURAL CURRICULA
AT MICHIGAN STATE UNIVERSITY

By LaVern Adam Freeh

Purpose.--To identify and compare some characteristics of farm youth who attend college, and of non-farm youth who attend college and enroll in agricultural curricula. Emphasis is given to the students' attitudes toward agriculture; their exposure to information about college curricula and/or careers; and cognitive factors associated with their college curricula choices.

Method.--Three hundred and thirty-nine first-term, male, freshman students enrolled at Michigan State University in the fall of 1961 were included in the study. They were divided into three groups: (1) farm youth enrolled in agricultural curricula; (2) non-farm youth enrolled in agricultural curricula; and (3) farm youth enrolled in other than agricultural curricula. The students were classified as "farm" or "non-farm" youth through the use of criteria which were developed specifically for the study. Data for the study were gathered in four one-hour meetings through the use of a questionnaire. The three groups were compared by use of the chi-square and T-test techniques.

Findings.--Significant differences were found among the three groups. Some of these differences are listed.

(1) Farm youth enrolled in agricultural curricula, when compared with the other two groups of students, more often reported that:

(a) The adults they admired most were in agricultural occupations.

(b) Their closest friends were aspiring to agricultural careers.

(c) They had studied vocational agriculture in high school.

(d) They had participated in the FFA and the 4-H.

(e) Their first career choice was farming.

(f) They had a good understanding of career opportunities in agriculture.

(g) They had extensively read agricultural careers publications.

(h) They had done some reading in publications dealing with agricultural curricula.

(i) They had heard a speech about careers and college curricula by a college faculty member.

(j) They rated vocational agriculture teachers as having exerted the greatest influence on their college curricula choice, after parents.

(k) They rated the vocational agriculture course, speeches and publications about agricultural curricula and agricultural careers, visits to the college campus, and experiences in the FFA high as a source of influence on their choice of college curricula.

(2) Some other significant differences between the two groups of farm youth were:

(a) Farm youth enrolled in agriculture more often reported that their parents were full-time farmers.

(b) Farm youth in agriculture reported more exposure to information about agriculture.

(c) Farm youth in other than agricultural curricula rated teachers (other than vocational agriculture), high school counselors, high school courses (other than vocational agriculture), rank in high school class, publications dealing with non-agricultural careers and curricula and goals and objectives, not directly related to agriculture, higher as a source of influence relative to their choice of curricula.

(d) Farm youth enrolled in agriculture more often reported that they felt agriculture was a growing industry and the career opportunities in agriculture were expanding than did farm youth who were not enrolled in agriculture.

(3) Some other significant differences between farm and non-farm youth enrolled in agricultural curricula were as follows:

(a) Farm youth chose their curricula later in high school than non-farm youth.

(b) Non-farm youth more often reported that employers, adults (other than parents or teachers), and college faculty members had influenced their curricula choice.

(c) Non-farm youth more often reported that their father had encouraged them to continue their education and that their parents didn't care what occupation they entered as long as they liked it.

(d) Non-farm youth more often classified the career they were preparing for as related to agriculture rather than agriculture itself.

Farm and non-farm youth enrolled in agriculture did not differ significantly with respect to their attitude toward agriculture.

Likewise, both groups indicated that a liking for plants and/or animals and an interest in working out of doors exerted a high influence on their choice of curricula.

All three groups of students reported that the 4-H agents, leaders, or experiences exerted little influence on their curricula choice.

No significant differences were found between the levels of educational and occupational aspiration that the students in each group reported their parents had for them.

CHARACTERISTICS AND INFLUENCE PATTERNS OF STUDENTS ENROLLING IN AGRICULTURAL CURRICULA AT MICHIGAN STATE UNIVERSITY

By

LaVern Adam Freeh

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CHAPTER I

PURPOSES AND OBJECTIVES OF THE STUDY

Introduction

An individual makes many decisions in his lifetime. Among the more important are those which relate to his choice of an occupation, and the nature and extent of his education beyond high school. The latter involves not only his decision relative to attending or not attending college, but just as important, his choice of curriculum if he decides to enter college. To a great extent these decisions are interrelated, are initiated in secondary school and have a definite influence on success attained in later life.

Purpose of the Study

The purpose of this study is to identify and compare some characteristics of youth who attend college and to determine what selected factors are associated with their choice of a particular college curriculum. The study is restricted to farm youth who attend college and non-farm youth who enroll in agricultural curricula in college. Attention was focused on these groups for two reasons: (1) Recent research has shown that, as a group, fewer farm youth attend college than urban youth; and (2) enrollments in agricultural curricula are steadily declining despite a continued and perhaps increasing need for college graduates in agriculture. This is supported by the statements which are recorded under Background and Need For the Study.[1]

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[1]Cf. post, p. 2, et seq.

What are some characteristics of farm youth who attend college? What are some characteristics of non-farm youth who enroll in agricultural curricula? What cognitive factors are associated with the enrollment of farm youth in agricultural curricula? What cognitive factors are associated with the enrollment of farm youth in other than agricultural curricula? What cognitive factors are associated with the enrollment of non-farm youth in agricultural curricula? Does a pattern of influences emerge? Some of these questions and many more have been asked before in other research. However, insofar as it could be determined, they have not been previously incorporated into one study nor have they been treated as in this study.

The purpose of this study, therefore, is to identify some characteristics of the youth groups mentioned and to determine what factors they feel influenced their choice of college curricula.

Background and Need for the Study

Agriculture has undergone some tremendous changes in recent years. While once it was viewed almost entirely from the standpoint of farming and ranching, it today is often defined as the "sum total of all the operations involved in producing a farm commodity and getting it to the ultimate consumer in its final form."[2]

In all its ramifications, agribusiness, as it sometimes is referred to, is said to be a 100 billion dollar industry employing 35 percent of the nation's labor force[3] and offering 15,000 skilled jobs a year.[4]

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[2]John H. Davis and Ray A. Goldberg, A Concept of Agribusiness (Boston, The Alpine Press, Inc., 1957).

[3]Davis, op. cit., p. 6.

[4]National Project in Agricultural Communications, I've Found My Future In Agriculture, publication (American Association of Land-Grant Colleges and Universities, 1958).

DeGraff and others[5] estimate that as many as one-fourth of all occupations can be classified as being related to agriculture, and it is in this broad category that graduates of agricultural colleges may well look for employment. See figure 1.

Walden[6] states that one might suppose that an industry of these dimensions would attract an abundance of youth, particularly farm youth who have the background, the heritage and tradition of agriculture in their blood. He also feels that considering the opportunities in agriculture and the availability of education in agriculture, through land-grant colleges in every state, that one might also expect both farm and non-farm youth to be pouring into agricultural curricula in ever increasing numbers. But, he notes this is not happening. Rather, in the face of agriculture's perceived annual 15,000 job demand, agricultural colleges in America are currently graduating only enough to fill one-half of the positions. If this trend continues, the agricultural colleges will be graduating barely enough to fill one-fifth of the agricultural positions that will demand trained men by 1970.

This represents a deep concern to agricultural educators and to those in agriculture who produce, process and distribute agricultural products. They see an increasing need for well-trained manpower in agriculture and a decreasing interest in this area on the part of youth. See figure 2.

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[5]Herrell DeGraff, "Who is the Farm Worker," The County Agent, Vo-Ag. Teacher, Vol. 13, No. 9, September 1957, p. 16; "In Summing Up," Editorial, The County Agent, Vo-Ag. Teacher, Vol 14, No. 2, February 1958, p. 68

[6]Howard T. Walden, "Needed: A Broader Agricultural Education," Editorial, CORN, Vol. XVII, No. 3, Summer, 1961.

FIGURE 1

EACH YEAR THERE ARE THE FOLLOWING JOBS OPEN FOR AGRICULTURAL GRADUATES[1]

Agricultural Research	Agricultural Industry	Agricultural Business	Agricultural Education	Agricultural Communications	Agricultural Conservation	Agricultural Services	Farming Ranching
Production	Machinery & equipment	Banking & credit	Vocational	Farm reporting	Soil	Inspection & regulation	General
Marketing	Food processing	Insurance	Agricultural	Newspapers	Water	Food & feed	Grain
Economics	Grain & seed processing	Farm management	Agricultural extension	Market reporting	Range	Seed & fertilizer	Dairy
Agricultural engineering	Meat & poultry packing	Cooperative management	College instruction	Publications	Forests	Agricultural chemicals	Swine
Equipment & utilities	Fertilizer & lime	Land appraisal	Governmental agencies	Magazines	Fish	Plant & animal quarantine	Beef
Processing	Pesticides & herbicides	Grading, packaging & labeling	Farm organizations	Photography	Wildlife	Quality control and grading	Sheep
New uses and methods	Feed mftg.	Marketing	Industrial agencies	Motion pictures	Parks	Organizations & foundations	Poultry
New products	Dairy process'g.	Storage & warehousing	Business firms	Radio	Turf	Agricultural technicians consultants statisticians	Cotton
By-products	Fats & oils	Transportation	International technical aid	Recording		Veterinarians	Forage
Conservation		Farm utilities		Television			Fruits
				Advertising			Vegetables
							Tobacco

1/ Adapted from "I've Found My Future in Agriculture," published by the National Project in Agricultural Communications.

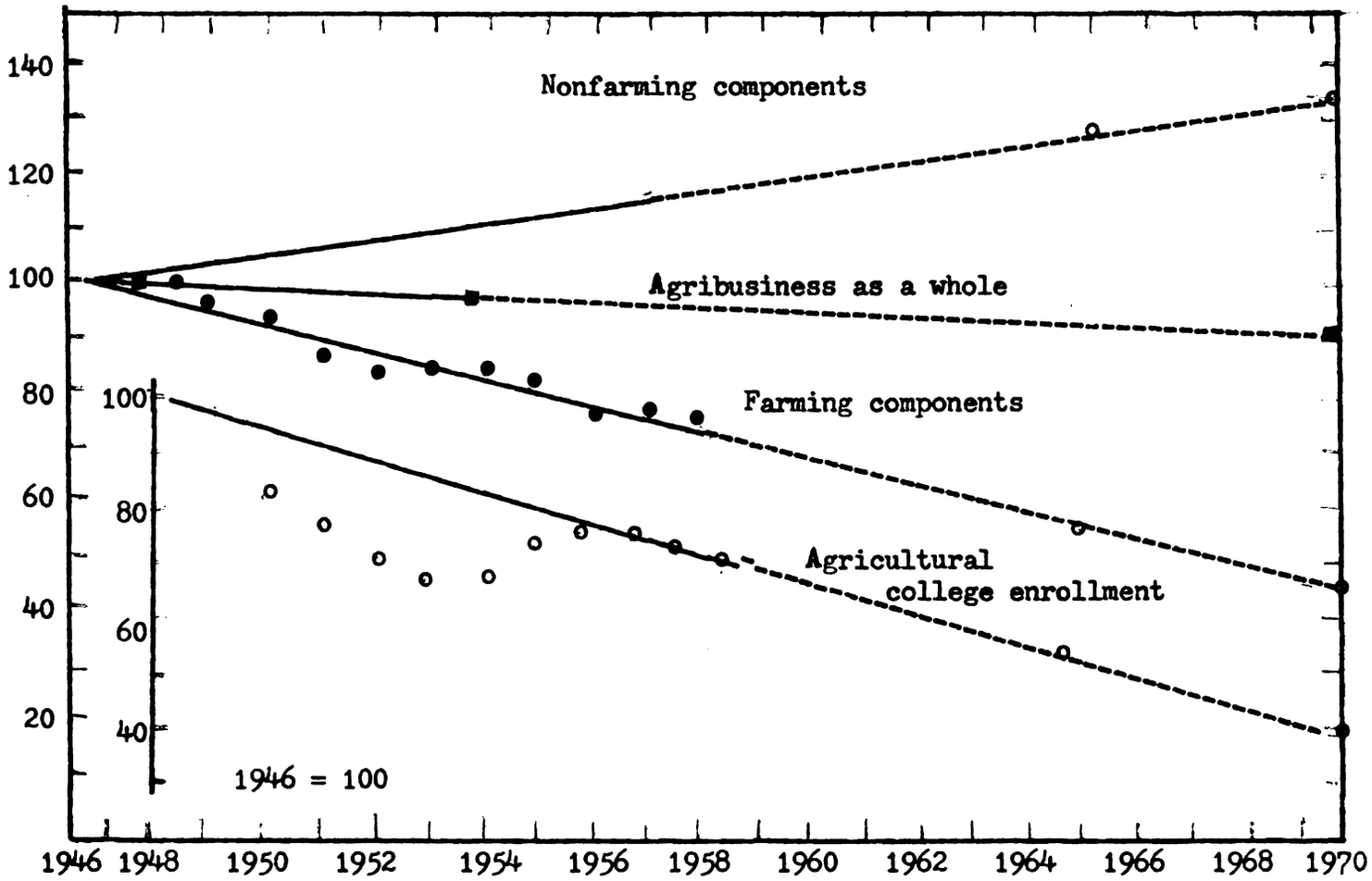
FIGURE 1 (Continued)

Agricultural Research	Agricultural Industry	Agricultural Business	Agricultural Education	Agricultural Communications	Agricultural Conservation	Agricultural Services	Farming Ranching
Reclamation	Textiles & fibers	Custom services		Exhibiting		Foreign agricultural service	Seeds
Rural sociology	Buildings & utilities	Private businesses		Training			Nursery
	Forest products						Specialty

Note: More than 15,000 new jobs each year but only about 7,500 graduates to fill them.

FIGURE 2

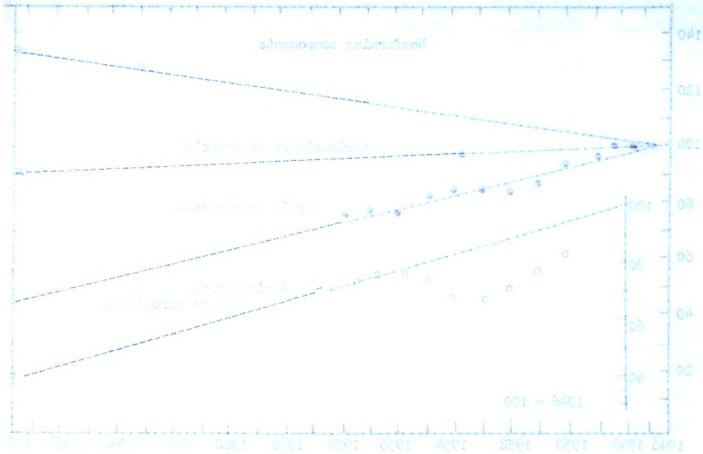
COMPARATIVE TRENDS IN AGRIBUSINESS EMPLOYMENT AND AGRICULTURAL COLLEGE ENROLLMENT FOR 1946-1958 PROJECTED TO 1965 AND 1970



Source: Stanford Research Institute.

FIGURE 2

COMPARATIVE TRENDS IN AGRIBUSINESS EMPLOYMENT AND AGRICULTURAL COSTS AND EMPLOYMENT FOR 1946-1972 PROJECTED TO 1985 AND 1990



Source: Stanford Research Institute.

The seriousness of declining enrollments in agricultural curricula in college is emphasized by the statements of Benedict and McGlothlin. They say,

> There has been a downward trend in the number of students enrolling in colleges of agriculture for the past ten years and the number of agricultural students as a proportion of the total land-grant college enrollment has decreased consistently for the last twenty years. It also appears that the caliber of agricultural students is decreasing. These trends are taking place in spite of the increases in the number of employees in the farm supply and crop processing - distribution industries which have offset the decrease in the labor force involved in production. Furthermore, the decrease in number and caliber of agricultural students is taking place in the face of the tremendous world-wide demand for agricultural experts in all fields. This is especially true in the underdeveloped countries where the availability of food and fiber supplies may be critical in determining the economic and ideological future of these countries.[7]

Two of the factors contributing to the downward trend in the number of students enrolling in agricultural curricula may be the decreasing number of rural youth and their relatively low level of educational aspirations. Burchinal and others in comparing rural youth to other groups say,

> Present research clearly supports the generalization that rural youth have lower levels of educational aspiration than urban youth. Generally, proportionately fewer of the rural males or females plan on post high school education than urban males or females. Educational aspiration differences are greatest with respect to plans to attend a four-year college or university. Farm children, regardless of sex, levels of intellectual ability, or family status levels, generally have lower educational aspirations than similar children from village homes and almost always lower levels than comparable urban children.[8]

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[7]Harris M. Benedict and Robert S. McGlothlin, "College-Trained Manpower for Agribusiness" (A proposal for research, Stanford Research Institute, Agricultural Research Center, June, 1960) p. 1-2.

[8]Lee G. Burchinal, Archibald O. Haller and Marvin Taves, "Career Choices of Rural Youth in a Changing Society" (Unpublished Agricultural Experiment Station Regional Bulletin Number 15, University of Minnesota, 1962) p. 18.

Traditionally, rural youth have provided the greatest potential source of manpower for agriculture. In view of their lower educational aspirations and declining numbers, agricultural educators question if these youth will continue in this role in the future. Since the trend of the declining numbers of farm youth is likely to continue, there seems to be a need for raising their educational aspirations, not only to meet the manpower requirements of agriculture, but to enable farm youth to compete more effectively in the labor market in our complex society. Des Marais says,

> Current indications are that uneducated and untrained youth will find it increasingly difficult to secure employment in the future.[9]

What steps should be taken to increase enrollments in agricultural colleges to the point at which they are proportional to the need for agriculturally trained students, both in number and quality?

A statement by Benedict and McGlothlin[10] in their proposal of research prepared for an agribusiness subcommittee of the American Association of land-grant colleges and state universities, offers a suggestion. They state,

> For colleges of agriculture to regain in their preeminent position in supplying agriculture with sufficient high caliber manpower, a long-range research program is needed to develop for colleges of agriculture complete information on the following:
> (1) The type and number of jobs available in all components of agriculture, both domestically and abroad.
> (2) The type of individual and the type of individual training desired by segments of agriculture, including those in farm supplies, farming and processing-distribution components.

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[9]Philip H. Des Marais, Deputy Assistant Secretary, United States Department of Health, Education and Welfare (Quoted from a talk given at Regional White House Conference, November 14, 1961, Detroit, Michigan).

[10]Benedict and McGlothlin, op. cit., p. 22-23.

(3) The types of new curricula, or revisions of old curricula which are necessary to provide the training required.

(4) The various factors that motivate students to select careers.

(5) Methods of exploiting these motivating factors so that the desired types of secondary students will select agribusiness as a career and the colleges of agriculture as the institutions in which to obtain training for that career.

In other words, there is need for study in many areas.

This study is related to the need identified in item number four above. For the most part, studies in agricultural education, with implications for the guidance of farm youth, have been in the nature of follow-ups relative to their educational achievements and occupational placement and success. Sociological studies in this area have centered around the educational and occupational aspirations and achievements of youth. Much is known about the numbers and kinds of youth who attend college. Less is known about the characteristics of farm youth who attend college in relation to their choice of college curricula. And even less is known about the sources and experiences which are associated with the choice of college curricula by both farm and non-farm youth.

This information should prove valuable for counseling purposes; for planning and conducting programs designed to stimulate more farm youth to attend college and/or to provide them with information about agricultural curricula and the occupational opportunities in agriculture.

Hypotheses

Based on a study of related research, and the observations and experiences of the author, the following hypotheses were made and tested by this study:

(1) Farm youth who enroll in agricultural curricula report more influence from sources and experiences supporting agriculture than do farm youth who enroll in other than agricultural curricula or non-farm youth who enroll in agricultural curricula.

(2) Farm youth who enroll in agricultural curricula report less frequently that their parents have high levels of educational aspirations for them than do farm youth who enroll in other than agricultural curricula.

(3) Farm youth who enroll in agricultural curricula report less frequently that their parents have high levels of occupational aspirations for them than do farm youth who enroll in other than agricultural curricula.

(4) Farm youth who enroll in agricultural curricula report greater exposure to information about agriculture than do farm youth who enroll in other than agricultural curricula or non-farm youth who enroll in agricultural curricula.

(5) Non-farm youth who enroll in agricultural curricula report factors as having influenced their choice of college curricula which are significantly different from those reported by farm youth as having influenced their choice.

(6) Non-farm youth who enroll in agricultural curricula and farm youth who enroll in other than agricultural curricula, as a group, report a less favorable attitude toward agriculture than do farm youth who enroll in agricultural curricula.

(7) Non-farm youth who enroll in agricultural curricula and farm youth who enroll in other than agricultural curricula less frequently report goals and objectives directly related to agriculture than do farm youth who enroll in agricultural curricula.

Some Basic Assumptions

The following basic assumptions serve as foundations for the hypotheses established in this study:

(1) First term freshman students in college can and will accurately report factual information about themselves.

(2) First term freshman students in college have perceptions relative to the sources and experiences which influenced their choice of college curricula and they can and will accurately report these perceptions.

(3) First term freshman students in college have developed some attitudes relative to agriculture and they can and will accurately report these attitudes.

(4) First term freshman students in college have goals and objectives which influenced their choice of college curricula and they can and will accurately report these goals and objectives.

(5) The students in a random sample of students who are classified as "farm youth enrolled in other than agricultural curricula" will be representative of all farm youth enrolled in other than agricultural curricula at Michigan State University.

Limitations of the Study

This study was limited in that it was confined to a selected number of male freshman students in a particular term at Michigan State University. Data compiled in Chapter III[11] indicate however

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[11]Cf. post, p. 37, et seq.

that there is no significant difference between the students who were included in the study and similar groups of students who enrolled as freshmen at Michigan State University in recent years when they are compared relative to choice of major; FFA and 4-H Club experience; and home background.

The study was confined to certain characteristics and cognitive factors associated with the college curricula choice of individuals.

The data are limited in that they only identify some of the characteristics of the students studied and a selected group of cognitive factors associated with their choice of college curricula.

Definition of Terms

For the purposes of this study, the following definitions are assumed to be pertinent and relevant.

Farm Youth	Male students who meet two or more of the following criteria: (1) Have lived on a farm for three or more of the eight years (1953-61); (2) Have worked on a farm for three or more of the eight years (1953-61); (3) Have parents or guardians who presently live on a farm.
Non-farm Youth	Male students who do not meet two or more of the above criteria.
Agricultural Curricula	Academic programs which specifically prepare one for a career in farming, agricultural education, agricultural business and industry, agricultural service, inspection and quality control, agricultural

research, agricultural communications, conservation and resource development are classified as agricultural curricula for the purposes of this study. The following academic programs offered at Michigan State University are so designated: Agricultural Business, Agricultural Communications, Agricultural Education, Agricultural Economics, Agricultural Engineering, Agricultural Mechanics, Agricultural Science, Animal Husbandry, Dairy Production, Farm Crops, Fisheries and Wildlife, Food Science, Forestry, General Agriculture, Horticulture, Pomology and Vegetable Crops, Poultry Science, Resource Development, Soil Science and Veterinary Medicine.

First-term Freshmen — Students enrolled as first term freshmen at Michigan State University during the fall term of 1961 and who have not previously been enrolled in any college.

Fall term — The academic period between September 28, 1961 and December 10, 1961 at Michigan State University.

Statistically Significant — For this study, statistically significant means that the factors are significant at the 1% or 5% level as determined by the Chi Square test of independence.

1% level - Significant at the 1% level means that the observed difference would not be likely to occur by chance more than once in 100 instances.

5% level - Significant at the 5% level means that the observed difference would not be likely to occur by chance more than five times in 100 instances.

Agriculture — The term agriculture as used in this study refers to farming plus those occupational areas which are directly involved in the processing, distribution and marketing of farm products; those occupational areas directly involved in supplying the farmer with services, equipment and materials used on the farm; and the areas of forestry, fisheries and wildlife and conservation.

Occupational Prestige — This term is interpreted as the regard that people have for an occupation and those engaged in it.

Feelings — This is used to denote an expression of the attitudes that an individual has towards something.

Occupational Aspirations — As used in this study, the term refers only to educational and occupational aspirations, and includes responses

secured from the instrument relative to the educational and occupational levels the students believe their parents would like them to attain.

Cognitive Factors — This refers to factors which are perceived by students as having influenced their choice of college curricula.

Procedure of the Study

The procedures used in this study developed as a result of three agricultural education seminars at Michigan State University during 1958, 1959 and 1960, and through independent study under the guidance of an advisory committee in 1961.

After studying the techniques and procedures which had been used for securing data in related studies, a preliminary instrument was developed. The instrument was administered to 15 freshman college students who were then questioned relative to its clarity and structure. The comments of those students, along with suggestions from the author's guidance committee, formed the basis for some minor changes which were made in the instrument. In its final form, it was coded so that the data could be analyzed by electrical tabulating equipment.

Since the instrument was patterned after those used in other accepted studies of a similar nature, but representative of different populations, it was not felt necessary to test its validity further.

Reliability of the instrument was determined by the test-retest method. It was first administered to a group of forty prospective freshman college students who attended a counseling clinic during the month of July, 1961. Retesting was done after an interval of six

weeks with the same group of students. Thirty-five of the original forty students took part in the retest.

For the instrument as a whole, it was found that 80 percent of the questions were answered the same way in the retest as they were in the original test. In 95 percent of the questions where answers were changed, the difference between the response in the test and the response in the retest represented a minor shift in the degree of emphasis rather than a complete change in answers.

The data for this study were gathered from first term male freshman students at Michigan State University during the fall term of 1961. The students in the sample were divided into three groups: (1) Farm youth enrolled in agricultural curricula; (2) Non-farm youth enrolled in agricultural curricula; and (3) Farm youth enrolled in other than agricultural curricula. All of the students in the first two classifications were included in the study, while a random sample (one out of three) of the students in the third classification was included.

The students were classified as being farm or non-farm youth on the basis of their answers to the following questions:

(1) Have you lived on a farm for three or more of the last eight years (1953-61)?

(2) Have you worked on a farm for three or more of the last eight years (1953-61)?

(3) Are your parents or guardians presently living on a farm?

If a student answered affirmatively two or more of these questions, he was classified as a "farm youth" for the purpose of this study. This method of classification was developed for this study and was motivated by dissatisfaction with the techniques used by others in related studies for distinguishing between farm and non-farm youth.

Too often the methods used for the classification of farm youth were vague, inaccurate or inappropriate. In some studies, the investigator relied upon the individuals in the sample to classify themselves as farm or non-farm youth.

The data were gathered in four, one-hour meetings during November, 1961. Letters were sent by the Director of Resident Instruction, College of Agriculture, to those in the sample who were enrolled in the College of Agriculture, asking them to attend one of four scheduled meetings to fill out a research instrument. Similar letters were sent to those enrolled in Agricultural Engineering by the department head and to those enrolled in Veterinary Medicine or in other than agricultural curricula, by the University Provost's office.

A total of 349 instruments were completed, of which 10 were discarded as incomplete. Three hundred and thirty-nine instruments were used in summarizing the data.

The data were analyzed by the use of electrical tabulating equipment. Cards were prepared for each of the 339 students who completed an instrument. All of the data pertaining to a particular respondent were punched on a separate card. The cards were then processed by the "101 IBM" machine which sorts, totals and records the tabulations according to a prearranged wiring system.

The results are presented in terms of whether or not the differences which were found are significant. A table developed by Cuthbert Daniel,[12] the Chi-Square technique and the "T" test were used to test the differences. A copy of Daniel's table is found in Appendix B.

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[12]Cuthbert Daniel, "Statistically Significant Differences in Observed Percents," Journal of Applied Psychology, Vol. 24, 1940, pp. 826-830.

CHAPTER II

REVIEW OF LITERATURE AND RELATED STUDIES

It is the purpose of this chapter to review selected literature which is concerned directly, or indirectly, with factors similar to those of this study. No attempt has been made to include a large number of studies in this review of literature. Those which are included have been reviewed because they lay the foundation for research dealing with characteristics of youth, and cognitive factors associated with their educational plans.

The related research studies have been divided into two categories: (1) Some characteristics of youth associated with occupational and educational plans; and (2) Cognitive factors associated with enrollment in agricultural curricula. The first part of the chapter is concerned with literature having an indirect relationship to this study. The latter part presents literature which is closely related.

Some Characteristics of Youth Associated With Occupational and Educational Plans

From the beginning of time, societies have often been concerned with their youth. Burchinal and others emphasize the importance of this concern when they say,

> Youth are the most precious asset in any community. They represent the future of our communities, states and nations.

> Maximum development and utilization of their potentials represent a challenge in the educational and vocational counseling fields.[1]

Educators and others concerned with youth have a responsibility for helping youth move easily and surely into occupations where they can make their best contribution to society and achieve their greatest sense of personal satisfaction. But successful entry into a useful and enjoyable occupation is not always easy. Haller and others[2] point out that the act is part of a larger system of influences which includes: (1) occupational decision; (2) the changing occupations in a changing society; (3) the immediate situation of youth, including available facilities and the expectations of others; (4) the youth's life decisions in areas other than occupations; and (5) the youth's personality. They also state that the ties between occupations and education are becoming increasingly close and that youth who aspire to high-level occupations must go to college if they are to attain them.

When do youth make their occupational decisions? Ginzberg and his co-workers[3] divided occupational decision making into three periods: the period of fantasy choice; the period of tentative choice; and the period of realistic choice. Each period corresponds roughly with the ages of pre-adolescence, adolescence and early adulthood.

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[1]Lee G. Burchinal, Archibald O. Haller and Marvin Taves, "Career Choices of Rural Youth in a Changing Society" (Unpublished Agricultural Experiment Station Regional Bulletin Number 15, University of Minnesota, 1962), p. 1.

[2]Archibald O. Haller, Lee G. Burchinal and Marvin Taves, Choosing an Occupation, A Report Prepared for the North Central Regional Research Committee, Sub-committee on Youth and the Family, 1961, p. 21.

[3]Eli Ginzberg, et al., Occupational Choice, An Approach to a General Theory (New York: Columbia University Press, 1951) pp. 56, 60, 271.

Other researchers, such as Strong,[4] MacKaye,[5] and Hartson,[6] have found that occupational choice tends to crystallize in late adolescence or early adulthood.

With respect to the type of occupations chosen by youth, Stephenson observed that they tend to restrict their occupational choices to a very few within a narrow range. He stated,

> A comparison of students' occupational orientation with studies of adult ratings of the desirability of occupations show a close correspondence between youth's most frequent vocational choices and occupations rated high on a prestige scale by adults. Since such a distribution of choice bears little relationship to the actual occupational structure, the conclusion has been that youth's vocational orientation is grossly unrealistic.[7]

Carter,[8] in developing a theory of occupational choice proposes that a young man identifies with a person or group; consequently, he becomes interested in the occupational field of that group.

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[4]E. K. Strong, Change of Interest With Age (Stanford, California: Stanford University Press, 1931).

[5]D. L. MacKaye, "The Fixation of Vocational Interest," American Journal of Sociology, XXXIII (1927), p. 353-370.

[6]L. D. Hartson, "Vocational Choices Before and After College," Occupations, XVI (1937), pp. 138-142.

[7]Richard M. Stephenson, "Realism of Vocational Choice: A Critique and an Example." Personnel and Guidance Journal 35 (April 1957) pp. 482-488.

[8]Harold D. Carter, "The Development of Vocational Attitudes," Journal of Consulting Psychology, IV (September-October, 1940) p. 186.

As to how youth make their occupational choices, Porter[9] and Samson and Stefflre,[10] emphasized that children are not independent in making their occupational choices and that their occupational choices are significantly related to their fathers occupation.

Borden,[11] however, stresses that dynamically the relationship between a father's occupation and the son's interest type is related to the degree of identification of the son with the father.

Samson and Stefflre[12] in further examining the relationship between a child's occupational choice and father's occupation found that children of parents working at a professional or semi-professional level over-select professional objectives and under-select "manual" objectives, while children of parents who are engaged in service or agricultural occupations tend to over-select service and agricultural objectives and under-select professional objectives. Grim[13] reports a distinct relationship between the occupational and educational aspirations that parents have for their children and the educational and

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[9]Richard J. Porter, "Vocational Plans and Preferences of High School Senior Boys in Relation to Mental Ability, Emotional Adjustment and Prestige Level of Fathers Occupation" (Unpublished Doctoral Thesis, University of Pittsburg, Pittsburg, Pennsylvania, 1951) pp. 57.

[10]Ruth Samson and Buford Stefflre, "Like Father - - - Like Son?" The Personnel and Guidance Journal, October 1952, pp. 37-38.

[11]Edward S. Borden, "A Theory of Vocational Interests as Dynamic Phenomena," Educational and Psychological Measurements, III (Spring 1943), p. 60.

[12]Samson and Stefflre, op. cit., 38.

[13]Edgar L. Grim, "A Study to Determine the Probability of Relationships Between the Educational and Vocational Goals of Tenth and Twelfth Grade Boys and Girls in Oakland and Macomb County Public High Schools and the Expressed Educational Goals of the Parents of these Children," (Unpublished Doctoral Thesis, Michigan State University, 1956).

occupational aspirations of the children.

Edlefson and Crowe,[14] in contradiction to the findings cited above, found that parents did not seem to be an important factor in a youngster's choice of occupation. Further, the degree of parental influence decreased as the years in school of the youngster increased. Work experience was the paramount reason given by youth for occupational choice.

Super[15] suggested that vocational choices are the outcome of individual needs and the way in which an individual perceives himself in relation to his environment. As such, vocational choice is compounded in varying degrees of: The desire for prestige, security or affluence; family influence; romantic conceptions of actual working conditions in a specific job; frequently inaccurate self appraisal; and probably inaccurate estimate of the needs of the labor world.

Haller and others,[16] in a review of research in this area, classified two broad factors in the environment of youth as having the greatest influence on the total process of entering occupations. These are: the facilities available to youth; and the expectations other people have for them. Under facilities, they include the accessibility and quality of high schools and the financial resources available to youth.

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[14]John B. Edlefson and Martin Jay Crowe, "Teen-agers' Occupational Aspirations," Washington Agricultural Experiment Station Bulletin 618, Pullman, Washington (24:1960).

[15]Donald Super, The Psychology of Careers (New York: Harper and Brothers, 1957), p. 362.

[16]Haller, Burchinal and Taves, op. cit., p. 6.

Under expectations of others for youth, they list those of parents, acquaintances of his own age, teachers and (where they exist) school counselors, as being the most important. These people and others he comes in contact with help the individual mold his self-concept. It is largely through certain other persons that he learns what is available and appropriate for him.

The literature indicates that the characteristics of an individual, both inherent and acquired, his self-concept, and external factors are all associated with his occupational planning and occupational choice.

The factors cited as being associated with occupational choice are similar to those associated with educational plans. French and his colleagues,[17] using a selected nationwide sample of 35,000 twelfth grade students from 516 representative high schools, pointed out that factors which relate to college attendance more closely than expressed plans are: professional nature of father's occupation, extent of father's education, number of friends going to college, class standing, high school program, proportion of college expenses which family is able to pay, professional aspirations and academic reasons for college attendance. It was found that the high school programs in which students are enrolled did not closely match plans to attend or not to attend college. Good grades in high school were seen to have a particularly high relationship with plans for college.

In 1950, White[18] made a study of 1,053 high school students from 37 different high schools in Ohio and found a definite relationship

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[17]John W. French, et al., "Background Factors Relating To College Plans and College Enrollment Among Public High School Students," Educational Testing Service, Princeton, New Jersey, (April 1957).

[18]R. Clyde White, "Future Demand For Admissions to College: How Many and Who?" College and University, Vol. 29, No. 1 (October 1953), pp. 5-13.

between the social class position of students and attendance at college. Ninety-two percent of those who came from the upper social class enrolled in college as compared to only 14 percent of those in the lower social class.

Sewell, Haller and Strauss[19] reported that status made a contribution to educational and occupational aspirations independent from intelligence.

A study by Crawford[20] indicates that there is a relationship between the initial enrollment of high school graduates in college within six months after their graduation and such factors as: sex, courses of study pursued in high school, greater educational attainment levels of parents, higher scholastic achievement in high school, degrees of expressed certainty of attending college, plans made for college enrollment, and occupations of the heads of households.

Edlefson and Crowe[21] called attention to the fact that as the number of children in the family increased, the percentage that did not plan to attend college also increased. Lack of money for advanced education may be the main factor involved here. They also found that the eldest and the youngest children had the most certainty concerning college plans.

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[19]William H. Sewell, Archibald O. Haller and Murray A. Strauss, "Social Status and Educational and Occupational Aspirations," American Sociological Review, Vol. 22, No. 1 (February 1957), pp. 72-73.

[20]Ferris N. Crawford, "A Study of Selected Factors Relating to College Enrollment of Public High School Graduates Within Six Months After Graduation," (Unpublished Doctoral Thesis, Michigan State University, East Lansing, Michigan, 1960).

[21]Edlefson and Crowe, op. cit., p. 62.

Wilson and Buck[22] report that the young people who attend college as compared to those who don't are more likely to: have a higher average IQ; have a better personality adjustment; be slightly younger; come from smaller families; belong to more formal organizations; hold more positions of organizational leadership; read more books; and more non-fiction; have a father who is a white collar worker; prefer white collar employment and think it has the highest status; come from families who are most successful, active and prestigeful in the community.

Characteristics of farm youth

An analysis of farm youth relative to their occupational choices and educational plans is revealing.

Slocum[23] studied the occupational plans of high school seniors from farm and non-farm homes and found, in regard to educational planning, that there was a somewhat greater tendency for seniors from urban areas than those from rural areas to plan on immediate college entrance. Nearly all seniors who planned to attend college considered themselves to be average or above average students and eight out of ten indicated that the most important reason for attending college was occupational preference.

Edlefson and Crowe[24] found that youth living on farms preferred

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[22]Paul B. Wilson and Roy C. Buck, "The Educational Ladder," Rural Sociology, Vol. 25, pp. 404-413, (December 1960).

[23]W. L. Slocum, "Occupational and Educational Plans of High School Seniors From Farm and Non-Farm Homes," State College of Washington Bulletin 564, Pullman, Washington, (February 1956).

[24]Edlefson and Crowe, op. cit., p. 63.

a type of work involving things while those living in towns or cities preferred those types of work involving people.

Burchinal and others[25] carry this comparison of farm and non-farm youth further and state that studies, with but one exception, show that farm or rural youth have lower levels of occupational and educational aspiration than urban youth.

Haller[26] states that the parents of farm boys who plan not to farm tend to have higher levels of educational and occupational aspiration for their sons than do parents of those who plan to farm.

A study of rural youth by Youmans[27] adds to existing evidence that differences in socio-economic status are associated with differences in educational attainments. He found that youths from rural families of higher socio-economic status groups made better use of opportunities than did youths from lower socio-economic status groups. The home, the school, and the community tended to reinforce this system of privilege. He concluded a higher percentage of rural youth could be influenced to obtain the benefits of at least a high school education if: (1) Parents and youths could be influenced to adopt more favorable attitudes concerning the value of formal education; (2) Youths could be relieved of some unpaid work at home; (3) The

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[25]Burchinal, Haller and Taves, op. cit., p. 7.

[26]Archibald O. Haller, "Planning to Farm: A Social Psychological Interpretation," Social Forces, Vol. 37, No. 3, (March 1959).

[27]E. Grant Youmans, "The Educational Attainment and Future Plans of Kentucky Rural Youths," Kentucky Agricultural Experiment Station Bulletin 664, University of Kentucky, Lexington, Kentucky, January 1959, pp. 44-45.

a type of work involving things with those living in towns or cities preferred these types of work involving people.

Burchfield and others[25] agree with conclusions of more and non-farm youth further and state that whether, rightly or not, one's occupation, when that farm or rural youth have taken higher intellectual and educational aspiration than urban youth.

Haller[26] states that non-farm youth from farm and non-farm homes tend to have higher levels of educational and occupational aspiration for their sons than do farmers or farm wives who often do so.

A study of rural youth[27] with to relating values that differences in socio-economic status are associated with differences in educational aspirations. It appeared that youths from rural families of higher socio-economic status were more better use of opportunities than did youths from lower socio-economic status groups. The home, the school, and the community tended to reinforce this system of relations. In conclusion a higher percentage of rural youth could be influenced to obtain the benefits of at least a high school education if: (1) farmers and youths could be influenced to adopt more favorable attitudes concerning the value of formal education; (2) youths could be relieved of more urgent work at home; (3) the

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[25]Burchfield, Haller and Taves, op. cit., p. 7.

[26]Archibald O. Haller, "Measuring to Farm: A Social Psychological Interpretation," Social Forces, Vol. 37, No. 3, (March 1959).

[27]E. Grant Youmans, "The Educational Attainment and Future Plans of Kentucky Rural Youths," Kentucky Agricultural Experiment Station Bulletin 668, University of Kentucky, Lexington, Kentucky, January 1959, pp. 44-52.

community could provide more part-time paid work for students during the school term; (4) School personnel would assist lower socio-economic status youths in finding acceptable roles in extracurricular activities; and (5) Teachers would deliberately encourage youths to remain in school.

Haller[28] found that farm boys in the final year of high school who intend to farm, plan to attend college less frequently than those who do not plan to farm. But, he concluded that this did not necessarily mean that planning to farm directly influenced college plans.

There is considerable evidence that each of these variables, plans regarding farming and plans regarding college, is related to intelligence. While the evidence is conflicting, most studies indicate that the more intelligent farm boys tend to leave the farm to enter non-farm occupations.[29] Moreover, other researchers including Berdie,[30] Kahl,[31] and Livesay[32] state that the more intelligent persons are disproportionately represented among those planning to attend college. By inference, one might assume that planning to farm does not inhibit the desire to attend college, but that both are due to low intelligence.

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[28]Archibald O. Haller, "The Influence of Planning to Enter Farming on Plans to Attend College," Rural Sociology, Vol. 22, No. 2 (June 1957).

[29]C. T. Pihlblad and C. L. Gregory, "Selective Aspects of Migration Among Missouri High School Graduates," American Sociological Review, XIX (June 1954), pp. 314-324.

[30]Ralph F. Berdie, "Why Don't They Go To College?" Personnel and Guidance Journal, (March 1953), pp. 352-356.

[31]Joseph A. Kahl, "Educational and Occupational Aspirations of 'Common Man' Boys," Harvard Educational Review XXXIII, (Summer 1953), pp. 186-203.

[32]T. E. Livesay, "Test Intelligence and College Expectation of High School Seniors in Hawaii," Journal of Educational Research XXXV, (January 1942), pp. 334-337.

This assumption however, is not supported by Bjoraker[33] who found no significant association at the five percent level between mental ability, size of family, level of formal education attained by the parents, farm ownership by the parents and the son's level of desire to remain on the farm.

Deyoe[34] in a study of Michigan farm youth, found factors such as: number of years of vocational agriculture taken by the student; the quality of the home farm; recency of leaving high school; and the degree of participation in the work of the home farm as being associated with the student's likelihood of farming.

Salmela,[35] in a study of farm reared boys, noted a significant relationship between the student's occupational choices and the size of the family, education of parents, amount of discussion of plans with parents, and participation in 4-H Club, Boy Scout, and church activities.

Hensel[36] found no significant differences between the occupational choices of youth who had and those who had not been enrolled in

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[33]Walter T. Bjoraker, "Factors Associated With Vo-Ag. Students' Desire To Remain on the Farm," Agricultural Education Magazine, Vol. 26, No. 1, (July 1953).

[34]G. P. Deyoe, Young Men From Michigan Farms, Department of Education, Michigan State College (Lansing: The State Board of Control for Education, 1939), pp. 9-12.

[35]Melvin R. Salmela, "Relation Between Home Characteristics of Farm-Reared Boys and Their Occupational Choices," (Unpublished Masters Thesis, Iowa State College, Ames, Iowa, 1958).

[36]James W. Hensel, "High School Influences on the Occupational Choice of Farm Reared Boys," Agricultural Education Magazine, Vol. 32, No. 11, (May 1960).

vocational agriculture in high school. Those who ranked high scholastically in high school tended to choose professional occupations however.

Vickerstaff[37] reported that farm boys were more favorable in their attitude toward agriculture and that vocational agriculture students were more favorable toward farming than high school students in general. Youth who were in 4-H or vocational agriculture were found to be equally favorable toward farming.

Haller[38] in a county-wide study of farm boys in Michigan found that those who plan to farm tend to lack ego strength and to be emotionally unstable, to be withdrawn, shy or timid, to lack resolution, will control and character stability. Those who do not plan to farm tend to be emotionally stable, to be adventurously resilient, to be independent or self-sufficient and to have firm will control and character stability.

Characteristics of youth enrolled in agricultural curricula

Some recent studies have focused attention on the characteristics of youth who enroll in agricultural curricula in college.

Powers,[39] in 1953, found that approximately 20 percent of the former college students who had been enrolled in agricultural curricula

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[37]S. G. Vickerstaff, "The Attitude of High School Boys Toward Agriculture," (Masters Thesis, Iowa State College, Ames, Iowa, 1942), p. 61.

[38]Archibald O. Haller, "The Occupational Achievement Process of Farm-Reared Youth in Urban-Industrial Society," Rural Sociology, Vol. 25, No. 3, (September 1960).

[39]Billy Gene Powers, "Former Students' Opinions Concerning The Relation of Their College Training to Their Careers," (Unpublished Masters Thesis, Oklahoma State University, Stillwater, Oklahoma, 1958), p. 64.

indicated that they had decided to enter their present occupation previous to enrolling in college. The replies reported by 509 alumni were grouped by frequency of reporting as follows: previous to college entrance; after military service; during fourth year in college; immediately after graduation from college; during third year in college; during second year in college; during first year in college; and other reasons.

Rhea[40] reported that one out of three students entered agricultural curricula after previous college work elsewhere and that one out of five transferred to agricultural curricula from some other division in the college. The proportion of farm reared graduates in the agricultural curricula varied from a low of 24 percent in forestry to a high of 86 percent in agricultural education.

In a study conducted at Ohio State University in 1960, Leuthold, Phillips, Rothert and Wells[41] found that 34 percent of the students enrolled in agricultural curricula had changed their major at least once. Over one-third of those who changed their major had to take additional course work. Their findings show that a large number of those who chose a different major chose agricultural economics and rural sociology. About 60 percent of the students had chosen a career and about one-third of the group had decided on a curricula prior to entering college.

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[40]Mark B. Rhea, "Present Status and Opinions of Graduates Granted Bachelor of Science Degrees Since 1932 in Agricultural Curricula at Iowa State College," (Unpublished Ph.D. Thesis, Iowa State College, Ames, Iowa, 1953), p. 122.

[41]Frank O. Leuthold, G. Howard Phillips, Lowell F. Rothert, and James D. Wells, "Factors Associated With Changes in Majors by Agricultural Students at Ohio State University," (Unpublished Graduate Study, Department of Rural Sociology, Ohio State University, Columbus, Ohio, 1960).

In a comparison of farm reared students with non-farm students, they found the following differences: farm reared students made significantly higher grades than non-farm students as determined by the cumulative point hour of agricultural students; non-farm students more often chose careers in conservation and processing than did farm reared students; farm reared students more often chose a career in educational work than did non-farm students; (other types of careers were found to have near normal numbers of farm and non-farm students). A higher proportion of non-farm students chose a major in animal science, dairy technology, zoology and entomology than did farm reared students; a higher proportion of farm reared students chose agricultural education, agricultural engineering and dairy science than did non-farm students. (The other majors had near normal proportions between farm and non-farm students) Farm reared students were found to be more generally familiar with the opportunities in agriculture and agricultural curricula than were non-farm students as entering freshmen; both farm reared and non-farm students usually enrolled in the majors they were most familiar with as entering freshmen; non-farm students were slightly more satisfied with their current major than were farm reared students.

Cognitive Factors Associated With Enrollment In Agricultural Curricula

Gardner[42] found that farm boys who attended college but did not enroll in agricultural curricula listed finances, personal qualifications,

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[42]George F. Gardner, "A Survey of Factors Influencing Farm Youth in Selecting College Curricula," (Unpublished Masters Thesis, University of Idaho, Moscow, Idaho, 1957).

and experiences as having had the greatest influence on their decision not to enroll in agricultural curricula. The above included: the high cost of becoming established in farming, insecurity of farming, low return for time, expense involved in raising farm products, high income offered by other occupations, special talents and abilities which could be utilized better in other career fields; and high scores in high school subjects which indicated possible success in other occupations.

4-H Club experience did not appear to have an influence on youth in their choice of curricula but farm youth with experience in the FFA enrolled in agricultural curricula to a greater extent than the general average shown for farm youth attending college.

Students enrolled in agricultural curricula stated that the major influences on their choice of curricula were in the area of farm work, farm people, plants and animals.

Bentley and Hemp[43] found that students who enrolled in agricultural curricula felt they were influenced in their choice of specialized fields by persons, vocational factors and publications. Persons cited as being most influential were parents, friends and teachers of vocational agriculture. Those cited as being of next importance were relatives, county extension agents, college professors, high school principals and teachers other than in agriculture. Vocational factors cited as having influenced the student most were: economic advantages

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[43]Ralph R. Bentley and Paul E. Hemp, "Factors Influencing Agricultural College Students to Choose Their Fields of Specialization," Agricultural Education Magazine, Vol. 30, No. 11, (May 1958).

of the occupation, opportunity for employment, employment before entering college and social advantages of the job.

The study showed that three-fourths of the students felt they were influenced by reading agricultural books and magazines, while less than one-half felt they were influenced by college catalogs, announcements and hobbies.

In a similar study, Bentley and Hemp[44] studied the factors which influenced agricultural college students to choose agriculture as a career. They found that farm experience factors exerted the greatest influence. A comparison of freshmen and senior students showed that significantly more freshmen students were influenced by FFA experience and the study of vocational agriculture. Comparing students enrolled in agricultural education with those enrolled in other phases of agricultural curricula, they found that a significantly higher percentage of agricultural education students were influenced by the factors "studying agriculture in high school" and acquaintance with agricultural leaders; and non-agricultural education students were significantly more influenced by the factor "expect to inherit a farm some day."

Strickland,[45] in studying factors affecting enrollment in agriculture and agricultural education found that students who had been enrolled in vocational agriculture in high school gave the following

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[44]Ralph R. Bentley and Paul E. Hemp, "Factors Influencing Agricultural College Students to Choose Agriculture as a Career," Agricultural Education Magazine, Vol. 30, No. 10, (April 1958).

[45]Elmer Oscar Strickland, "The Factors Affecting Enrollment in Agriculture and Agricultural Education at Auburn University From 1956-60," (Special Research Problem, Auburn University, Auburn, Alabama, 1960).

reasons for enrolling or not enrolling in agricultural curricula: reasons for enrolling -- interested in teaching vocational agriculture; interested in dairy extension work; desired a college degree; had a scholarship; wanted to gain experience for advancement in agriculture. Reasons for not enrolling -- lack of salary incentive; no financial backing; public sentiment relative to agriculture; other fields more attractive; difficulty in passing college curriculum.

Graduates who had been enrolled in agricultural curricula, indicated in a study by Powers,[46] that several factors influenced their choice of occupation and thus their choice of curricula. In order of frequency of reporting, these factors were: natural aptitude and liking for type of work; availability of positions in field; experience while attending college; counsel and influence of an elementary school teacher, county extension agent or high school teachers; experience in the field; parents desire, approval and/or encouragement; experiences while attending high school; counsel and influence by a college teacher; counsel and influence of college advisor or counselor; and counsel and influence of close relatives.

Summary

Several inferences can be drawn from previous research findings regarding the occupational choices and educational plans of youth.

(1) Final occupational choices are based upon tentative occupational choices, arrived at by occupational role taking, which in turn, is related to the total social and psychological development of an

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[46]Powers, op. cit., p. 64.

individual. Choices are on the basis of an individual's experience, knowledge of occupational alternatives, training requirements of occupations, financial and non-monetary rewards, the individual's resources, and the individual's preference and personality characteristics.

(2) The influence of parents, friends, school personnel and others is important in contributing to the development of the individual's self-concept. Through these persons, he learns what is available and appropriate for him.

(3) Occupational choice and educational planning are interrelated.

(4) The persuasive and potent influences of reference groups within the social status greatly influence youths' attitudes toward education.

(5) Rural youth tend to have lower levels of occupational and educational aspiration than urban youth.

(6) Planning to farm has a strong negative influence on the plans of rural youth to attend college.

(7) A considerably larger proportion of urban youth than farm youth plan to attend college.

(8) The characteristics of farm youth enrolled in agricultural curricula in college are different from those of non-farm youth enrolled in the same curricula in many respects.

(9) Youths perceive specific factors as having had the greatest influence on their choice of college curricula.

The literature cited provides a basis for an understanding of some of the work that has been done in the area of occupational choice and educational planning. Thus it has implications and application for succeeding chapters in this study. It also serves to point out the uniqueness of this study. In so far as could be determined, in

no prior study had anyone specifically studied farm and non-farm youth relative to the characteristics and cognitive factors associated with choice of college curricula. Further, the criteria used for classifying youth as farm or non-farm youth in this study had not been previously reported.

CHAPTER III

THE YOUTH STUDIED COMPARED WITH PREVIOUS GROUPS OF STUDENTS

The purpose of this chapter will be to compare students in the sample who were enrolled in agricultural curricula with comparable groups of students enrolled in agricultural curricula in previous years. The comparison will be made on the basis of performance on orientation tests, home background, participation in the FFA and 4-H Clubs and choice of major. It will give some indication as to the similarity or differences between the sample and comparable students in previous years.

The results are presented statistically in terms of whether or not the differences are significant. The Chi-Square technique was used to determine significance.

Table I shows student performance on the English and Reading orientation tests. The English test contains thirty-five objective test items representing aspects of English usage. The Reading test is designed to measure the ability of students to comprehend thoughts in reading passages that are representative of textual materials found in several academic areas. Significant differences at the 5 percent level were found between the students in the sample group and similar student groups of previous years.

The students in the sample group achieved higher median scores than did the student groups of previous years.

TABLE I

STANDINGS OF STUDENTS ENROLLED IN AGRICULTURAL CURRICULA ON ENGLISH AND READING ORIENTATION EXAMINATIONS[a]

Term	N	Range	10 PR	Q_1	Median	Q_3	90 PR
English Test							
Fall 1958[b]	188	4-31	9.2	12.9	18.0	22.2	26.3
Fall 1959[b]	236	3-34	10.6	14.4	17.8	22.3	26.4
Fall 1960[b]	209	4-34	10.6	14.7	18.8	23.7	27.5
Fall 1961[b]	241	6-32	12.0	14.8	19.3	23.3	27.7
Reading Test							
Fall 1958[b]	188	5-39	16.6	20.3	25.1	29.8	33.9
Fall 1959[b]	236	7-41	18.9	21.6	26.4	31.0	34.3
Fall 1960[b]	209	10-40	19.0	22.8	26.9	31.1	34.8
Fall 1961[b]	241	9-39	18.1	21.5	27.6	31.2	36.3

[a]Appendix A offers a key for interpreting the data

[b]Does not include Veterinary Medicine

Table II indicates the total score of the student groups on the college qualification tests. These tests measure scholastic aptitude and yield four scores: V (Verbal), I (General information), N (Numerical), and the total score which is the sum of the three part scores. Again significant differences at the 5 percent level were found between the median scores achieved by the students in the sample and those of comparable student groups of previous years.

The students in the sample group achieved higher scores than did similar student groups in previous years.

The student groups were compared on the basis of home background.

Table III shows that the proportion of farm to non-farm students in agricultural curricula has remained relatively constant in recent years.

TABLE II

STANDINGS OF STUDENTS ENROLLED IN AGRICULTURAL CURRICULA ON CQR TOTAL IN ORIENTATION EXAMINATIONS[a]

Term	N	Range	10 PR	Q_1	Median	Q_3	90 PR
			CQR Total				
Fall 1958[b]	188	56-177	80.9	97.5	112.5	134.2	153.3
Fall 1959[b]	236	63-180	86.8	101.5	115.5	134.8	151.1
Fall 1960[b]	209	63-175	93.4	104.2	121.0	138.0	153.0
Fall 1961[b]	241	63-190	95.8	108.8	124.5	141.0	161.5

[a]Appendix A offers a key for interpreting the data

[b]Does not include veterinary medicine

TABLE III

FARM AND NON-FARM BACKGROUND OF FIRST-TERM FRESHMEN ENROLLED IN AGRICULTURAL CURRICULA

Term	Number From Farm	Number Non-Farm	Percent Non-Farm
Fall 1958[a]	90	111	55
Fall 1959[a]	95	130	58
Fall 1960[b]	78	85	52
Fall 1961	114	158	58

[a]Does not include Veterinary Medicine

[b]Not all freshmen replied

The majors chosen by students enrolled in agricultural curricula are recorded in Table IV. General Agriculture, Forestry, and Fisheries and Wildlife were the majors chosen most often in each of the years. The percentage of students choosing a particular major in 1961 was not significantly different from the corresponding percentage in previous years.

TABLE IV

FIRST-TERM FRESHMEN STUDENTS IN AGRICULTURAL CURRICULA BY MAJOR[a]

Major	Fall 1958[b]		Fall 1959[b]		Fall 1960[b]		Fall 1961[b]	
	No.	%	No.	%	No.	%	No.	%
Agricultural Science	17	7	21	6	21	7	16	5
Agricultural Business	19	8	30	9	20	7	26	9
General Agriculture	65	25	132	39	109	38	126	40
Agricultural Engineering	26	10	20	6	27	9	23	7
Fisheries and Wildlife	51	20	56	17	48	16	41	13
Forestry	61	24	70	19	60	20	74	23
Lumber and Building Materials	12	5	3	1	4	1	5	2
Park Management	4	1	10	3	5	2	4	1
Total	255	100	242	100	295	100	316	100

[a]From the records of the Director of Resident Instruction, College of Agriculture

[b]Students majoring in Agricultural Science, Agricultural Business or General Agriculture choose one of the following specialized areas prior to their junior year in college: Agricultural Economics, Agricultural Education, Agricultural Communications, Agricultural Mechanics, Animal Husbandry, Dairy Production, Farm Crops, Floriculture, Food Science, Horticulture, Ornamental Horticulture, Pomology and Vegetable Crops, Poultry Science, Soil Science, and Resource Development.

The percentage of students with FFA and 4-H experience is shown in Table V. Except for 1961, a greater percentage reported FFA experience than 4-H Club experience. Likewise, the percentage of farm youth with FFA and 4-H Club experience was considerably greater than it was for non-farm youth. Again this has remained relatively constant in recent years.

SUMMARY

This chapter indicates that there was a significant difference between those youth in the sample who were enrolled in agricultural curricula

TABLE V

FRESHMAN STUDENTS WITH FFA AND 4-H CLUB EXPERIENCE ENROLLED IN AGRICULTURAL CURRICULA

Term	FFA Experience				4-H Club Experience			
	Farm Youth		Non-farm Youth		Farm Youth		Non-Farm Youth	
	No.	%	No.	%	No.	%	No.	%
Fall 1958	48	53	21	19	27	30	16	14
Fall 1959	54	56	30	23	33	34	19	14
Fall 1960[a]	33	43	16	18	24	30	12	14
Fall 1961[b]	67	60	11	7	76	68	21	16

[a]Not all freshmen replied

[b]Includes freshmen enrolled in Veterinary Medicine

and comparable groups of students in previous years when they were compared on the basis of median scores achieved on orientation examinations. This suggests that the sample group had greater scholastic ability than former groups. No significant differences were found, however, between the sample group and previous groups when they were compared on the basis of home background, choice of major and participation in the FFA and 4-H Clubs. It is especially interesting to note that the percentage of farm to non-farm youth was essentially the same for each of the years. This suggests that higher achievement on orientation examinations was not related to a greater or lesser percentage of non-farm youth enrolling in agricultural curricula.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

This chapter presents the results of the study in terms of responses to questions which were asked the students in the sample. The responses of farm youth enrolled in agricultural curricula are analyzed and compared to the responses of farm youth enrolled in other than agricultural curricula and to the responses of non-farm youth enrolled in agricultural curricula to identify certain characteristics of the youth studied. Emphasis is given to their attitude toward agriculture; their exposure to information about college and/or careers; and cognitive factors associated with their college curriculum choice.

No further description will be included here of those characteristics of the sample included in the section on delimitations and procedures of the study, and the preceding chapter.

Responses were secured from eighty-nine percent of the students contacted. One hundred and eleven of the one hundred and fourteen students classified as farm youth enrolled in agricultural curricula responded as compared to eighty-nine of the one hundred and two students who were classified as farm youth enrolled in other than agricultural curricula. One hundred and thirty-nine of the one hundred and fifty-eight students classified as non-farm youth enrolled in agricultural curricula responded.

Characteristics of the youth studied

Table VI shows the farming status of parents or guardians of the farm youth in the sample. Sixty percent of the farm youth enrolled in agricultural curricula indicated that their parents or guardians were full-time farmers as compared to 40 percent of the farm youth enrolled in other than agricultural curricula. A greater percentage of farm youth enrolled in non-agricultural curricula indicated that their parents lived on farms but did not farm than did farm youth enrolled in agricultural curricula. The difference was not significant, however.

TABLE VI

FARMING STATUS OF PARENTS OR GUARDIANS OF FARM YOUTH IN THE SAMPLE

	Students				
	Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Total
	Number	Percent	Number	Percent	
Full-time farming	66	60	36	40[a]	102
Part-time farming	28	25	31	35	59
Lived on farm but did not farm	15	14	22	25	37
No response	2	1	—	—	2
Total	111	100	89	100	200

[a]This percentage is significantly different at the 5 percent level from the corresponding percentage for farm youth enrolled in agricultural curricula.

Table VII shows that farm youth enrolled in agricultural curricula were not significantly different from farm youth enrolled in non-agricultural curricula when compared on their employment experiences. Non-farm youth reported considerably less farm work experience than

Characteristics of the youth studied

Table VI shows the further status of persons in families on the farm youth in the sample. Slightly several of the farm youth enrolled in agricultural curricula indicated that their fathers or guardians were full-time farmers in comparison with the farm youth enrolled in other than agricultural curricula. A greater percentage of farm youth enrolled in non-farm curricula indicated that their parents lived on farms but did not have their own farm enrolled in agricultural curricula. The differences are not significant, however.

TABLE VI

FARMING STATUS OF FAMILIES IN WHICH THE FARM YOUTH WERE REARED

	Curriculum			
	Farm Youth in Agricultural		Farm Youth in non-Agricultural		Total
	Number	Percent	Number	Percent	
Full-time farming	76	69	74	84*	102
Part-time farming	38	35	21	24	59
Lived on farm but did not farm	15	14	12	13	27
No response	2	1	—	—	2
Total	111	100	89	100	200

*This percentage is significantly different at the 5 percent level from the corresponding percentage for farm youth enrolled in agricultural curricula.

Table VII shows that farm youth enrolled in agricultural curricula were not significantly different from farm youth enrolled in non-agricultural curricula when compared on their employment experiences. Non-farm youth reported considerably less farm work experience than

farm youth but over 50 percent reported that they had worked on a farm or in an agricultural occupation related to farming. The latter included work in forests, conservation camps, feed stores, dairies, and other agricultural businesses.

TABLE VII

EMPLOYMENT EXPERIENCES OF STUDENTS

Type of Experience	Students					
	Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
Worked on farm	101	91	78	88	47	34[a]
Worked in Ag. occupation other than farming	9	8	3	3	29	21
Worked in Non-agricultural occupations	1	1	8	9	63	45[a]
Total	111	100	89	100	139	100

[a]This percentage is significantly different at the 5 percent level from the corresponding percentage for farm youth enrolled in agricultural curricula.

Farm youth enrolled in agricultural curricula differed significantly in some respects from farm youth not enrolled in agriculture, and non-farm youth enrolled in agriculture relative to the occupational areas of adults they admired most and the career aspirations of friends they most associated with. The data are shown in tables VIII and IX. Farm youth enrolled in agriculture most often reported that they admired adults who were employed in agriculture and that they associated most with friends who aspired to agricultural careers.

farm youth but over 50 percent reported that they had worked on a farm or in an agricultural occupation related to farming. The latter included work in forests, conservation areas, land survey, dairies, and other agricultural businesses.

TABLE XII

EXPERIENCE OF FARM YOUTH

Type of Experience	Farm Youth in Agricultural occupations		Farm Youth in non-agricultural occupations		Non-farm Youth in Agricultural occupations	
	Number	Percent	Number	Percent	Number	Percent
Worked on farm	107	94	72	90	40	74[a]
Worked in Agr. occupation other than farming	9	7	7	9	20	21
Worked in non-agricultural occupations	1	1	1	1	2	4[a]
Total	117	100	80	100	129	100

[a]This percentage is significantly different at the 5 percent level from the corresponding percentage for farm youth enrolled in agricultural curricula.

Farm youth enrolled in agricultural curricula differed significantly in some respects from farm youth not enrolled in agriculture, and non-farm youth enrolled in agriculture relative to the occupational areas of adults they admired most and the career aspirations of friends they most associated with. The data are shown in tables VIII and IX. Farm youth enrolled in agriculture most often reported that they admired adults who were employed in agriculture and that they associated most with friends who aspired to agricultural careers.

TABLE VIII

OCCUPATIONAL AREAS OF ADULTS
MOST ADMIRED BY STUDENTS

Occupational Area	Students: Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
Agriculture (Farming and other)	41	37	6	7[a]	13	9[a]
Non-Agricultural	27	24	59	66[a]	93	67[a]
Agriculture and Non-Agriculture	43	39	24	27	33	24[a]
Total	111	100	89	100	139	100

[a]This percentage is significantly different at the 5 percent level from the corresponding percentage for farm youth enrolled in agricultural curricula.

TABLE IX

CAREER ASPIRATIONS OF FRIENDS WITH WHOM
STUDENTS MOST ASSOCIATED

Career Aspirations	Students: Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
Agricultural	25	23	--	0[a]	6	4[a]
Non-Agricultural	30	27	57	64[a]	74	53[a]
Agricultural and Non-Agricultural	39	35	24	27	35	25
Undecided	17	15	8	9	24	18
Total	111	100	89	100	139	100

[a]This percentage is significantly different at the 5 percent level from the corresponding percentage for farm youth enrolled in agricultural curricula.

Sixty-seven percent of the farm youth enrolled in agricultural curricula reported that they had been enrolled in vocational agriculture in high school as compared to only 24 percent of the farm youth enrolled in other than agricultural curricula. Only 10 percent of the non-farm youth reported that they had been enrolled in vocational agriculture. Table X presents the responses of the three sample groups.

TABLE X

NUMBER OF STUDENTS WHO HAD STUDIED VOCATIONAL AGRICULTURE IN HIGH SCHOOL

Years of Vo-Ag.	Students					
	Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
None	39	33	67	76[a]	125	90[a]
One Year	12	11	9	10	4	3
Two Years	3	3	6	7	1	1
Three Years	10	9	4	4	3	2
Four Years	47	44	3	3[a]	6	4[a]
Total	72	67	22	24[a]	14	10[a]

[a]This percentage is significantly different at the 5 percent level from the corresponding percentage for farm youth enrolled in agricultural curricula.

Slightly fewer students in each classification reported that they had had FFA experience than had reported enrollment in vocational agriculture. The numbers are shown in Table XI. It indicates that not everyone who was enrolled in vocational agriculture in high school was a member of the FFA. Almost three times as many farm youth enrolled in agricultural curricula reported that they had studied vocational

agriculture and had been a member of the FFA as did farm youth enrolled in other than agricultural curricula. This might infer that some farm youth decide prior to high school or soon after entering high school that they will pursue a non-agricultural career and thus do not enroll in vocational agriculture. Others may have attended schools which did not offer vocational agriculture.

TABLE XI

NUMBER OF STUDENTS WHO HAD FFA EXPERIENCE

Years of FFA Experience	Students					
	Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
None	44	40	70	79[a]	128	98[a]
One Year	7	6	7	8	2	1
Two Years	3	3	5	6	3	2
Three Years	7	6	3	3	2	1
Four Years	46	42	4	4[a]	4	3[a]
More than Four Years	3	3	-	-	-	-
Total with FFA Experience	66	60	19	21[a]	11	7[a]

[a]This percentage is significantly different at the 5 percent level from the corresponding percentage for farm youth enrolled in agricultural curricula.

Forty-two percent of the farm youth enrolled in agricultural curricula reported that their favorite subject in high school was agriculture. Sixty-two percent of the farm youth who studied vocational agriculture in high school reported that it was the subject they enjoyed most. In light of the data presented in the previous

two tables, it is not surprising to find that only a small percentage of the other students reported that agriculture was their favorite subject. It is interesting to note, however, that half of the 10 non-farm boys who reported they were enrolled in agriculture as shown in the previous table reported that it was the subject they enjoyed most in high school. The results are shown in Table XII.

TABLE XII

SUBJECT STUDENTS ENJOYED MOST IN HIGH SCHOOL

Type of Subject	Students					
	Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
Vocational Agriculture) General Agriculture)	46	42	3	3[a]	7	5[a]
Subject other than the above	65	58	86	97[a]	132	95[a]
Total	111	100	89	100	139	100

[a]This percentage is significantly different at the 5 percent level from the corresponding percentage for farm youth enrolled in agricultural curricula.

Only two significant differences were found when farm youth enrolled in agricultural curricula were compared with the other groups in the sample relative to experience in 4-H Club work. This is shown in Table XIII. Less non-farm youth reported that they had been members of 4-H Clubs than farm youth. Otherwise the groups were not significantly different. Again it is quite likely that non-farm youth had less opportunity to join 4-H Clubs than farm youth.

The students were compared on the basis of activities they had participated in while in high school. Some significant differences

TABLE XIII

NUMBER OF STUDENTS WHO HAD 4-H EXPERIENCE

Years of 4-H Club Experience	Students					
	Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
None	35	32	40	45	118	84[a]
One Year	6	5	6	7	5	4
Two Years	10	9	9	10	5	4
Three Years	10	9	7	8	4	3
Four Years	17	15	4	4	3	2
More than Four Years	33	30	23	26	4	3
Total with 4-H Club Experience	76	68	49	55	21	16[a]

[a]This percentage is significantly different at the 5 percent level from the corresponding percentage for farm youth enrolled in agricultural curricula.

were found as indicated in Table XIV. Farm youth enrolled in agricultural curricula more often reported participation in the FFA and 4-H Clubs than did the other two groups. Farm youth enrolled in other than agricultural curricula reported significantly more participation in dramatics and chorus-vocal than did farm youth enrolled in agriculture. In all other activities, there was no significant difference between farm youth enrolled in agriculture and the other groups in the sample.

Forty-seven percent of the farm youth enrolled in agricultural curricula reported that they had decided to attend college during their last two years in high school, while the majority of the other two groups reported that they had decided to attend college prior to their

TABLE XIV

ACTIVITIES IN WHICH STUDENTS PARTICIPATED WHILE IN HIGH SCHOOL

Type of Activity	Students					
	Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
Athletics	74	67	64	72	95	68
Dramatics	34	30	42	47[a]	34	24
Band-Orchestra	21	18	27	30	30	22
4-H or FFA	80	72	33	37[a]	15	10[a]
Chorus-Vocal	20	18	33	37[a]	27	19
School Paper-Annual	30	27	30	34	28	20
Other	47	42	45	50	60	43

[a]This percentage is significantly different at the 5 percent level from the corresponding percentage for farm youth enrolled in agricultural curricula.

last two years in high school. Table XV shows the years in which students reported they had decided to attend college.

Although these differences in any one year were not significant, it can be observed that many farm youth enrolled in agriculture in the study sample made their decisions to enter college somewhat later than the students in the other two groups. When the T test was applied to an average of the years in which students decided to attend college, a significant difference, at the one percent level, was found between farm and non-farm youth. Farm youth in the sample, regardless of the curricula they enrolled in, selected their college curricula later in high school than did non-farm youth. These data are given in Table XVI. Even though farm youth who were not enrolled in agriculture

TABLE XV

SCHOOL YEAR IN WHICH STUDENTS REPORTED DECISIONS TO ATTEND COLLEGE

Year in School	Students: Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
6	15	14	15	17	24	17
7	5	5	6	7	9	6
8	7	6	13	15	16	12
9	15	14	9	10	34	24
10	15	14	19	21	27	20
11	28	24	12	13	15	11
12	26	23	15	17	14	10
Total	111	100	89	100	139	100

TABLE XVI

YEAR IN SCHOOL IN WHICH STUDENTS REPORTED THEY SELECTED THEIR COLLEGE CURRICULA

Year in School	Students: Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
6	3	3	2	2	7	5
7	4	4			3	2
8	1	1	2	2	7	5
9	7	6	6	7	14	10
10	15	14	18	21	20	14
11	20	18	18	20	36	26
12	52	47	42	47	38	27[a]
Other than the above	9	7	1	1	14	11
Total	111	100	89	100	139	100

[a]This percentage is significantly different at the 5 percent level from the corresponding percentage for farm youth enrolled in agricultural curricula.

reported they had decided to attend college earlier in life than farm youth enrolled in agriculture, as shown in the previous table, the groups were almost identical when they were compared as to the school year in which they selected their college curricula.

The majors and specializations selected by students enrolled in agricultural curricula were reported in Chapter III,[2] Table XVII gives the majors chosen by farm youth who enrolled in other than agricultural curricula.

TABLE XVII

MAJORS SELECTED BY FARM YOUTH ENROLLED IN OTHER THAN AGRICULTURAL CURRICULA

Major	Number	Percent
Engineering (other than agriculture)	22	26
Non-Preference	18	21
Science or Mathematics	14	16
Business	9	10
Pre-Law	4	4
Pre-Medicine	4	4
Education	4	4
Police Administration	3	3
Other	11	12
Total	89	100

Eighty percent of the farm youth in the sample had visited the university campus prior to enrolling in college as compared to 52 percent

[2]Cf. post, p. 37, et seq.

of the non-farm youth. Over half of the farm youth enrolled in agricultural curricula who had visited the campus had done so in connection with an FFA or 4-H Club activity. The majority of the students in the other two groups listed "other" events as the occasion for their visits. The responses are shown in Table XVIII. It might be noted that 19 percent of the farm boys enrolled in other than agricultural curricula visited the campus for an FFA or 4-H Club activity. The differences between farm youth enrolled in agriculture and farm youth enrolled in non-agricultural curricula is significant in respect to the percent that visited the campus for FFA and 4-H Club activities, however.

TABLE XVIII

STUDENT VISITATIONS TO MSU CAMPUS

	Students					
Occasion for visit	Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
4-H or FFA Activity	53	48	17	19[a]	6	4[a]
Agricultural College Open House			2	2	2	1
Farmers' Week	16	14	12	13	2	1[a]
Other	19	17	41	46[a]	63	45[a]
Total	88	79	72	80	73	51

[a]This percentage is significantly different at the 5 percent level from the corresponding percentage for farm youth enrolled in agricultural curricula.

There is also a significant difference between the number of youth enrolled in agriculture and the number of students in the other groups who visited campus for "other" occasions. Sixty-two percent of the farm youth enrolled in agriculture visited the campus to take part in

an agricultural activity, while the majority of the students in the other two groups visited the campus for "other" reasons.

There has been considerable discussion in recent years relative to the prestige rating of the word "agriculture." Some people believe that prospective students are often reluctant to enroll in such majors as forestry, park management, fisheries and wildlife, etc., if they are offered by the agricultural college. Further, these same people feel that non-farm students who do enroll in some of the majors offered in a college of agriculture would prefer that the major be offered in some other college in the university. The students in the sample were asked to state their preference as to which college should offer the curricula in which they were enrolled. Table XIX presents the response of the three sample groups.

TABLE XIX

STUDENTS' PREFERENCE RELATIVE TO WHICH COLLEGE SHOULD OFFER THE CURRICULA THEY ARE ENROLLED IN

	Students					
	Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
Preference	Number	Percent	Number	Percent	Number	Percent
Strongly prefer College of Agriculture	39	35	1	1[a]	21	15[a]
Prefer College of Agriculture	45	41	4	4[a]	45	32
Don't care	22	19	38	43[a]	43	31
Prefer college other than agriculture	3	3	25	28[a]	22	16
Strongly prefer college other than agriculture	2	2	21	24[a]	8	6
Total	111	100	89	100	139	100

[a]This percentage is significantly different at the 5 percent level from the corresponding percentage for farm youth enrolled in agricultural curricula.

Ninety-five percent of the farm youth in the sample enrolled in agricultural curricula either preferred the College of Agriculture or had no preference for the college which offered their major, and 95 percent of the farm youth enrolled in other than agricultural curricula quite naturally preferred a college other than agriculture or did not care. The interesting finding is that 78 percent of the non-farm youth also preferred the College of Agriculture or did not care. Only twenty-two percent of the non-farm students reported that they would prefer that their major be offered by a college other than agriculture. Their responses were not significantly different from those of farm youth enrolled in agricultural curricula.

Two of the hypotheses tested in this study were that farm youth who enroll in agricultural curricula less frequently report that their parents have high levels of educational and occupational aspiration for them than do farm youth who enroll in other than agricultural curricula. Tables XX, XXI, XXII and XXIII show the responses of the students regarding the levels of educational and occupational aspiration that their parents had for them. As indicated in these four tables, with but one exception, there were no significant differences between the two groups of farm youth in the sample. The one exception is found in Table XXV. More farm youth enrolled in other than agricultural curricula reported that their father would like them to pursue a very important occupation than did farm youth enrolled in agriculture. Significant differences between farm and non-farm youth enrolled in agricultural curricula are shown in Tables XXIII, XXIV and XXV. Non-farm youth reported, more often than farm youth, that their father had encouraged them to continue their education; and that their parents did not care how good the occupation was that they

were preparing for, as long as they liked it.

TABLE XX

EDUCATIONAL ASPIRATIONS THAT STUDENTS REPORTED THEIR MOTHER HAD FOR THEM

Educational Aspirations of Mother	Students					
	Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
Strongly encouraged continuing education	78	70	66	75	102	73
Gave student some encouragement to continue education	29	26	19	21	35	26
Never said much about education	2	2	4	4	2	1
Felt student would be better off going to work	2	2	—	—	—	—
Total	111	100	89	100	139	100

No significant differences were found between farm youth enrolled in agricultural curricula and the students in the other two groups.

There was a significant difference between farm youth enrolled in agricultural curricula and non-farm youth in regard to the amount of encouragement they felt their parents gave them for continuing their education.

Quite a number of significant differences were found between farm youth enrolled in agricultural curricula and the students in the other sample groups regarding the career areas in which they would most like to work. Almost half of the farm youth enrolled in agricultural curricula reported farming as their first career choice with

TABLE XXI

EDUCATIONAL ASPIRATIONS THAT STUDENTS REPORTED THEIR FATHER HAD FOR THEM

Educational Aspirations of Father	Students					
	Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
Strongly encouraged continuing education	64	57	55	62	93	68[a]
Gave student some encouragement to continue education	34	31	23	26	28	19
Never said much about education	11	10	9	10	15	11
Felt student would be better off going to work	2	2	2	2	3	2
Total	111	100	89	100	139	100

[a]This percentage is significantly different at the 5 percent level from the corresponding percentage for farm youth enrolled in agricultural curricula.

the broad field of agriculture second. This is contrary to the findings of Haller reported in the Review of Literature.[3] Farm youth enrolled in other than agricultural curricula preferred education, engineering and farming in that order. Non-farm youth rated agriculture and science as their first two choices. Forty percent of the non-farm youth chose agriculture as their number one career choice. Engineering was the area least chosen by both farm and non-farm youth enrolled in agriculture as shown in Table XXIV. The responses are dispersed throughout the various areas.

[3]Cf. ante, p. 19.

TABLE XXII

OCCUPATIONAL ASPIRATIONS THAT STUDENTS REPORTED THEIR MOTHER HAD FOR THEM

Felt Mother Wanted Them to Pursue	Students					
	Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
Very Important Occupation	8	7	16	18	7	5
Occupation that is considerably better than most occupations in community	22	20	16	18	14	10
Occupation that is slightly better than most occupations in community	10	9	3	3	10	7
Occupation which is equal to most in community	5	5	3	3	3	2
Doesn't care how good occupation is as long as student likes it	66	59	51	58	105	76[a]
Total	111	100	89	100	139	100

[a]This percentage is significantly different at the 5 percent level from the corresponding percentage for farm youth enrolled in agricultural curricula.

Ninety-five percent of the farm youth enrolled in agricultural curricula and 77 percent of the non-farm youth enrolled in agriculture classified the career they were preparing for as an agricultural career or related to agriculture. Their responses were significantly different however. Fifty-two percent of the farm youth classified their career as agricultural while 63 percent of the non-farm youth classified the career they were preparing for as related to agriculture. This is shown in Table XXV.

TABLE XXIII

OCCUPATIONAL ASPIRATIONS THAT STUDENTS REPORTED THEIR FATHER HAD FOR THEM

Felt Father Wanted Them to Pursue	Students					
	Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
Very Important Occupation	8	7	18	21[a]	10	7
Occupation that is considerably better than most occupations in community	28	25	19	21	21	15
Occupation that is slightly better than most occupations in community	8	7	6	7	10	7
Occupation which is equal to most in the community	5	5	4	4	4	3
Doesn't care how good occupation is as long as student likes it	62	56	42	47	94	68[a]
Total	111	100	89	100	139	100

[a]This percentage is significantly different at the 5 percent level from the corresponding percentage for farm youth enrolled in agricultural curricula.

It might be well to note that 12 percent of the farm youth who were not enrolled in agriculture classified the career they were preparing for as agricultural or related to agriculture.

When the three groups of students were compared on the basis of their understanding of career opportunities in agriculture, it was found that 17 percent of the farm youth who were not enrolled in agriculture and 21 percent of the non-farm youth enrolled in agriculture reported that they had a good understanding of career opportunities,

TABLE XXIV

CAREER AREA IN WHICH STUDENTS WOULD MOST LIKE TO WORK

Career Area	Students: Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
Education	6	5	22	25[a]	11	8
Medicine	12	11	7	8	14	10
Engineering	3	3	19	21[a]	10	7
Agriculture (The entire industry)	28	25	11	12	56	40[a]
Science	9	8	14	16	35	26[a]
Farming	53	48	16	18[a]	13	9[a]
Total	111	100	89	100	139	100

[a]This percentage is significantly different at the 5 percent level from the corresponding percentage for farm youth enrolled in agricultural curricula.

TABLE XXV

HOW STUDENTS CLASSIFIED THE CAREERS FOR WHICH THEY ARE PREPARING

Career Classification	Students: Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
Agricultural Career	57	52	2	2[a]	20	14[a]
Related to Agriculture	49	43	9	10[a]	87	63[a]
Non-Agricultural	4	4	68	77[a]	21	15
Don't Know	1	1	10	11	6	4
Didn't Answer	—	—	—	—	5	4
Total	111	100	89	100	139	100

[a]This percentage is significantly different at the 5 percent level from the corresponding percentage for farm youth enrolled in agricultural curricula.

as compared to 35 percent of the farm youth enrolled in agriculture. By the same token, almost twice as many farm youth enrolled in other than agricultural curricula and more than three times as many non-farm youth reported that they had little or no understanding of career opportunities in agriculture than did farm youth enrolled in agricultural curricula. The responses are presented in Table XXVI.

TABLE XXVI

DEGREE OF UNDERSTANDING STUDENTS REPORTED THEY HAD OF AGRICULTURAL CAREER OPPORTUNITIES

Understanding of Career Opportunities in Agriculture	Students					
	Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
Good Understanding	39	35	15	17[a]	30	21[a]
Some Understanding	67	60	66	74	87	63
Little or no Understanding	5	5	8	9	22	16
Total	111	100	89	100	139	100

[a]This percentage is significantly different at the 5 percent level from the corresponding percentage for farm youth enrolled in agricultural curricula

Attitudes of students towards agriculture

Five questions were included in the research instrument for the express purpose of identifying attitudes of the student groups towards agriculture. For the most part, the responses to these questions by farm youth enrolled in agricultural curricula were significantly different from farm youth enrolled in other than agriculture. On the other hand, they were not significantly different from those of non-farm youth enrolled in agricultural curricula.

Responses to the question, "which of the following most closely represents your feelings about the field of agriculture," are shown in Table XXVII.

TABLE XXVII

STUDENT ATTITUDES RELATIVE TO THE STATE OF THE AGRICULTURAL INDUSTRY

State of Agricultural Industry	Students					
	Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
Growing industry	89	80	45	50[a]	104	75
Neither growing or declining	15	13	14	16	15	11
Declining industry	5	5	18	21	4	3
Haven't developed a feeling	2	2	12	13	116	11
Total	111	100	89	100	139	100

[a]This percentage is significantly different at the 5 percent level from the corresponding percentage for farm youth enrolled in agricultural curricula.

A greater percentage of the farm youth enrolled in agricultural curricula felt that agriculture was a growing industry than did farm youth who were not enrolled in agriculture. Almost one-fourth of the farm youth enrolled in other than agricultural curricula reported that they felt agriculture was a declining industry.

A significant difference was found between the two groups of farm youth regarding the career opportunities they felt agriculture offered. As shown in Table XXVII, 83 percent of the farm youth enrolled in agriculture felt that agriculture was a growing industry as compared to 51 percent of the farm youth enrolled in other than agricultural curricula.

The responses of non-farm youth were not found to be significantly different from those of farm youth enrolled in agriculture.

TABLE XXVIII

STUDENT ATTITUDES RELATIVE TO CAREER OPPORTUNITIES IN AGRICULTURE

Career Opportunities in Agriculture	Students					
	Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
Growing	92	83	45	51[a]	108	78
Have remained the same	17	15	23	25	23	16
Declining	2	2	21	24[a]	8	6
Total	111	100	89	100	139	100

[a]This percentage is significantly different at the 5 percent level from the corresponding percentage for farm youth enrolled in agricultural curricula.

The question relating to the social status associated with an agricultural career produced some significantly different responses between the two groups of farm youth. Although Table XXIX shows a high majority of all students agreeing that high or average prestige is associated with a career in agriculture, a greater percentage of the farm youth in the sample who enrolled in agriculture felt that high prestige was associated with a career in agriculture than did farm youth who were enrolled in non-agricultural curricula.

Ninety-five percent of the farm youth enrolled in agriculture reported that they felt average or high prestige was associated with a career in agriculture as compared to 92 percent of the non-farm

TABLE XXIX

STUDENT ATTITUDES RELATIVE TO SOCIAL STATUS ASSOCIATED WITH AGRICULTURAL CAREER

Agricultural Careers	Students					
	Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
High Prestige	30	27	8	9	22	16
Average Prestige	75	68	71	80[a]	106	76
Low Prestige	6	5	10	11	11	8
Total	111	100	89	100	139	100

[a]This percentage is significantly different at the 5 percent level from the corresponding percentage for farm youth enrolled in agricultural curricula.

youth enrolled in agriculture and 79 percent of the farm youth who were not enrolled in agriculture.

A greater percentage of the farm youth who were not enrolled in agriculture felt that there was less opportunity for advancement in an agricultural career than there was in most other career areas than did farm and non-farm youth who were enrolled in agriculture. Fifty-six percent of the farm youth who were not enrolled in agriculture felt that agricultural careers offer as much opportunity for advancement as do most other career areas. Significant differences can be seen in Table XXX. .

No significant differences were found between the student groups regarding the potential for making money in agricultural careers. As shown in Table XXXI, two-thirds or more of the respondents felt that agricultural careers offer medium potential for making money.

TABLE XXX

STUDENT ATTITUDES RELATIVE TO OPPORTUNITIES FOR ADVANCEMENT IN AGRICULTURAL CAREER

In Relation to Other Career Fields	Students					
	Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
Agr. careers offer more opportunity for advancement	15	14	1	1	15	10
Agr. careers offer as much opportunity for advancement	88	79	50	56[a]	101	73
Agr. careers offer less opportunity for advancement	8	7	38	43[a]	23	17
Total	111	100	89	100	139	100

[a]This percentage is significantly different at the 5 percent level from the corresponding percentage for farm youth enrolled in agricultural curricula.

TABLE XXXI

STUDENT ATTITUDES RELATIVE TO THE POTENTIAL FOR MAKING MONEY IN AGRICULTURAL CAREERS

Potential for Making Money in Agr. Career	Students					
	Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
High Potential	21	19	7	8	16	12
Medium Potential	82	74	59	66	106	76
Low Potential	8	7	23	26	17	12
Total	111	100	89	100	139	100

The nature and extent of students exposure to information regarding careers and college curricula

With but two exceptions, as indicated in Table XXXII, there were no significant differences between the responses of the three groups regarding the availability in their high school of publications dealing with careers and college curricula. Over half of the students in each group felt that publications dealing with careers and college curricula, agricultural or otherwise, were readily available.

TABLE XXXII

STUDENT RESPONSE RELATIVE TO THE AVAILABILITY OF PUBLICATIONS DEALING WITH CAREERS AND COLLEGE CURRICULA

Publications Dealing With Chosen Career Area	Students					
	Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
Felt they were readily available	59	53	41	46	61	44
Felt they were not readily available	41	37	34	38	59	42
Don't know how available they were	11	10	14	16	19	14
Total	111	100	89	100	139	100
Publications Dealing with College Curricula in General						
Felt they were readily available	82	74	64	72	113	81
Felt they were not readily available	22	20	21	24	17	12
Don't know how available they were	7	6	4	4	9	7
Total	111	100	89	100	139	100

TABLE XXXII (Continued)

Publications Dealing With Agricultural Careers	Students: Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
Felt they were readily available	76	68	50	56[a]	80	58[a]
Felt they were not readily available	31	28	14	16	33	23
Don't know how available they were	4	4	25	28	26	19
Total	111	100	89	100	139	100
Publications Dealing With Agricultural Curricula						
Felt they were readily available	65	59	42	47	83	60
Felt they were not readily available	38	34	16	18	30	21
Don't know how available they were	8	7	31	35	26	19
Total	111	100	89	100	139	100

[a]This percentage is significantly different at the 5 percent level from the corresponding percentage for farm youth enrolled in agricultural curricula.

A greater percentage of farm youth enrolled in other than agricultural curricula reported that they did not know how available agricultural publications were than did the other two student groups. Similarly, a lesser percentage of the respondents reported that agricultural career publications were readily available than did the other two groups of students. When the three groups were compared regarding the extent to which they read publications dealing with careers and

college curricula in general, no significant differences were found. However, as is indicated in Table XXXIII, when they were compared relative to the extent to which they read publications dealing with agricultural careers and agricultural curricula, significant differences were found between farm youth enrolled in agriculture and the other two groups.

Farm youth enrolled in other than agricultural curricula and non-farm youth enrolled in agriculture less often reported that they had extensively read publications dealing with agricultural careers and agricultural curricula and more often reported that they had read this type of publication "little or not at all" than did farm youth enrolled in agriculture.

A greater percentage of farm youth enrolled in agricultural curricula reported that they had heard a college faculty member give a talk on careers and college curricula, agricultural and other, than did the students in the other two groups. The differences between the groups are indicated in Table XXXIV.

Where did the students hear a college faculty member speak on agricultural careers and/or agricultural curricula? Table XXXV shows that their responses included: at the high school, at an FFA banquet, at a career day, during a college visit and "others." No significant differences were found between the groups although a greater percentage of farm youth enrolled in agricultural curricula indicated that they had heard such a talk at the high school or at an FFA banquet than did the other two groups.

TABLE XXXIII

THE EXTENT TO WHICH STUDENTS REPORTED THEY READ PUBLICATIONS CONCERNED WITH CAREERS AND COLLEGE CURRICULA

Extent to Which Read	Students: Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
General Career Publications						
Read extensively	13	12	17	19	30	22
Read some	73	65	63	71	88	63
Read little or not at all	25	23	9	10	21	15
Total	111	100	89	100	139	100
Agricultural Careers Publications						
Read extensively	45	41	3	3[a]	30	22[a]
Read some	56	50	35	40	64	46
Read little or not at all	10	9	51	57[a]	45	32[a]
Total	111	100	89	100	139	100
Publications Concerned With General College Curricula						
Read extensively	17	15	19	21	28	20
Read some	59	53	54	61	82	59
Read little or not at all	35	32	16	18	29	21
Total	111	100	89	100	139	100
Publications Concerned With Agricultural Curricula						
Read extensively	27	24	2	2	27	19
Read some	60	54	19	22[a]	54	39[a]
Read little or not at all	24	22	68	76[a]	58	42[a]
Total	111	100	89	100	139	100

[a]This percentage is significantly different at the 5 percent level from the corresponding percentage for farm youth enrolled in agricultural curricula.

TABLE XXXIV

NUMBER OF STUDENTS WHO HEARD A TALK ABOUT CAREERS AND/OR COLLEGE BY A COLLEGE FACULTY MEMBER

Type of Talk	Students					
	Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
Heard college faculty member give talk on careers and/or college	93	84	64	72[a]	105	76[a]
Heard college faculty member give talk on ag. careers and/or ag. curricula	76	68	30	34[a]	63	45[a]

[a]This percentage is significantly different at the 5 percent level from the corresponding percentage for farm youth enrolled in agricultural curricula.

TABLE XXXV

LOCATION OR OCCASION WHERE STUDENTS HEARD COLLEGE FACULTY MEMBER SPEAK ON AGRICULTURAL CAREERS AND/OR AGRICULTURAL CURRICULA

Location or Occasion	Students					
	Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
In high school	31	28	16	18	36	26
At FFA banquet	9	8	3	3	3	2
At career day	8	7	7	8	8	6
During college visit	14	13	1	1	16	12
Other	20	18	9	10	19	14
Total	82	74	36	40	82	60

Cognitive factors associated with college curricula choice

What persons had students found to be of importance in helping them choose their college curricula? Table XXXVI shows how the 339 students ranked the various people. The responses of the three groups of students differed significantly on six of the ten factors tested by the Chi Square technique.[4] In general, it will be noted that farm youth enrolled in other than agricultural curricula and non-farm youth were slightly more conservative in their ratings than farm youth enrolled in agricultural curricula. Parents were rated most important by farm youth while non-farm youth rated adults, other than parents or teachers, as being most important.

Farm youth enrolled in agricultural curricula rated vocational agriculture instructors, adults (other than parents and teachers), and teachers (other than vocational agriculture), in that order as of greatest importance, but less so than parents. Farm youth enrolled in other than agricultural curricula were quite similar to farm youth enrolled in agriculture in their ratings of people except for their ratings of the vocational agriculture instructor. Farm youth in non-agricultural curricula rated vocational agriculture instructors eighth while farm youth enrolled in agriculture rated them second. When only those youth in the sample who had studied vocational agriculture in high school were compared, it was found that those enrolled in agricultural curricula rated vocational agriculture teachers significantly higher as a source of influence.

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[4]For a complete statistical summary, including Chi Square value, degrees of freedom, and level of significance, see Appendix I.

TABLE XXXVI

STUDENT RATING OF PEOPLE WHO INFLUENCED COLLEGE CURRICULA CHOICE[a]

People	Students		
	Farm Youth in Ag. Curricula	Farm Youth in Non-Ag. Curricula	Non-Farm Youth in Ag. Curricula
Parents	2.12	1.92	1.85
Adults (other than parents and teachers)	1.87	1.84	1.90
Friends	1.67	1.60	1.59
Vo-Ag Teachers	1.95	1.09	1.16
4-H Agent or Leader	1.50	1.06	1.01
Teachers other than Vo-Ag	1.72	1.83	1.67
High School Counselor	1.66	1.68	1.53
College Faculty Member	1.61	1.47	1.70
Employers	1.56	1.45	1.79
Others	.99	.98	1.00

[a]The higher the numerical value, the more important the perceived influence.

Non-farm youth differed a great deal from farm youth enrolled in agricultural curricula in three respects: they rated vocational agricultural teachers much lower and college faculty members and employers much higher than did farm youth enrolled in agricultural curricula. All of the student groups rated 4-H Club agents and leaders second from the bottom in importance.

A further study of the rating given various factors was made by asking the students to rate factors which influenced their choice of

college curricula. Table XXXVII shows that on this basis, the vocational agriculture course, publications dealing with agriculture careers, and publications dealing with agricultural curricula show greater differences for farm youth in the two categories than do the other factors. When the farm youth in the two groups who had studied vocational agriculture in high school were compared, the same pattern of significant differences emerged. When the ratings of farm youth enrolled in agricultural curricula were compared with these of non-farm youth, the vocational agriculture course, publications dealing with specific non-agricultural curricula and/or college curricula in general, publications dealing with agricultural careers and experiences in the FFA, showed the greater differences. The responses of the three groups of students differed significantly on all of the fifteen factors tested by the Chi Square technique.[5]

The students were compared on the basis of other factors which may have influenced them to choose their college curricula. As indicated in Table XXXVIII, farm youth enrolled in agricultural curricula ranked such factors as: an interest in agriculture, a liking for plants and/or animals, an interest in working outdoors and a desire to become a farmer as having influenced their curricula choice the most. Farm youth enrolled in other than agriculture ranked such factors as: an interest in a particular career area, the feeling that there is more opportunity for advancement in your chosen career area, a feeling that you can use your education to its best advantage, and a feeling that areas other than agriculture offer greater opportunity

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[5]For a complete statistical summary, including Chi Square value, degrees of freedom, and level of significance, see Appendix V.

TABLE XXXVII

STUDENT RATING OF FACTORS WHICH INFLUENCED COLLEGE CURRICULA CHOICE[a]

Factors	Students		
	Farm Youth in Ag. Curricula	Farm Youth in Non-Ag. Curricula	Non-Farm Youth in Ag. Curricula
High school courses other than Vo-Ag.	1.78	2.27	1.71
Vocational agriculture course	1.86	1.10	1.10
Rank in high school class	1.77	2.04	1.55
Employment experiences	2.26	1.89	2.20
Speech about agriculture and/or ag. careers	1.76	1.10	1.45
Speech about a specific non-ag. career and/or careers in general	1.36	1.54	1.45
Publications dealing with agricultural curricula	1.97	1.18	1.78
Publications dealing with a specific non-ag. curricula and/or college curricula in general	1.47	1.78	1.57
Publications dealing with agricultural careers	2.06	1.14	1.79
Publications dealing with non-agricultural careers	1.34	1.83	1.48
Visit to M.S.U. campus	1.77	1.47	1.60
Experiences in the FFA	1.76	1.04	1.05
Experiences in 4-H Clubs	1.75	1.07	1.08
High school activities	1.72	1.91	1.57
Others	.71	.85	1.35

[a]The higher the numerical value, the more important the perceived influence.

as having had the greatest influence on their choice of college curricula. Non-farm youth ranked the factors: an interest in a particular career area, a liking for plants and/or animals, an interest in working out of doors, and an interest in an agricultural career area other than farming as having influenced their curricula choice the most.

It appears that both farm youth and non-farm youth enrolled in agricultural curricula indicated that an interest in working out of doors and a liking for plants and/or animals had an important influence on their college curricula choice.

The factors on which the groups differ significantly are indicated in the table.

TABLE XXXVIII

COMPARISON OF PERCEIVED FACTORS WHICH INFLUENCED COLLEGE CURRICULA CHOICE

Factor	Students					
	Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
An interest in agriculture	80	72	3	3[a]	43	30[a]
A desire to become a farmer	41	36	2	2[a]	5	4[a]
An interest in ag. but have a limited opportunity to enter farming	17	15	7	8	11	8
An interest in an ag. career other than farming	30	27	13	14	58	42[a]
A liking for plants and/or animals	62	56	8	9[a]	94	68

TABLE XXXVIII (continued)

Factor	Students					
	Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
A feeling that areas other than ag. offer greater opportunity	7	6	33	37[a]	7	5
An interest in a particular career area	26	33	56	63[a]	89	64[a]
A desire to achieve high social status	4	4	17	19	11	8
A desire to make a lot of money	9	8	20	23	7	5
A feeling that you aren't smart enough to succeed in some other curricula	8	7	4	4	6	4
A college or university scholarship	10	10	8	9	4	3
An interest in working out of doors	64	58	13	14[a]	94	68
A desire to travel	5	5	13	14	19	13
A desire to live in a city	0	0	4	4	6	4
A feeling that your chosen career area offers you good working hours	1	.05	16	18	6	4
A desire to become famous	3	3	8	9	0	-
The feeling that there is great opportunity for advancement in your chosen career area	18	16	34	40[a]	28	20
A desire to do good for others	15	13	21	23	33	24

TABLE XXXVIII (continued)

Factor	Students: Farm Youth in Ag. Curricula		Farm Youth in Non-Ag. Curricula		Non-Farm Youth in Ag. Curricula	
	Number	Percent	Number	Percent	Number	Percent
A feeling that it will prepare you for a variety of work	25	23	20	23	21	15
A desire to have an "in-door" job	0	0	2	2	2	1
A desire to be in a position of authority	5	5	15	16	9	6
A feeling that you can use your education to its best advantage	25	23	42	47[a]	22	16
High scholastic standing in your high school class	4	4	11	12	1	.05
Others	7	6	7	8	14	10

[a]This percentage is significantly different at the 5 percent level from the corresponding percentage for farm youth enrolled in agricultural curricula.

CHAPTER V

SUMMARY, CONCLUSIONS AND IMPLICATIONS

Summary

This has been a study to identify characteristics of selected students enrolling in agricultural curricula in college and the cognitive factors associated with their curricular choice. Specific purposes were to compare farm youth enrolled in agricultural curricula with farm youth enrolled in non-agricultural curricula and non-farm youth enrolled in agricultural curricula, on the basis of: (1) their general characteristics; (2) their attitudes toward agriculture; (3) their exposure to information regarding careers and curricula; and (4) the perceived influence of people, experiences and other factors on their curricular choice. The comparisons were made to determine whether any significant differences existed between the farm youth enrolled in agriculture and the other groups studied.

This chapter will present a summary of the student responses, along with the conclusions and implications.

Summary of General Characteristics of the Students

The following statements summarize the characteristics of the students in the sample:

(1) Farm youth enrolled in agricultural curricula differed significantly from farm youth enrolled in other than agricultural curricula in the following ways:

(a) they more often reported that their parents or guardians were full-time farmers;

(b) a greater percentage reported that the adults they admired most were in agricultural occupations;

(c) a greater percentage reported that their closest friends were aspiring to agricultural careers;

(d) a greater percentage had studied vocational agriculture in high school;

(e) they reported more participation in the FFA and less in dramatics, chorus-vocal activities;

(f) they more often visited the college campus for FFA and 4-H Club activities and less often for "other" activities;

(g) a greater percentage preferred that their curricula be offered in the College of Agriculture;

(h) a much greater percentage chose farming as their first career choice;

(i) a greater percentage classified their ultimate career as "agricultural" or related to agriculture;

(j) a greater percentage reported a good understanding of career opportunities in agriculture.

(2) Farm youth enrolled in agricultural curricula differed significantly from non-farm youth enrolled in agriculture in the following ways:

(a) they more often reported that they had worked on a farm and less often reported that they had worked in non-agricultural occupations;

(b) they more often reported that the adults they admired most were employed in agricultural occupations;

(c) a greater percentage reported that their closest friends were aspiring to agricultural careers;

(d) a greater percentage reported that they had studied vocational agriculture and participated in FFA and 4-H activities;

(e) they more often reported that agriculture was their favorite subject in high school;

(f) they more often reported that they had selected their college curricula when they were seniors in high school;

(g) they more often visited the college campus to participate in FFA and 4-H Club activities and less often for "other" activities;

(h) a greater percentage strongly preferred the College of Agriculture as the school which should offer their curriculum;

(i) a smaller percentage reported that their father had strongly encouraged them to continue their education;

(j) a greater percentage classified the career they were preparing for as agricultural, while a smaller percentage classified it as related to agriculture;

(k) a greater percentage reported they had a good understanding of career opportunities in agriculture.

Summary of Students' Attitude Toward Agriculture

The following statements summarize the attitudes of the students in the sample toward agriculture:

(1) Farm youth enrolled in agricultural curricula differed significantly from farm youth in other than agricultural curricula in the following ways:

(a) they more often reported that they felt agriculture was a growing industry;

(b) a greater percentage reported that they felt the career opportunities in agriculture were growing;

(c) they less often reported that agricultural careers were associated with average social prestige;

(d) a greater percentage reported that they felt agricultural careers offered as much opportunity for advancement as other career areas.

(2) Farm youth in agriculture did not differ significantly from non-farm youth in agriculture with respect to their attitudes toward agriculture.

Summary of Students' Exposure to Information About Careers and College Curricula

The following statements summarize the students' exposure to information about careers and college curricula:

(1) Farm youth enrolled in agriculture differed significantly from the youth in the other two groups in the following ways:

(a) they more often reported that they felt agricultural career publications were readily available in their high school;

(b) they more often reported that they had extensively read agricultural careers publications;

(c) they less often reported that they had read agricultural careers publications "little or not at all;"

(d) they more often reported that they had done some reading in publications dealing with agricultural curricula;

(e) they less often reported that they had read publications dealing with agricultural curricula "little or not at all;"

(f) they more often reported that they had heard a college faculty member give a talk on agricultural careers and agricultural curricula.

Summary of Cognitive Factors Associated With Curricula Choice

The students were asked to cite the people who had influenced their choice of college curricula. Significant differences were found between the groups with respect to the amount of influence the students felt was exerted by parents, vocational agriculture teachers, college faculty members, 4-H Club agents or leaders, teachers other than Vo-Ag and employers. The following statements summarize the way in which the students rated people as a source of influence.

(1) Farm youth enrolled in agricultural curricula differed significantly from farm youth in other than agricultural curricula in the following ways:

(a) they more often rated vocational agriculture teachers as the greatest source of influence, after parents.

(b) they rated adults (other than parents and teachers), friends, college faculty members, employers and 4-H Club agents or leaders higher as a source of influence. Both groups rated 4-H Club agents or leaders as having the least influence however.

(c) they rated teachers (other than vo-ag) and high school counselors lower as a source of influence.

(2) Farm youth enrolled in agricultural curricula differed significantly from non-farm youth in agricultural curricula in the following ways:

(a) they rated parents, vocational agriculture teachers, friends, teachers (other than vo-ag), high school counselors and 4-H Club agents and leaders higher as a source of influence. Both groups, however, rated 4-H Club agents and leaders as having had the least influence on their college curricula choice.

(b) they rated adults (other than parents and teachers), college faculty members, and employers lower as a source of influence.

When the students were asked to rate factors which might have influenced their choice of college curricula, significant differences were found between the groups as summarized by the following statements:

(1) Farm youth enrolled in agricultural curricula differed significantly from farm youth enrolled in other than agricultural curricula in the following ways:

(a) they rated the vocational agriculture course, employment experiences, a speech about agriculture and/or agricultural careers, publications dealing with agricultural curricula, publications dealing with agricultural careers, visit to M.S.U. campus, and experiences in the FFA and 4-H Club higher as a source of influence.

(b) they rated high school courses (other than vo-ag), rank in high school class, speech about a specific non-agricultural career and/or curricula or careers in general, publications dealing with non-agricultural curricula and non-agricultural careers, and high school activities, lower as a source of influence.

(a) they [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

(b) they [illegible]

[illegible]

[illegible]

When the [illegible]

influenced [illegible]

were found [illegible]

(1) [illegible]

[illegible]

[illegible]

(a) they [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

visit [illegible] meeting, [illegible] in the FFA and

4-H Club [illegible] as a [illegible].

(b) they rated high school courses taken on vocational, rank in high school class, growth about a specific non-agricultural career and/or curriculum or career in general, participations dealing with non-agricultural curricula and non-agricultural careers, and high school activities, lower as a source of influence.

(2) Farm youth enrolled in agricultural curricula differed significantly from non-farm youth in agricultural curricula in the following ways:

(a) they rated vocational agriculture and other high school courses, rank in high school class, speech about agriculture and/or agricultural careers, publications dealing with agricultural careers and agricultural curricula, visit to M.S.U. campus, experiences in the FFA and 4-H Club and high school activities, higher as a source of influence.

(b) they rated publications dealing with non-agricultural curricula and non-agricultural careers, speech about a specific non-agricultural career and/or careers in general, and "others" lower as a source of influence.

A comparison of other factors which students perceived to have influenced their curricula choice showed some significant differences between the groups in the sample.

(1) Farm youth enrolled in agricultural curricula differed significantly from the other two groups of students as follows:

(a) they more often reported that an interest in agriculture and a desire to become a farmer influenced their curricula choice.

(b) they less often reported that an interest in a particular career area influenced their curricula choice.

(2) Farm youth enrolled in agricultural curricula differed significantly from farm youth not enrolled in agriculture in the areas cited above plus the following:

(a) they more often reported an interest in working out of doors as having influenced their curricula choice.

(b) they more often reported an interest in plants and/or animals as having influenced their curricula choice;

(c) they less often reported that "a feeling that there is great opportunity for advancement in their chosen career area" influenced their curricula choice.

(d) they less often reported "a feeling that they can use their education to its best advantage" influenced their curricula choice.

(3) In addition to the differences cited in the first statement above, farm youth also differed from non-farm youth in that non-farm youth more often reported that an interest in an agricultural career other than farming influenced their curricula choice.

A liking for plants and/or animals and an interest in working out of doors was reported by a high percentage of both farm and non-farm youth in agriculture as having influenced their curricula choice.

CONCLUSIONS

Seven hypotheses, as stated on pages 9 and 10, provided the basis for this study. The conclusions are drawn from the findings as they relate to the hypotheses.

Conclusions Relative to Hypothesis Number 1

Hypothesis number 1 was that farm youth who enroll in agricultural curricula report more influence from sources and experiences supporting agriculture than do farm youth who enroll in other than agricultural curricula.

(a) Shop [illegible]

[illegible]

(b) Shop [illegible]

[illegible]

(c) Home [illegible]

[illegible]

(d) Use [illegible]

[illegible]

(e) In [illegible]

[illegible]

A little [illegible]

of those who [illegible]

youth in agriculture [illegible]

[illegible]

Seven hypotheses, [illegible] for this study. The [illegible] relate to the hypotheses.

Conclusions Relative to Hypothesis Number 1

Hypothesis number 1 was that farm youth who enroll in agricultural curricula report more influence from sources and experiences supporting agriculture than do farm youth who enroll in other [illegible] agricultural curricula.

This hypothesis was to be accepted and regarded as true if farm youth enrolled in agriculture reported significantly more influence from the following than did farm youth enrolled in non-agricultural curricula:

* (1) Adults in agricultural occupations
* (2) Friends aspiring to agricultural careers
* (3) Vocational agriculture instructors
* (4) Speech about agricultural careers and/or agricultural curricula
* (5) Agricultural employers
* (6) Publications dealing with agricultural careers
* (7) Publications dealing with agricultural curricula
* (8) Vocational agricultural course
* (9) Experience in the FFA
*(10) Experience in the 4-H
*(11) Employment experience in agriculture

In all the above factors (*) significant differences were found between the two groups. Farm youth enrolled in agricultural curricula reported significantly more influence from these sources and experiences than did farm youth enrolled in other than agricultural curricula. Therefore, hypothesis number one was accepted.

Conclusions Relative to Hypothesis Number 2

Hypothesis number 2 was that farm youth who enroll in agricultural curricula less frequently report that their parents have high levels of educational aspiration for them than do farm youth who enroll in other than agricultural curricula.

Data to test this hypothesis were taken from questions about the youths' parents. Each boy's parents' level of educational aspiration

for him was measured by his responses to two identical questions, one for each parent. Responses to each question were arbitrarily scored from zero to four, and the scores for both summed to provide for an over-all index of the parents' level of educational aspiration for him.

No significant differences were found between the two groups of students.

Conclusions Relative to Hypothesis Number 3

Hypothesis number 3 was identical to hypothesis number 2 except that it referred to the level of occupational aspiration that parents had for the students.

Again, the responses to each of two questions were arbitrarily scored from zero to four, and the scores for both were summed to provide an over-all index of the students' parents' level of occupational aspiration for him.

No significant differences were found between the two groups of students.

Conclusions Relative to Hypothesis Number 4

Hypothesis number 4 was that farm youth who enroll in agricultural curricula report greater exposure to information about agriculture than do farm youth who enroll in other than agricultural curricula.

It was decided to accept this hypothesis if the following criteria were met:

(1) A significantly higher percentage of farm youth in agriculture reported that publications dealing with agricultural careers and/or agricultural curricula were readily available in their high school.

for idea was measured by the [illegible]

for each period. Responses to [illegible]

from zero to five, and the [illegible]

over-all index of the [illegible]

No significant [illegible]

students.

Conclusions [illegible]

Hypothesis [illegible]

that it [illegible]

had for the students.

Again, [illegible]

scored [illegible]

with an over-[illegible]

aspiration [illegible]

No significant [illegible]

students.

Conclusions Relative to Curricula [illegible]

Hypothesis [illegible] in agricultural

curricula [illegible]

than do [illegible]

It was decided to accept this hypothesis for the following reasons:

(1) A significantly higher percentage of [illegible] in agricultural

[illegible] reported that publications dealing with agricultural courses

and/or agricultural curricula were readily available in their high

school.

(2) A significantly higher percentage of farm youth in agricultural curricula reported that they had extensively read publications dealing with agricultural careers and agricultural curricula;

(3) A significantly higher percentage of farm youth in agriculture reported that they had heard a speech about agricultural careers and/or agricultural curricula.

(4) A significantly higher percentage of farm youth in agriculture had been enrolled in vocational agriculture.

(5) A significantly higher percentage of farm youth in agriculture had been members of the FFA.

(6) A significantly higher percentage of farm youth in agriculture had visited the college campus to participate in an FFA or 4-H Club activity.

In testing this hypothesis all but the first criteria were completely satisfied.

On the basis of the criteria listed and findings of the study, hypothesis number 4 was accepted.

Conclusions Relative to Hypothesis Number 5

Hypothesis number 5 was that non-farm youth who enroll in agricultural curricula report factors as having influenced their choice of college curricula which are significantly different from those reported by farm youth as having influenced their choice. The students were asked to rate 25 factors relative to the influence they felt each had on their college curricular choice.

It was decided to accept this hypothesis if the two groups of students differed significantly on these factors.

Significant differences between the two groups were found in 84 percent of the factors. Therefore this hypothesis was accepted.

Conclusions Relative to Hypothesis Number 6

Hypothesis number 6 was that non-farm youth who enroll in agricultural curricula and farm youth who enroll in other than agricultural curricula, as a group, report a less favorable attitude toward agriculture as a career field than do farm youth enrolled in agricultural curricula. This hypothesis was tested by the responses to five questions in the research instrument.

It was decided to accept the hypothesis and regard it as true if the responses given by non-farm youth and farm youth in other than agricultural curricula differed significantly from those of farm youth in agricultural curricula.

It was found that farm youth enrolled in non-agricultural curricula differed significantly from farm youth in agriculture as follows: (1) a smaller percentage thought agriculture was a growing industry; (2) a greater percentage felt that the career opportunities were declining; (3) a greater percentage felt agriculture offered less opportunity for advancement than other careers; (4) a greater percentage felt agriculture offered average social prestige; (5) a smaller percentage felt it offered as much opportunity for advancement as other career areas. No significant differences were found between the responses of non-farm youth and farm youth enrolled in agriculture. This hypothesis was therefore neither wholly accepted nor rejected.

The part that was accepted is that farm youth enrolled in other than agricultural curricula have a less favorable attitude toward agriculture as a career field than farm youth enrolled in agriculture.

The part that was rejected is that non-farm youth enrolled in agriculture have a less favorable attitude toward agriculture than farm youth enrolled in agriculture.

Conclusions Relative to Hypothesis Number 7

Hypothesis Number 7 was that non-farm youth who enroll in agricultural curricula and farm youth who enroll in other than agricultural curricula less frequently report goals and objectives directly related to agriculture than do farm youth who enroll in agricultural curricula. Data to test this hypothesis were taken from the responses to items which were classified as goals or objectives related to agriculture.

It was decided to accept this hypothesis if the responses of farm youth in agriculture were significantly different from the other two groups of students on the items.

Farm youth enrolled in other than agricultural curricula differed significantly from farm youth in agriculture on their responses to 66 percent of the items. Non-farm youth enrolled in agriculture differed significantly from farm youth in agriculture relative to their responses to 33 percent of the items.

Since farm youth in other than agricultural curricula and non-farm youth in agriculture did less frequently report goals and objectives directly related to agriculture than did farm youth enrolled in agricultural curricula, this hypothesis was accepted. It is well to note, however, that non-farm youth in agriculture more frequently reported goals directly related to agriculture than did farm youth enrolled in other than agricultural curricula.

IMPLICATIONS OF THE STUDY

Several implications resulted from the study and are listed as follows:

1. Publications dealing with agricultural careers and agricultural curricula were perceived, by students enrolled in agricultural curricula, as having influenced their choice of college curricula to a great degree. Therefore, it would seem that if agricultural colleges and potential employers of college graduates in agriculture wish to influence more youth to attend college and to enroll in agricultural curricula, they should make career and curricula publications readily available to high school students.

This might be accomplished by sending the publications to school librarians, vocational agriculture instructors, school counselors, science instructors and directly to the students.

2. Students enrolled in agricultural curricula reported that persons outside the school exerted considerable influence on their choice of a college curricula. These included parents, adults they admired (other than parents or teachers), and employers. This implies that to effectively influence prospective college students relative to their curricula choice, influence must not only be exerted on the prospective students, but beyond that, one must identify and inform people who have influences on students.

The latter might be accomplished in part by providing such people with information about career areas and college curricula.

3. Farm youth who were not enrolled in agricultural curricula in college reported significantly less years of enrollment in vocational agriculture, and less participation in the FFA and 4-H Club work than did farm youth enrolled in agricultural curricula. This

might imply that youth develop many of their attitudes toward agriculture prior to entering high school. As a result, they may have decided against an agricultural career before entering high school and thus did not enroll in a course which is associated with agriculture; or participate in activities so oriented. If this deduction is valid, as it appears to be, then it is important that information about agriculture, agricultural careers and agricultural curricula be readily available to youth while they are in the latter years of elementary school.

Again, this information might be distributed to librarians, counselors, and teachers.

4. The vocational agriculture course, FFA experience, and the vocational agriculture instructor were rated high as sources of influence by students enrolled in agricultural curricula. In view of this finding, it would seem that the vocational agriculture courses and FFA programs should be structured so as to provide youth with an accurate and thorough understanding of the career opportunities in agriculture, the importance of higher education to success in modern agricultural careers, and the scope and nature of agricultural curricula in college. Means of preparation for entrance into, and progress in agricultural occupations other than farming should receive equal or greater emphasis than farming in high school.

5. If there is an increasing need for college graduates who have majored in agricultural curricula, as the available evidence indicates, then agricultural colleges might well give special emphasis to programs and activities designed to promote a better understanding of modern agriculture, agricultural careers and agricultural curricula among prospective college students and the general public. To carry

out these activities they might well enlist the support of agricultural organizations, persons employed in agriculture and potential employers of college graduates in agriculture.

6. The findings of this study strongly suggest that additional studies need to be conducted to determine the attitudes of potential students toward agriculture, their understanding of modern agriculture and the career opportunities it offers.

7. Since over fifty percent of the students enrolled in agricultural curricula in the past few years have come from non-farm backgrounds, agricultural colleges and others interested in attracting more youth into the agricultural field might well emphasize programs and activities which are designed to provide potential students of this nature with more information about modern agriculture.

8. Since this study and others have shown a high correlation between the levels of educational and occupational aspiration of youth and the levels of educational and occupational aspiration that their parents have for them, it would seem that in order to raise the aspiration levels of youth one must also raise the aspiration levels of the parents.

9. This study seems to refute some of the findings of Haller. He found that farm youth who intend to farm plan to attend college less frequently than those who do not plan to farm. Yet in this study, 48 percent of the farm youth enrolled in agricultural curricula indicated that farming was the career area in which they would most like to work. There is a possibility that planning to farm and naming farming as the career area in which one would like to work is not the same thing. It would seem that they are quite similar, however.

out these activities they [illegible]

tural organizations, personal [illegible]

employers of college graduates [illegible]

6. The findings of [illegible]

studies need to be [illegible]

students toward agriculture [illegible]

and the career possibilities [illegible]

7. Since many [illegible]

tural curricula [illegible]

ground, and [illegible]

more young men are [illegible]

and activities [illegible]

this nature with more [illegible]

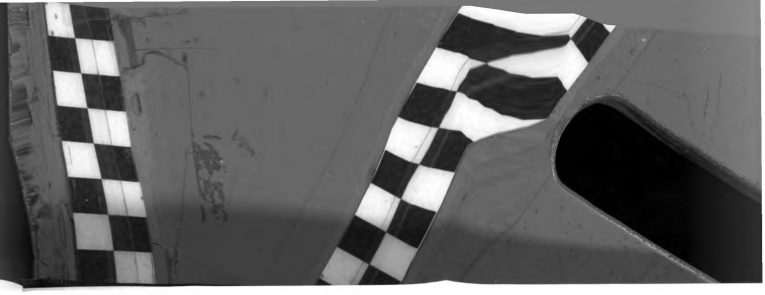
8. Since this study [illegible]

tween the levels of [illegible]

and the levels of aspiration [illegible] supposition that their parents have for them, it would seem that it [illegible] the aspiration levels of youth and [illegible] the aspiration levels of the parents.

9. This study seems to [illegible] of the findings of Heller. He found that farm youth who intend to farm plan to attend college less frequently than those who do not plan to farm. Yet in this study, 68 percent of the farm youth enrolled in agricultural curricula indicated that farming was the career area in which they would most like to work. There is a possibility that planning to farm and wanting farming as the career area in which one would like to work is not the same thing. It would seem that they are quite similar, however.

10. The criteria used for identifying "farm youth" in this study could provide the basis for a standardized method of identifying "farm youth" in future research studies.



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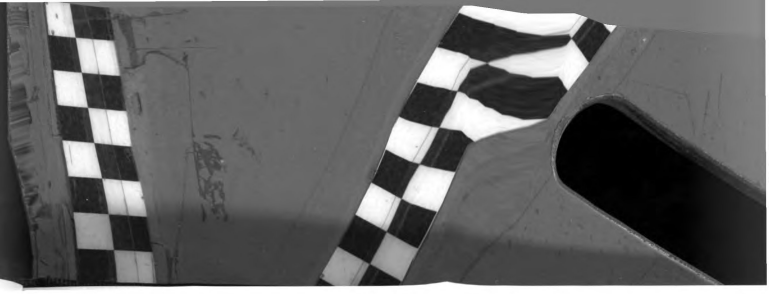

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A P P E N D I X

APPENDIX A

KEY FOR INTERPRETING ORIENTATION TESTS

The Tables contain certain statistical symbols which require some explanation:

N	Number of students on which results are based
Range	Range of scores from lowest to highest
P.P.	Percentile point
10 P.P.	Score such that 10 percent of the students received lower scores
Q_1	Score such that 25 percent of the students received lower scores
Median	Score such that 50 percent of the students received lower scores
Q_3	Score such that 75 percent of the students received lower scores
90 P.P.	Score such that 90 percent of the students received lower scores
Decile	A ten-point score system where a 10 refers to scores received by the most superior 10 percent of new freshmen and a 1 to scores received by the 10 percent of the lowest scoring freshmen.

APPENDIX B

TABLE USED TO STATISTICALLY INTERPRET DIFFERENCES BETWEEN SAMPLE GROUPS*

How much a percent observed in one sample must differ from that observed in another for the difference to be statistically significant

Lower Percent	Size of Each Sample 20	25	30	35	40	45	50	60	70	80	90
10						15.8	14.7	13.3	12.2	11.2	10.5
20		26.0	23.6	21.7	20.1	18.8	17.8	16.1	14.8	13.8	13.0
30	30.9	27.4	25.0	23.1	21.5	20.2	19.2	17.4	16.0	15.0	14.1
40	30.8	27.6	25.3	23.4	21.9	20.6	19.6	17.9	16.6	15.5	14.6
50	29.6	26.7	24.5	22.8	21.4	20.2	19.2	17.6	16.3	15.3	14.5
60	27.3	24.8	22.8	21.3	20.1	19.0	18.1	16.7	15.5	14.6	13.8
70	23.8	21.7	20.2	18.9	17.8	17.0	16.2	15.0	13.9	13.1	12.4
80		17.5	16.4	15.4	14.6	13.9	13.3	12.4	11.6	10.9	10.4
90						9.3	9.0	8.4	7.9	7.5	7.2

Lower Percent	Size of Each Sample 100	120	140	160	180	200	250	300	400	500	1000
10	9.9	8.9	8.2	7.6	7.1	6.7	5.9	5.3	4.5	4.0	2.8
20	12.2	11.0	10.2	9.5	8.9	8.4	7.5	6.8	5.8	5.2	3.6
30	13.4	12.2	11.2	10.5	9.9	9.3	8.3	7.6	6.5	5.8	4.1
40	13.8	12.6	11.7	10.9	10.3	9.8	8.7	8.0	6.9	6.1	4.3
50	13.7	12.5	11.7	10.9	10.3	9.8	8.7	8.0	7.0	6.2	4.9
60	13.1	12.0	12.2	10.5	9.9	9.4	8.4	7.7	6.7	6.0	4.3
70	11.9	10.9	10.2	9.5	9.0	8.6	7.7	7.1	6.2	5.5	4.0
80	9.9	9.2	8.6	8.0	7.6	7.3	6.5	6.0	5.3	4.7	3.4
90	6.9	6.4	6.0	5.7	5.4	5.1	4.7	4.3	3.8	3.4	2.5

To use the table, find the lower percent and the size of the sample. The number, in the Table, at the point where a line drawn from the size of the sample intersects one drawn from the lower percent, is the difference necessary in order to be statistically significant at the five percent confidence level.

*Daniel, Cuthbert, "Statistically Significant Differences in Observed Percents," Journal of Applied Psychology, Vol. 24, 1940, pp. 826-830.

(Based on 95% certainty that difference is not due to the size of the sample)

APPENDIX C

REVISED INSTRUMENT - JULY 20, 1961

PERSONAL DATA

PART I

(1-6) 1. Student Number _____ Date _____

(7) 2. Major or Field of Specialization _____

(8) 3. Father's Occupation _____

(9) 4. Circle the number which indicates the number of years you studied vocational agriculture in high school:

0 1 2 3 4

(10) 5. Circle the number which indicates the years of FFA experience you have had:

0 1 2 3 4 more than 4

(11) 6. Circle the number which indicates the years of 4-H experience you have had:

0 1 2 3 4 more than 4

(12) 7. Circle the year in school in which you feel you decided to attend college:

6 7 8 9 10 11 12

(13) 8. Circle the year in school in which you feel you selected the college curricula you are enrolled in:

6 7 8 9 10 11 12

(14) 9. Have you lived on a farm for three or more of the last eight years (1953-1961)?

1. Yes _____ 2. No _____

(15) 10. Have you worked on a farm for three or more of the last eight years years (1953-1961)?

1. Yes _____ 2. No _____

(16) 11. Are your parents or guardians presently living on a farm?

1. Yes _____ 2. No. _____

(17) 12. If your parents or guardians live on a farm, please indicate their farming status. (Check)

Full-time farming _____ Part-time farming _____
Live on a farm but do not farm _____

PART II ABOUT YOURSELF

(18) 1. How would you classify the career you are preparing for?

1. ( ) Its an agricultural career
2. ( ) Its a career which is related to agriculture
3. ( ) Its a non-agricultural career
4. ( ) I don't know

(19) 2. Please indicate the social standing you feel is associated with a career in agriculture:

1. ( ) High prestige
2. ( ) Average prestige
3. ( ) Low prestige

(20) 3. Please indicate the potential you feel an agricultural career offers for making money:

1. ( ) High potential for making money
2. ( ) Medium potential for making money
3. ( ) Low potential for making money

(21) 4. Please indicate the extent to which you feel you understand the career opportunities available in the field of agriculture:

1. ( ) Have a good understanding of career opportunities in agriculture.

2. ( ) Have some understanding of career opportunities in agriculture.

3. ( ) Have little or no understanding of career opportunities in agriculture.

(22) 5. Which of the following most closely represents your feelings about the field of agriculture:

1. ( ) Agriculture is a growing industry

2. ( ) Agriculture is neither growing nor declining

3. ( ) Agriculture is a declining industry

4. ( ) Never thought about it enough to develop a real feeling

(23) 6. As to the curricula you are enrolled in, which of the following most closely identifies your feelings:

1. ( ) Strongly prefer that it be offered in the College of Agriculture

2. ( ) Prefer that it be offered in the College of Agriculture

3. ( ) Don't care which college offers it

4. ( ) Prefer that it be offered in a college other than the College of Agriculture

5. ( ) Strongly prefer that it be offered in a college other than the College of Agriculture

(24) 7. If you were given the opportunity to enter an occupation in one of the following career areas at the same rate of pay and the same opportunity for advancement, which career area would you choose?

1. ( ) Education 3. ( ) Engineering 5. ( ) Science

2. ( ) Medicine 4. ( ) Agriculture 6. ( ) Farming

(25) 8. Which of the following most closely represents your feelings about the career opportunities in the field of agriculture?

1. ( ) The career opportunities in agriculture are growing

2. ( ) The career opportunities in agriculture have remained about the same

3. ( ) The career opportunities in agriculture are declining

(26) 9. Which of the following most closely represents your feeling about one's chance for advancement in an agricultural career?

1. ( ) Agricultural careers offer one more opportunity for advancement than do most other career areas.

2. ( ) Agricultural careers offer one as much opportunity for advancement as do most other career areas.

3. ( ) Agricultural careers offer one less opportunity for advancement than do most other career areas.

(27) 10. In regard to the two adults you admire most, other than parents, teachers, which of the following most closely identifies the occupation they are in:

1. ( ) They are farmers or in some other agricultural occupation

2. ( ) They are in non-agricultural occupations

3. ( ) One is in an agricultural occupation while the other is not.

(28) 11. In regard to two friends whom you have associated with the most during the past four years, which of the following do you feel most closely identifies their career aspirations.

1. ( ) They hope to enter agricultural careers

2. ( ) They hope to enter non-agricultural careers

3. ( ) One hopes to enter an agricultural career while the other does not.

4. ( ) They're undecided about their career choice

12. RATE THE FOLLOWING FACTORS ACCORDING TO THE RELATIVE AMOUNT OF INFLUENCE YOU FEEL THEY HAVE HAD ON YOUR CHOICE OF COLLEGE CURRICULA BY CIRCLING ONE LETTER IN COLUMN I. IF YOU FEEL YOU WERE INFLUENCED "A GREAT DEAL" BY A FACTOR CIRCLE A; IF YOU WERE INFLUENCED "SOME" CIRCLE S; IF "VERY LITTLE" OR "NOT AT ALL" CIRCLE V:

			Column I Degree to which factor influenced your choice of curricula		
		PEOPLE	(1)	(2)	(3)
(29)	1.	Parents	A	S	V
(30)	2.	Adults you admire other than parents and teachers	A	S	V
(31)	3.	Friends	A	S	V
(32)	4.	Vo-Ag teachers	A	S	V
(33)	5.	4-H Agent or leader	A	S	V
(34)	6.	Teachers other than Vo-ag	A	S	V
(35)	7.	High school counselor	A	S	V
(36)	8.	College faculty member	A	S	V
(37)	9.	Employers	A	S	V
(38)	10.	Others _____	A	S	V
		THINGS			
(39)	11.	High school courses other than Vo-Ag	A	S	V
(40)	12.	Vocational agriculture course	A	S	V
(41)	13.	Rank in high school class	A	S	V

(42)	14.	Employment experiences	A	S	V
(43)	15.	Speech about agriculture and/or agricultural careers	A	S	V
(44)	16.	Speech about a specific non-agricultural career and/or careers in general	A	S	V
(45)	17.	Publications dealing with agricultural curricula	A	S	V
(46)	18.	Publications dealing with a specific non-agricultural curricula and/or college curricula in general	A	S	V
(47)	19.	Publications dealing with agricultural careers	A	S	V
(48)	20.	Publications dealing with non-agricultural careers	A	S	V
(49)	21.	Visit to M.S.U. Campus	A	S	V
(50)	22.	Experiences in the FFA	A	S	V
(51)	23.	Experiences in the 4-H	A	S	V
(52)	24.	High school activities	A	S	V
(53)	25.	Others _____	A	S	V

(54) 13. Below are some factors which may influence one to choose a particular college curricula. Check (✓) five or less which you feel influenced your choice of curricula:

A. ( ) An interest in agriculture

B. ( ) A desire to become a farmer

C. ( ) An interest in agriculture but have a limited opportunity to enter farming

D. ( ) An interest in an agricultural career other than farming

E. ( ) A liking for plants and/or animals

F. ( ) A feeling that areas other than agriculture offer greater opportunity

G. ( ) An interest in a particular career area

H. ( ) A desire to achieve high social status

NOTE* Please turn page before completing this question.

I. ( ) A desire to make a lot of money

J. ( ) A feeling that you aren't smart enough to succeed in some other curricula.

K. ( ) A college or university scholarship

L. ( ) An interest in working out of doors

M. ( ) A desire to travel

N. ( ) A desire to live in a city

O. ( ) A feeling that your chosen career area offers you good working hours

P. ( ) A desire to become famous

Q. ( ) A desire to do good for others

R. ( ) The feeling that there is great opportunity for advancement in your chosen career area

S. ( ) A feeling that it will prepare you for a variety of work

T. ( ) A desire to have an "in-door" job

U. ( ) A desire to be in a position of authority

V. ( ) A feeling that you can use your education to its best advantage

W. ( ) High scholastic standing in your high school class

X. ( ) Others _____

PART III ABOUT YOUR PARENTS

(59) 1. AS TO CONTINUING YOUR EDUCATION BEYOND HIGH SCHOOL, WHICH OF THE FOLLOWING DO YOU FEEL MOST CLOSELY IDENTIFIES YOUR MOTHER:

1. ( ) Strongly encouraged you to continue your education

2. ( ) Gave you some encouragement to continue your education

3. ( ) Never said much about your education

4. ( ) Felt you would have been better off going to work after high school

(60) 2. AS TO CONTINUING YOUR EDUCATION BEYOND HIGH SCHOOL, WHICH OF THE FOLLOWING DO YOU FEEL CLOSELY IDENTIFIES YOUR FATHER:

1. ( ) Strongly encouraged you to continue your education
2. ( ) Gave you some encouragement to continue your education
3. ( ) Never said much about your education
4. ( ) Felt you would have been better off going to work after high school

(61) 3. AS TO THE KIND OF OCCUPATION YOU GO INTO, WHICH OF THE FOLLOWING DO YOU FEEL MOST CLOSELY IDENTIFIES YOUR MOTHER:

1. ( ) Wants you to have a very important occupation
2. ( ) Wants you to have an occupation that is quite a bit better than most occupations in your home community
3. ( ) Wants you to have an occupation that is a little better than most occupations in your home community
4. ( ) Feels that the occupation you take should be as good as most occupations in your home community
5. ( ) Does not care how good the occupation you go into is as long as you like it.

(62) 4. AS TO THE KIND OF OCCUPATION YOU GO INTO, WHICH OF THE FOLLOWING DO YOU FEEL MOST CLOSELY IDENTIFIES YOUR FATHER:

1. ( ) Wants you to have a very important occupation
2. ( ) Wants you to have an occupation that is quite a bit better than most occupations in your home community
3. ( ) Wants you to have an occupation that is a little better than most occupations in your home community
4. ( ) Feels that the occupation you take should be as good as most occupations in your home community
5. ( ) Does not care how good the occupation you go into is as long as you like it

PART IV ABOUT YOU AND SCHOOL

(63) 1. Did you ever meet with a high school guidance counselor relative to your future plans?

(1) (2)

YES _____ NO _____

(64) 2. What subject did you enjoy the most in high school?

_____
(Name of Subject)

(65) 3. Check the kinds of extracurricula activities you participated in while in high school? (Check all that participated in)

1. ( ) Athletics
2. ( ) Dramatics
3. ( ) Others _____
4. ( ) Band-orchestra
5. ( ) 4-H or FFA
6. ( ) Chorus-vocal
7. ( ) School paper or annual

PART V YOU AND OTHER EXPERIENCES

(66) 1. Did you ever hear a college faculty member give a talk about careers and/or college?

YES (1) _____ NO (2) _____

(67) 2. Did you ever hear a college faculty member give a talk about agricultural careers and/or the agricultural college?

YES (1) _____ NO (2) _____

(68) 3. If you have heard a talk about agricultural careers and/or agricultural college, where did it take place? (Check)

1. ( ) At high school
2. ( ) At FFA banquet
3. ( ) Other _____
4. ( ) At career day
5. ( ) During visit to college

(69) 4. Do you feel that publications dealing with your chosen career area were readily available for you to read while you were in high school?

YES (1) _____ NO (2) _____ I DON'T KNOW (3) _____

(70) 5. Do you feel that publications dealing with agricultural career areas were readily available for you to read while you were in high school?

YES (1) _____ NO (2) _____ I DON'T KNOW (3) _____

(71) 6. Do you feel that publications dealing with college curricula were readily available for you to read while you were in high school?

YES (1) _____ NO (2) _____ I DON'T KNOW (3) _____

(72) 7. Do you feel that publications dealing with agricultural curricula were readily available for you to read while you were in high school?

YES (1) _____ NO (2) _____ I DON'T KNOW (3) _____

8. To what extent did you read publications dealing with the following areas while you were in high school? (Check)

	PUBLICATIONS DEALING WITH:	(1) Read Extensively	(2) Read some	(3) Read little or not at all
(73)	Careers in general	_____	_____	_____
(74)	Agricultural Careers	_____	_____	_____
(75)	College Curricula in general	_____	_____	_____
(76)	Agricultural College Curricula	_____	_____	_____

(77) 9. Did you visit the M.S.U. Campus while in high school?

YES (1) _____ NO (2) _____

(78) 10. What was the occasion for your visit?

1. ( ) 4-H or FFA activity
2. ( ) Agricultural College Open House
3. ( ) Farmers Week
4. ( ) Other _____

_____

PART VI ABOUT YOUR EMPLOYMENT EXPERIENCE

(79) 1. Check the description or descriptions below which most closely describe the kind of part-time and summer employment experiences you had while in high school:

1. ( ) Worked on a farm

2. ( ) Worked in an agricultural occupation other than farming
Describe: _____

_____

3. ( ) Worked in a non-agricultural occupation
Describe: _____

_____

APPENDIX D

LETTER TO STUDENTS INVOLVED IN TESTING RELIABILITY OF INSTRUMENT

MICHIGAN STATE UNIVERSITY
The College of Agriculture
Office of the Director of Resident Instruction
EAST LANSING

September 15, 1961

Dear _____:

During the counseling clinic this summer, you were kind enough to fill out a research instrument for me relative to why or how students choose a college curriculum. This is to remind you to stop in at my office (121 Ag. Hall) some time during the first week of school to complete the second instrument.

It will require about twenty minutes of your time and we cannot complete the research without it.

With kindest regards,

Sincerely,

Vern Freeh
Coordinator of Student Programs

APPENDIX E

LETTER TO STUDENTS ENROLLED IN THE COLLEGE OF AGRICULTURE

MICHIGAN STATE UNIVERSITY
The College of Agriculture
Office of the Director of Resident Instruction
EAST LANSING

November 22, 1961

Dear _____:

I have scheduled a series of meetings for all first term freshmen students in the College of Agriculture.

During these meetings we are asking all freshmen students to provide us with information about themselves. This will be used in a research project we are conducting.

Please report to Room 110 Anthony Hall at 4:00 p.m. on one of the following dates:

(1) Wednesday, November 29th
(2) Thursday, November 30th
(3) Friday, December 1st
(4) Monday, December 4th

If you cannot attend one of these meetings, please stop in at our office (121 Ag. Hall) and make other arrangements with Mr. Vern Freeh, Coordinator of Student Programs.

Sincerely,

Richard M. Swenson
Director

RMS:rh

APPENDIX F

LETTER TO STUDENTS ENROLLED IN AGRICULTURAL ENGINEERING

MICHIGAN STATE UNIVERSITY
The College of Agriculture
Department of Agricultural Engineering
EAST LANSING

November 22, 1961

Dear _____:

The College of Agriculture is currently conducting a research study which pertains to the "characteristics of university students with a farm background." We would like you to participate in this study by attending a meeting in Room 110 of Anthony Hall at 4:00 p.m. on <u>one</u> of the following dates:

(1) Wednesday, November 29th
(2) Thursday, November 30th
(3) Friday, December 1st
(4) Monday, December 4th

At the meeting you will be asked to fill out a questionnaire about yourself. It probably won't take more than thirty minutes.

If you cannot attend one of the meetings, please see Mr. Vern Freeh, Coordinator of Student Programs in the College of Agriculture, (Room 121 - Ag. Hall) and make other arrangements.

Sincerely,

Arthur W. Farrall, Head
Agricultural Engineering Department

APPENDIX G

LETTER TO STUDENTS ENROLLED IN VETERINARY MEDICINE OR NON-AGRICULTURAL CURRICULA

MICHIGAN STATE UNIVERSITY
The College of Agriculture
Office of the Provost
EAST LANSING

November 22, 1961

Dear _____:

The College of Agriculture is currently conducting a research study which pertains to the "characteristics of university students with a farm background." We would like you to participate in this study by attending a meeting in Room 110 of Anthony Hall at 4:00 p.m. on one of the following dates:

(1) Wednesday, November 29th
(2) Thursday, November 30th
(3) Friday, December 1st
(4) Monday, December 4th

At the meeting you will be asked to fill out a questionnaire about yourself. It probably won't take more than thirty minutes.

If you cannot attend one of the meetings, please see Mr. Vern Freeh, Coordinator of Student Programs in the College of Agriculture, (Room 121 - Ag. Hall) and make other arrangements.

Sincerely,

David N. Hess
Administrative Assistant
Office of the Provost

DNH:dk

APPENDIX H

Chi Square Formula Used For Determining Differences Between Sample Groups

$$X^2 = E \frac{(f-fc)^2}{fc}$$

$$fc_{ii} = \frac{C_i R_i}{T} \qquad f_{ii} = \frac{C_i R_i}{T}$$

$$d.f. = (R-1)(C-1)$$
$$2.2 = 4$$

$$X^2_{2,.05} = 5.991$$

$$X^2_{2,.01} = 9.210$$

f= observed number
fc=computed number

APPENDIX I

Table of Chi Squares -- Group Responses
Relative to People Who Influenced
Their College Curricula Choice

People	X^2 Value	Degrees of Freedom	Level of Significance
Parents	9.724	2	1%
Adults (Other than parents or teachers)	2.198	2	none
Friends	1.838	2	none
Vo-Ag. Teachers	62.711	2	1%
4-H Agent or Leader	50.561	2	1%
Teachers other than vo-ag.	12.012	2	1%
High School Counselor		2	none
College Faculty Member	6.543	2	5%
Employers	13.729	2	1%
Others	3.098	2	none

APPENDIX J

Table of Chi Squares -- Group Responses Relative to Things Which Influenced Their College Curricula Choice

Things	X^2 Values	Degrees of Freedom	Level of Significance
High School Courses (Other than Vo-Ag.)	34.714	2	1%
Vocational Agriculture Course	71.558	2	1%
Rank in High School Class	23.233	2	1%
Employment Experiences	14.236	2	1%
Speech about Agriculture and/or Agricultural Careers	60.578	2	1%
Speech about Specific Non-Agricultural Career and/or Careers in General	8.435	2	5%
Publications Dealing with Agricultural Curricula	63.888	2	1%
Publications Dealing with Specific Non-Agricultural Curricula and/or College Curricula in General	12.568	2	1%
Publications Dealing with Non-Agricultural Careers	32.746	2	1%
Visit to M.S.U. Campus	15.435	2	1%
Experiences in the FFA	80.463	2	1%
Experiences in the 4-H	64.817	2	1%
High School Activities	11.376	2	1%
Others	15.749	2	1%