# SELECTED FACTORS ASSOCIATED WITH ATTENDANCE AT ADULT FARMER CLASSES IN MICHIGAN

Thesis for the Degree of Ph. D.

MICHIGAN STATE UNIVERSITY

Philip Barr Davis

1959

This is to certify that the

thesis entitled

SELECTED FACTORS ASSOCIATED WITH ATTENDANCE AT ADULT FARMER CLASSES IN MICHIGAN

presented by

Philip Barr Davis

has been accepted towards fulfillment of the requirements for

Ph.D degree in Teacher Education

H. C. Sweany
Major professor

Date July 17, 1959

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By

PHILIP BARR DAVIS

AN ABSTRACT

Submitted to the School for Advanced Graduate Studies of
Michigan State University of Agriculture and
Applied Science in partial fulfillment of
the requirements for the degree of

DOCTOR OF PHILOSOPHY

Department of Teacher Education

1959

Approved H. P. Sweany

Purpose.--The purpose of this investigation was to study specific data which reveal the association between attendance at adult farmer classes and selected factors related to the farmers or their classes.

Method.--A review of literature helped identify some of the factors used in this study. Teacher trainers and teachers of adult farmers suggested others. A questionnaire consisting of 30 factors was administered to farmers attending adult classes in 39 randomly selected communities in Michigan. Additional questionnaires were completed by mail by farmers in these communities who did not regularly attend adult classes. Returns from 472 farmers were used. Records of attendance for each farmer respondent were secured from the teachers of vocational agriculture at the completion of each adult class. Some data were secured from records of adult classes on file in the State Department of Vocational Education.

Farmers were grouped according to the percentage of meetings attended. The chi-square test of independence was used to determine the relationship between the selected factors and attendance.

Findings and Interpretations.--Thirteen of the 30 factors were significantly associated with attendance. The seven following factors were significant at the one percent level:

1. Farmers who lived five and one-half miles or more from the center attended more meetings than those living

closer.

2. Farmers who liked specifically the time of year classes were taught attended more meetings than those who said time of year made no difference.
3. Farmers, who felt the method used in classes made them want to attend, did attend more classes than those who thought methods used had no influence on their attendance.
4. Class meetings that covered farmers' problems caused those who appreciated this practice to attend more meetings than those not influenced by this practice.
5. Farmers, who preferred the time of day classes were held, attended more meetings than those who said the time of day made no difference.
6. Class meetings held less than 20 weeks in length were attended more regularly than those classes held over 20 weeks.
7. Dairying and Soils-Landscaping classes were attended more regularly than those in Livestock Production.

The six following factors were significant at the five percent level:

8. Farmers who favored discussing their problems in class had better attendance than those who indicated this factor had no influence on their attendance.
9. Farmers indicating that attendance in previous years made them want to attend, had better attendance than those who said it made no difference.

10. Farmers who said the agricultural teacher's ability made them want to attend had better attendance than those who said it had no influence.
11. Farmers who said the agricultural teacher's personality made them want to attend had better attendance than those who said it had no influence.
12. Poultry farmers, dairymen, and general farmers had more regular attendance than other types of farmers; non-farmers had the poorest attendance.
13. Farmers preferring "car-pools" had better attendance than those who said it had no influence.

Similar studies are recommended in other states to verify further the findings or to identify other significant factors.

State educational leaders in recognizing the importance of attendance should capitalize on the findings of this study in working with teachers of vocational agriculture to promote adult education in agriculture.

Because attendance tended to decrease where classes were held for more than 12 scheduled meetings or were continued for more than 20 weeks, state leaders should study carefully these findings to determine what practices should be recommended.

In communities where successful teachers of adults are assigned non-vocational secondary school responsibilities rather than adult farmer classes, state leaders should encourage their assignment in adult farmer education.

To encourage regular attendance, teachers of vocational agriculture should deal with problems of adult farmers and utilize discussion methods of instruction.

Teachers of vocational agriculture should assist farmers in pooling rides to adult classes and encourage attendance from year to year.

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## ACKNOWLEDGMENTS

The author is greatly indebted to the chairman of his guidance committee, Dr. H. P. Sweany, for his guidance, assistance, and encouragement throughout the study. In addition to Dr. Sweany, the author also wishes to express sincere appreciation to Dr. H. M. Byram, Dr. W. W. Farquhar, Dr. W. H. Roe, and Dr. R.A. Garner of Michigan State University for their suggestions and help.

The author wishes to specially mention Dr. Jerome Li of Oregon State College for his assistance in the statistical analysis of the data.

Acknowledgment is also given to the 39 teachers of vocational agriculture in Michigan who so willingly gave of their time to cooperate in gathering the data for this study.

For her patience, assistance, and encouragement, the author is indebted to his wife, Madalyn, without whom this study would not have been completed.

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# CHAPTER I

## INTRODUCTION

A complete program of vocational agriculture consists of systematic instruction for three groups: in-school students, young farmers, and adult farmers. During the earlier years of the vocational agriculture program in the United States, the in-school enrollment was always larger than the combined groups of young and adult farmers. However, the adult and young farmer programs expanded rapidly after World War II, and during the 1947-1948 and the 1950-1951 school years, their combined enrollments exceeded the enrollment of the in-school classes. Since 1950-1951, however, the number of adult and young farmer students has been declining. If it is important to reverse this downward trend, a concerted effort must be made to reach more adult and young farmers. This study will attempt to determine those factors associated with attendance in order to enable present and future teachers of vocational agriculture to maintain and increase enrollments and attendance in their adult farmer programs.

Statement of the Problem

The problem of this study is to determine what factors contribute to the regular attendance of adult farmers enrolled in systematic courses of instruction.

Although many teachers of vocational agriculture have worked diligently in providing instruction and assistance to the farmers in their communities, few adult education programs have reached the majority of the adult farmers in any one community who would benefit from such instruction. This statement can be supported by the information in Table 2 which indicates only approximately 6% of the total number of adult farmers are enrolled in classes.

What makes this large difference in potential and actual enrollments? Why don't more adult farmers take advantage of their opportunities to gain assistance in farming? What effect does off-the-farm employment have on adult farmer class enrollments and attendance? Are enrollments and attendance associated with certain characteristics of the enrollees, the program, or the instruction? All of these questions and many more have been asked before in previous research. Unfortunately, the few studies of adult education in agriculture that have been made have not been concerned with factors other than those pertaining to age of class members, distance from class center, and whether the members were owners or renters of their farms. Is it possible that attendance to

adult farmer classes can be associated with more than just these few factors commonly used in previous studies?

In order to determine the most important factors, a large number of items must be compared with actual attendance records of farmers enrolled in adult classes.

The factors to be studied may be grouped under the following headings:

1. Scope of the business
    a. Productive-man-work-units
    b. Off-the-farm employment
    c. Gross income
    d. Size of farm
    e. Type of farming
2. The nature of the instruction
    a. On-farm visits by instructor
    b. Personality and ability of agricultural teacher
    c. Use of special speakers
    d. Members being allowed to discuss problems
    e. Methods of instruction used
    f. Length of class in weeks
3. The course content
    a. Subject of class meetings
    b. Topics covered the member's farm problems
    c. A variety of subjects covered in the class

4. Class organization
    a. Place selected to hold classes
    b. Time of day classes are held
    c. Time of year classes are held
    d. Distance from class center
    e. Entertainment and refreshments provided at class meeting
    f. Instruction for wives
    g. Riding with neighbor
5. Personal characteristics of farmers
    a. Age
    b. Marital status
    c. Educational background
    d. Years enrolled in vocational agriculture in high school
    e. Farming status
    f. Members need for agricultural information
    g. Membership in organizations
    h. Adult farmer class attendance in previous years

It is believed that some degree of association may be established between these selected factors and attendance.

The problem, therefore, is to determine which of the factors listed previously are associated with the regular attendance of farmers at adult classes.

Background of the Problem

The need for this adult farmer education as a part of the total program of vocational agriculture in local communities has long been recognized by the agricultural leaders of this country. The Smith-Hughes law states specifically that the vocational agricultural program should be designed "to meet the needs of persons over fourteen years of age who have entered or who are preparing to enter upon the work of the farm or of the farm home."[1]

The Smith-Hughes law was one of the first official congressional acts which recognized the need for education beyond the normal public school age level. This law placed much of the responsibility of adult education, and specifically adult farmer education, in the hands of the many public high schools across the country.

In the attempt to carry out the intended purpose of the Smith-Hughes legislation, local teachers of vocational agriculture have initiated, organized, and conducted classes for adult farmers. The enrollment figures for adult farmer classes for the period 1921-22 through 1956-57 are summarized in Table 1.

Although these figures represent a large number of the adult farmer population, it is estimated by many persons and supported through research that these figures constitute only approximately 6% of the total adult farmer

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[1]U.S., Statutes at Large, Public Law 347, 64th Congress, Vol. 39, Part I, February 23, 1917, p. 934.

potential enrollment. This small percentage becomes more significant when one realizes that the potential enrollment for adult farmers is greater by far than for young farmers or high school students.

TABLE 1

ENROLLMENT IN ADULT FARMER CLASSES IN THE UNITED STATES FOR SELECTED YEARS*

| School Year | Adult Farmers |
|---|---|
| 1921-22 | 1,333 |
| 1923-24 | 15,227 |
| 1925-26 | 19,239 |
| 1927-28 | 35,192 |
| 1929-30 | 60,562 |
| 1931-32 | 87,139 |
| 1933-34 | 99,293 |
| 1935-36 | 107,517 |
| 1937-38 | 158,813 |
| 1939-40 | 192,247 |
| 1941-42 | 214,582 |
| 1943-44 | 183,880 |
| 1944-45 | 183,071 |
| 1945-46 | 224,613 |
| 1946-47 | 236,118 |
| 1947-48 | 297,713 |
| 1948-49 | 290,275 |
| 1949-50 | 345,007 |
| 1950-51 | 319,096 |
| 1951-52 | 271,160 |
| 1952-53 | 275,108 |
| 1953-54 | 247,275 |
| 1954-55 | 272,363 |
| 1955-56 | 277,849 |
| 1956-57 | 270,130 |

*Digests of Annual Reports of State Boards for Vocational Education, Federal Security Agency, Office of Education.

In Table 2 the enrollment by states for 1954-55 is tabulated. The total number of adult farmers enrolled in vocational agriculture in 1954-1955 in the United States was approximately 60% as large as the in-school group; how-

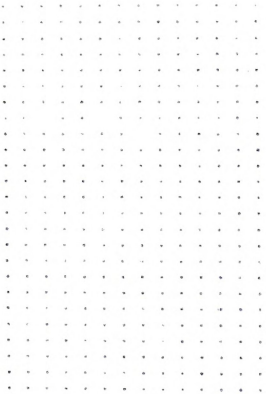

TABLE 2

RELATIVE CONCENTRATION OF ENROLLMENT IN VOCATIONAL AGRICULTURE CLASSES OF YOUNG AND ADULT FARMERS BY STATES AND THE UNITED STATES - 1954-55

| State | (a) Number of Farms | (b) Adult Farmers | (c) Young Farmers | (d) Total | (e) Enrollees Per Hundred Farms |
|---|---|---|---|---|---|
| Ala. | 176,956 | 7,870 | 473 | 8,343 | 4.6 |
| Ariz. | 9,321 | 263 | .... | 263 | 2.8 |
| Ark. | 145,076 | 10,362 | 955 | 11,317 | 7.0 |
| Calif. | 123,075 | 7,321 | .... | 7,321 | 6.0 |
| Colo. | 40,749 | 361 | 220 | 581 | 1.4 |
| Conn. | 12,753 | 40 | 109 | 149 | 1.2 |
| Del. | 6,297 | 84 | .... | 84 | 1.3 |
| Fla. | 57,543 | 817 | 294 | 1,111 | 1.9 |
| Ga. | 165,523 | 49,534 | 1,055 | 50,589 | 30.0 |
| Idaho | 38,740 | 87 | .... | 87 | .2 |
| Ill. | 175,543 | 12,829 | 522 | 13,381 | 7.6 |
| Ind. | 153,593 | 3,154 | 40 | 3,194 | 2.0 |
| Iowa | 192,933 | 16,790 | 597 | 17,387 | 9.0 |
| Kansas | 120,167 | 453 | .... | 453 | .4 |
| Ky. | 193,487 | 3,578 | 2,153 | 5,731 | 2.9 |
| La. | 111,127 | 7,843 | 3,042 | 10,885 | 9.8 |
| Maine | 23,368 | 25 | 18 | 43 | .2 |
| Md. | 32,500 | 427 | .... | 427 | 1.3 |
| Mass. | 17,361 | 358 | .... | 358 | 2.0 |
| Mich. | 138,922 | 5,032 | 936 | 5,968 | 4.3 |
| Minn. | 165,225 | 13,415 | 2,037 | 15,452 | 9.0 |
| Miss. | 215,915 | 24,681 | 344 | 25,025 | 11.5 |
| Mo. | 201,614 | 9,372 | 432 | 9,804 | 4.8 |
| Mont. | 33,061 | 222 | 203 | 425 | 1.3 |
| Neb. | 100,846 | 4,342 | 881 | 5,223 | 5.1 |
| Nev. | 2,857 | 102 | 66 | 168 | 5.8 |
| N.H. | 10,411 | .... | .... | .... | 0.0 |
| N.J. | 22,686 | 401 | 171 | 572 | 2.5 |
| N.Mex. | 21,070 | .... | .... | .... | 0.0 |
| N.Y. | 105,714 | 2,056 | 456 | 2,512 | 2.4 |
| N.C. | 267,906 | 7,902 | 6,892 | 14,794 | 5.5 |
| N.Dak. | 61,943 | 1,606 | 144 | 1,750 | 2.8 |

Note:

(a) U.S. Department of Commerce, Census of Agriculture, Number of Farms, Table 9, Vol. II, U.S. Government Printing Office, 1954, p. 30.

(b) (c) Digest of Annual Reports of State Boards for Vocational Education. Fiscal year ended June 30, 1955. Federal Security Agency, Office of Education.

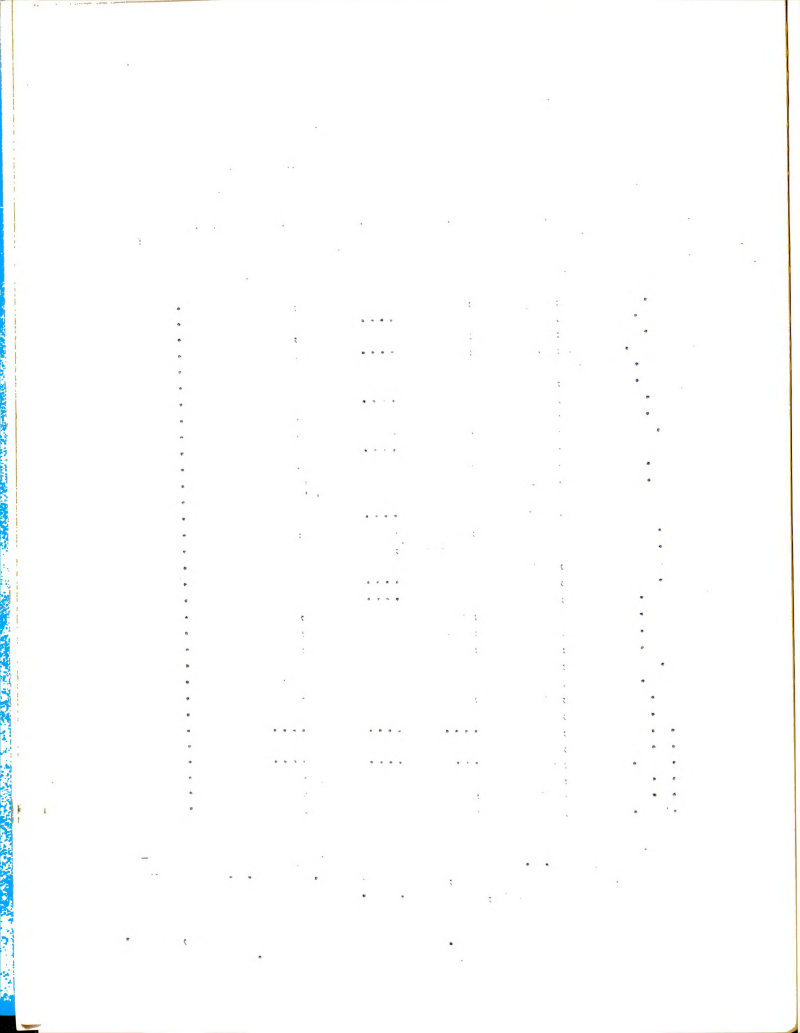

TABLE 2 - Continued

| State | (a) Number of Farms | (b) Adult Farmers | (c) Young Farmers | (d) Total | (e) Enrollees Per Hundred Farms |
|---|---|---|---|---|---|
| Ohio | 177,074 | 5,525 | 2,609 | 8,134 | 4.6 |
| Okla. | 118,979 | 8,325 | 4,243 | 12,568 | 10.5 |
| Ore. | 54,441 | 1,010 | 21 | 1,031 | 2.0 |
| Pa. | 128,876 | 2,262 | .... | 2,262 | 1.7 |
| R.I. | 2,004 | .... | .... | .... | 0.0 |
| S.C. | 124,203 | 20,703 | 6,563 | 27,266 | 22.0 |
| S.Dak. | 62,520 | 1,048 | .... | 1,048 | 1.7 |
| Tenn. | 203,149 | 8,703 | 1,012 | 9,715 | 4.8 |
| Texas | 202,947 | 14,081 | 3,072 | 17,153 | 5.8 |
| Utah | 22,826 | 886 | 450 | 1,336 | 6.0 |
| Vt. | 15,981 | 83 | 73 | 156 | 1.0 |
| Va. | 136,416 | 10,162 | 2,461 | 12,623 | 9.2 |
| Wash. | 65,175 | 1,165 | .... | 1,165 | 1.8 |
| W. Va. | 68,583 | 502 | 323 | 825 | 1.2 |
| Wis. | 153,558 | 5,269 | 3,055 | 8,684 | 5.6 |
| Wyo. | 11,402 | .... | .... | .... | 0.0 |
| Total | 4,782,416 | 271,411 | 45,952 | 317,363 | 6.6 average |

ever, the percentage of the total potential adult farmers enrolled is still quite small. In Table 2 can be found the number of farms in each state and in the United States as a whole, the enrollment of young and adult farmers, and the enrollees per hundred farms. Since by census definition there is one operator per farm, the number of enrollees per hundred farms is equal to the percentage of operators enrolled. As can be seen in Table 2, there were 4,782,416 farm operators in the United States in 1954.

There were also 2,729,650 non-family hired workers.[2] In addition there were many other men on farms who were out of school and not included in either the operator or the non-family hired worker groups. Thus, the enrollment of 317,363 vocational agricultural young and adult farmers in the 48 states in 1954 was the equivalent of 6.6% of the farm operators in the United States; if the non-family hired workers on farms were included, the enrollment would represent 4.2% of the total farming population; and if the uncounted men on farms were also included, the enrollment might even drop as low as 4% of the total adult and young farmer student potential.

Since the total number of farmers reported in Table 2 included both young and adult farmers, the exact figures cannot be obtained for the number of adult farmers in the United States in 1954. The official report from the United States Office of Education lists only 271,411 adult farmers enrolled in organized classes.[3] One can only estimate that approximately 6% of the adult farmers are attending classes.

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[2]U.S., Department of Commerce, Census of Agriculture, Workers on Farms, Table 3 (Washington: U.S. Government Printing Office, 1954), Vol. II, p. 238.

[3]Digest of Annual Reports of State Boards for Vocational Education. Fiscal year ended June 30, 1955. Federal Security Agency, Office of Education (Washington: U.S. Government Printing Office, 1955), p. 19.

Purpose of the Study

The purpose of this study is to bring to light specific data which may reveal some positive association between the class member's attendance at adult farmer classes and such selected factors as were indicated as sub-problems in the "Statement of the Problem."

Such information obtained from regular members of adult farmer classes should provide ideas for teachers of vocational agriculture which, if made available to them, will help in recruiting and maintaining attendance of adult farmers in systematic courses of instruction.

Basic Assumptions

In the area of adult farmer education there are many factors which are believed to be associated with enrollments and attendance. Previous studies indicate that some definite relationship exists between selected factors and enrollments. A few of these studies provide some evidence of an association with attendance.

Based on the foregoing statements, this study is founded on the following assumptions:

1. Factors associated with attendance at adult farmer classes may be isolated and evaluated. Previous studies indicate that characteristics of farmers, or conditions associated with their farming activities, such as age, size of farm,

distance from the class center, educational background, and other specific factors are associated with enrollments and subsequent attendance.

2. Factors, in addition to those stated in the previous paragraph, may also be isolated and studied in the belief that they, too, are associated with attendance at adult farmer classes. Factors such as off-the-farm employment, productive man work units, gross income, ability and personality of the instructor, the number of on-farm visits by the instructor, membership and attendance at farm, civic, and church organizations, and many others, also, are associated with attendance at adult farmer classes.
3. Valid answers from the respondents may be obtained through the use of a properly constructed, tested, and administered questionnaire.
4. The farmers in a random sample of adult farmer classes will be a relatively random sample of farmers from which the desired information may be obtained.
5. The chi-square test of independence is an acceptable statistical treatment to determine relationship between factors and attendance.

Need for the Study

Present national and world culture with its complexities requires adult education. Modern society is too complex for adults to depend upon the random experiences of daily life as their chief sources of learning. New knowledge, skills, and understandings are developing so rapidly that elementary and secondary education would, even if it were done well, be inadequate for adult living.

Technological changes on farms make it necessary for farmers to learn new techniques that would help them become more proficient in farming. Adult education is needed to provide opportunities for these men to go on learning regardless of their schooling or educational background.

The same political and economic needs which justify public schools for children can be used to justify adult education. Bogue writes:

> The saying that you are never too old to learn should be restated that you are never too old to need to learn. This view envisions education as one of the basic and continuing services which a democratic society requires and provides for itself through its cooperative efforts.[4]

Some might argue that agricultural education in high schools will provide training for farm people. Colville found that only 14% of his adult farmer class mem-

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[4]J. P. Bogue, The Community College (New York: McGraw-Hill Book Company, 1950), p. 215.

bers had had high school vocational agriculture.[5] Guiler found that only 35% of his adult farmer class had had some vocational agriculture in high school.[6] A study of 50 Institutional On-farm Training Classes in Nebraska revealed that 72% of the young veterans enrolled had never had vocational agriculture in high school. The remainder had received from one to four years of training in high school.[7] If the primary purpose of agricultural education is to provide the nation with educated farm operators, we have not yet accomplished it through our high school programs. Supplementary programs for adult farmers are needed.

Many teachers of vocational agriculture have become discouraged in the results of their efforts to establish adult farmer classes. It is important that a study be conducted to reveal to present and future vocational agricultural teachers some further evidence of the factors associated with attendance to adult farmer classes.

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[5]David E. Colville, "The Reasons Why Farmers Attend Short Courses and the Subsequent Influences on Their Farming Programs" (unpublished Master's thesis, Ohio State University, 1945), p. 23.

[6]Gilbert S. Guiler, "An Evaluation of the Program of Adult Education in Vocational Agriculture at Canal Winchester, Ohio, 1950-51" (unpublished Master's thesis, Ohio State University, 1951), p. 21.

[7]Burneil E. Gingery, "An Analysis of the Responses of Nebraska Veterans Enrolled in Institutional On-farm Training Regarding Financing Future Adult Courses in Agriculture," Summaries of Studies in Agricultural Education, Supplement No. 8, Bulletin No. 256 (U.S. Department of Health, Education, and Welfare, 1955), p. 35.

Delimitations

It would not be feasible to regard all factors associated with attendance at adult farmer classes in one study. Previous studies in this area generally have been concerned with descriptive factors such as age, educational background, distance from class center, and size of farm operated by each respondent in an attempt to establish associations with attendance. While these descriptive factors may be associated with attendance at adult farmer classes, it is believed that additional factors must be included in this study to present a comprehensive overview of the many items associated with attendance. For this reason, this study will be enlarged, yet limited, to the 30 selected factors listed previously on pages three and four.

This study will also be limited to the data received from 472 farmers enrolled in adult classes conducted by 39 teachers of vocational agriculture in 39 communities in the state of Michigan.

Definition of Terms

A definition of the terms is necessary for interpretation of the study. Each of the following will be defined in terms of the context in which it will be used:

Adult farmer

Those persons, usually 25 years or older, who are actively engaged in farming and have managerial responsibilities in the operation of their farms.

Adult farmer classes

Adult farmer classes in vocational agriculture are made up of farmers enrolled in an intensive course of systematic instruction on practical farm problems and activities conducted by a department of vocational agriculture.

Young farmer

Those persons, usually 16 to 25 years of age, who are actively engaged in but have not yet become established in farming.

Young farmer classes

Young farmer classes in vocational agriculture are made up of young farmers enrolled in an intensive course of instruction in agriculture conducted by a department of vocational agriculture.

Attendance

The attendance records of each of the 472 respondents in this study have been divided into the following categories:

Perfect - Those farmers who attended all of the meetings of the class in which they were enrolled.

Excellent - Those farmers who attended 75-99% of the meetings of the class in which they were enrolled.

Good - Those farmers who attended 50-74% of the meetings of the class in which they were enrolled.

Fair - Those farmers who attended 25-49% of the meetings of the class in which they were enrolled.

Poor - Those farmers who attended 24% and less of the meetings of the class in which they were enrolled.

In-school students

Because the methods of reporting educational programs in vocational agriculture include a large number of persons out of school, those students who are enrolled in the regular high school course in vocational agriculture have been identified as in-school students. Whenever this term is used, it is synonymous with high school students.

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 occur by chance more than once in 100 instances.

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

PMWU

A "productive man work unit" is a unit of measurement used in accurately estimating the amount of labor needed to produce crops and care for livestock. A "productive man work unit" is equivalent to one man working a 10 hour day at average efficiency. Standards used were developed by the Agricultural Economics Department of Michigan State University in 1957.

Factor

For this study, a factor is defined as a characteristic of farmers or adult farmer classes which can be measured objectively.

Selected factor

A selected factor is defined as that characteristic of farmers or adult farmer classes which has been arbitrarily selected for study in this problem.

Summary

The need for an educational program for adult farmers is becoming more apparent with the realization that present day agriculture requires advanced knowledge. Although adult farmer programs are in operation in many local communities in the United States, a large percentage of the total number of farmers is not being reached.

It is believed that this study through its review of related research, its collection of data, and treatment of data will reveal factors associated with attendance. By observation of these factors, teachers of vocational agriculture will be able to provide educational opportunities of interest to more farmers.

A thorough study of research conducted previously in the area of adult farmer education has been summarized and is presented in the following chapter.

## CHAPTER II

## REVIEW OF RELATED STUDIES

### Preliminary Considerations

The provisions made through the enactment of the National Vocational Education Act of 1917 (commonly referred to as the Smith-Hughes Act) for adult farmer classes stated:

> ...that such education shall be of less than college grade and be designated to meet the needs of persons over 14 years of age who have entered upon or who are preparing to enter upon the work of the farm or of the farm home...[1]

This act was the most far reaching law ever passed in the United States affecting the development of public school agricultural programs, not only in high school but, also, in adult farmer classes.

Adult farmer education, however, did not result from the Smith-Hughes Act. In this country it has had a long historical development.

The New England Town Meeting of the seventeenth century was a form of popular education for adults. Usually one meeting per year was held at which every male resident of the township was expected to be present with liberty to address the meeting. This appears to be the

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[1]U.S., Statutes at Large, Public Law 347, 64th Congress, Vol. 39, Part I, February 23, 1917, p. 934.

first effort, on record at least, of farmers attending organized meetings for the improvement of their own welfare -- for certainly the majority of the male residents of the townships in those early days in New England was farmers. In so far as the exchange of ideas was concerned some degree of adult education took place.

In 1785, the Philadelphia Society for Promoting Agriculture was organized to encourage "a greater increase of the products of land within the American States," and for this purpose the society would print memoirs, offer prizes for experiments, improvements, and agricultural essays, and encourage the establishment of other societies in the United States.[2] By 1860, there were 941 active agricultural societies in the United States.[3]

A direct outgrowth of the New England Town Meeting came in the form of the Lyceum in 1826 when Josiah Holbrook, a graduate of Yale in 1810, and subsequently a teacher and farmer, became interested in instruction for adults. He is frequently referred to as the "Father of the Lyceum," and in a sense, can be credited for laying some of the first foundation stones for our present-day adult farmer schools.

Briefly, the Lyceums were (1) "to procure for youth an economical and practical education and to diffuse

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[2]Alfred Charles True, A History of Agricultural Education in the United States, 1785-1925 (Washington, D.C.: U.S. Government Printing Office, 1929), p. 7.

[3]Ibid., p. 23.

rational and useful information through the community generally, and (2) to apply the sciences and the various branches of education to the domestic and useful arts and to all common purposes of life."[4] The Lyceums were voluntary associations of farmers and mechanics "for the purpose of self culture, community instruction, and actual discussion of common public interests." By 1839 more than 3000 Lyceums were in existence and they exercised educational leadership among adults in the rural areas.[5]

Farmers institutes were begun about 1870 and developed into a regular system of meetings under public control. These institutes, public meetings, and lectures for farmers spread so widely that by 1890 there were 26 states providing such farm meetings. By 1899 farmers institutes had spread into 45 states, with more than 2,000 institutes attended by over 800,000 farmers held that year. By 1914 when the Smith-Lever law was enacted, the number of farmers attending institutes had increased to over 3,000,000. The peak was reached in 1915 with 7,060 different institutes held, but by 1927 they had declined to 2,260. The sharp decline was due largely to increasing

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[4]Henry Barnard (ed.), American Journal of Education, Vol. 8, (Hartford, Connecticut: F. C. Brownell, 1860), p. 231.

[5]American Association for Adult Education, Handbook of Adult Education in the United States (New York: 1934), p. 98.

numbers of other types of meetings for farmers.[6]

The early farmers institute was essentially a one or two-day meeting featuring addresses on various farm, home, and community topics. Discussions were carried out by the speakers, representatives of the agricultural colleges and experiment stations, and the more progressive farmers. These meetings brought farmers and their families the results of research of the state agricultural experiment stations, the United States Department of Agriculture and similar institutions, as well as the successful practices of farmers.[7]

The Agricultural High School of Baltimore County at Sparks Station, Maryland, was opened in 1909 and was among the first public schools to introduce instruction in agriculture. This school also provided for adult farmers a ten-meeting course with an average attendance of 125 men and women. Monthly meetings were held on Saturday afternoons for the farmers' wives with an average attendance of 85 women. They studied home economics, carpentry, home crafts, or modern literature.[8]

Therefore, vocational education in agriculture for adult farmers provided by the public schools under the provisions of the Smith-Hughes Act of 1917 was but a natural development in the long process of adult farmer

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[6]True, op. cit., p. 277.

[7]Ibid., pp. 278-279.

[8]Ibid., p. 353.

education.

Farming requires a wide variety of skills and a great deal of scientific knowledge, much more than appears to be commonly recognized by those not familiar with agriculture. It also calls for business and managerial abilities of a high order. Anyone can keep farm animals but only the farmer who is a good manager can make those animals keep him.

Local communities, under the sponsorship of departments of vocational education in the public schools, are more and more accepting the responsibility of training out-of-school farm youth and adult farmers to establish and maintain themselves successfully in the business of farming.

Since 1921 there has been an increase in the number of adult farmers who have enrolled in evening classes in vocational agriculture.

Latest reports reveal 272,363 adult farmers were enrolled in classes in 1954-55.[9] Although this is a sizable number, Table 2 (page 4) indicates that only approximately 6% of the total number of adult farmers are attending classes. The small percentage of farmers who attend classes seems to be in direct contradiction to the many needs these farmers may have -- needs which can be

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[9]Digest of Annual Reports of State Boards for Vocational Education. Fiscal year ended June 30, 1955. Federal Security Agency, Office of Education (Washington: U.S. Government Printing Office, 1955), p. 19.

partly or wholly met by attending classes designed to meet their needs.

Review of Research on Selected Factors

Leaders in the field of adult farmer education such as Hamlin, Tabb, Dickerson, Mack, Ahalt, and others have conducted many investigations of adult farmer classes. Teachers actively engaged in teaching adult farmers have focused their studies on factors considered to have some bearing on attendance at adult farmer classes. Items of age, size of farm, distance from the class center, educational background, and farming status usually were included to establish a cross-sectional view of the "average" adult farmer.

Many studies have also included items such as time of day, day of the week, and the time of year classes are held, site of class meeting, attendance at previous classes, methods of instruction used, use of outside speakers, social and recreational activities, and many other factors to determine if these factors are associated with attendance, as well as enrollments. A number of these studies have been summarized and are included in the following review of research on selected factors.

Age of farmer

Tabb, in his study of farmers enrolled in adult farmer classes in Kentucky, found the average age to be 44. Further findings in a random sample of 869 farmers revealed the high interest group to be between 35 and 55

years of age with the lowest interest group over 65.[10] Although Tabb's study did not deal specifically with attendance, the findings indicated an association between the age of the farmer and class attendance.

Pierce found that 71.5% of the adult farmers enrolled were beyond 30 years of age. Only 4% were over 60. The largest percentage was between 40 and 49 years of age.[11]

Guiler discovered in his study in the Canal Winchester, Ohio area that the average age of the adult farmer was 40, with ages ranging from 30 to 63 years of age. The largest number enrolled (25%) was in the 30 to 35 age-group.[12]

A study of 620 farmers by Webster revealed a reasonably young average-age of 34.5. Only 6% were 60 and over.[13]

Many studies of young and adult farmers gave a

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[10]W. R. Tabb, "A Study of the Age of Farmers Attending Adult Farmer Classes and the Distance Traveled to Class" (Report of non-thesis study, University of Kentucky, 1954), pp. 4-7.

[11]Dewey Pierce, "The Status of Adult Education in Vocational Agriculture in Ohio, 1951-52" (unpublished Master's thesis, Ohio State University, 1952), p. 43.

[12]Gilbert S. Guiler, "An Evaluation of the Program of Adult Education in Vocational Agriculture at Canal Winchester, Ohio, 1950-51" (unpublished Master's thesis, Ohio State University, 1951), p. 15.

[13]George E. Webster, "The Discovery of Factors Involved in the Conduct of Courses for the Repair or Construction of Farm Machinery and Equipment - A Study of Vermont's Experience" (unpublished Master's thesis, Cornell University, 1943), p. 13.

slightly different age-picture while providing a basis for considering age as a factor associated with attendance.

Colville found that 80% of the farmers studied were under 45 years of age, 31% were under 30, and only 10% were over 50.[14] When this study is divided into its young farmer and adult farmer components, however, one finds 18% over 50 and an average adult farmer age of 38.

Dickerson's study of young and adult farmers revealed that 93.5% of the young farmers were under 35 years of age, while 88.7% of the adult farmers were 25 and over; 52.4% were over 35 years of age. According to these data, the largest percentage (41.9) of the adult farmers fell in the 35 to 54 age group, while the largest percentage (69.4) of the young farmers was contained in the 16 to 24 age group.[15]

All of these studies appear to support Thorndike's research concerning the optimum age of learning. In reporting on one of his earlier studies he says:

> We showed that the ability to learn increased from early childhood to about age 25 and decreased gradually and slowly thereafter, about one percent per year. Childhood was found to be emphatically

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[14]David E. Colville, "The Reasons Why Farmers Attend Short Courses and the Subsequent Influences on Their Farming Programs" (unpublished Master's thesis, Ohio State University, 1945), p. 19.

[15]Russell B. Dickerson, "The Development of Vocational Education in Agriculture for Young and Adult Farmers in Pennsylvania for the Ten Year Period, 1931-41" (unpublished Ph.D. dissertation, Pennsylvania State College, 1943), pp. 88-89.

> not the best age for learning in the sense of age when the greatest returns per unit of time spent are received. The age that is best in that sense is in the twenties, and any age below 45 is better than ages 10-14.
>
> Later investigations by Miles, Jones, and others made it probable that the decline in ability to learn from age 45 to 70 is not much more rapid than this, so that a man 65 may expect to learn at least half as much per hour as he could at 25 and more than he could at 8 to 10.
>
> These results perform the useful service of assuring any adult (21 to 70) who is not demented that he can learn most of what he needs to learn and with little or no greater time cost than at age 15.[16]

Although it is recognized that this study by Thorndike dealt principally with verbal learnings and did not control all variables, it does indicate that adults between the ages of 45 and 65 do have a considerable amount of ability to learn. While classes may logically be organized around the needs and interests of farmers between the ages of 30 and 55, those farmers past 55 should not be forgotten. It is believed that the present study will find the age-groups of 30 to 55 to be predominant. However, statistical treatment (comparisons of age-groups and actual attendance records) will be made to further support or reject the factor of age as being significantly associated with attendance.

Distance from class center

The factor of distance from the class center has been accepted by persons in adult education as being one of the more important factors associated with attendance.

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[16]Edward L. Thorndike, Adult Interests (New York: The Macmillan Company, 1933), pp. 2-3.

In past years the prospect of driving to a suitable meeting place in a doubtful medium of transportation over an even more undependable roadway could very well have greatly influenced a farmer's attendance to class. In recent years, however, dependable motor vehicles and improved roads have made the factor of distance from the class center of less importance as a determent to attendance to adult farmer classes.

Webster's study, concerned with the distance of farmers from 45 class centers, disclosed an average distance of 3.7 miles. Seventy-six percent of the enrollees lived within five miles and 20% lived within 1.5 miles. None of the members traveled more than 12 miles to class.[17]

Tabb reported in his study of 869 farmers that the average distance traveled was 5.2 miles. The maximum distance traveled was 22 miles. Ninety percent lived within 10 miles of the class center.[18]

Guiler studied class attendance of 70 farmers in Ohio. He found that 51% of the young and adult farmers traveled from one to six miles. Only nine of them traveled 10 or more miles to the class center.[19]

Although these studies indicate that some farmers will travel relatively long distances to attend meetings,

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[17]Webster, op. cit., p. 17.

[18]Tabb, op. cit., p. 8.

[19]Guiler, op. cit., p. 19.

generally speaking, most farmers prefer to attend classes within five miles of their homes. These findings might also indicate that regardless of the situation, few farmers will travel more than 10 miles to attend farmer classes.

Marital status of farmer

Some correlation may be shown between the marital status of farmers and subsequent attendance to classes. This factor appears to be of less significance since the majority of farmers in this country are married. Data from the 1950 United States Census revealed that 62% of the farmers were married.[20] These data included all rural males 14 years and older. The percentage of adult farmers who were married would be considerably higher.

Webster, in his study of 620 young and adult farmers attending classes, found that over 60% were married. Thirty-three percent of the farmers involved in this study, however, were under 25 years of age, with 125 members 21 and less.[21] One might possibly estimate from these figures that approximately 75% of those farmers over 21 were married. This approximation would support the figures revealed in the 1950 United States Census of Population.

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[20]U.S., Bureau of Census, Seventeenth Census of the United States: 1950. Population. Table 3, Vol. II, pp. 2D-29.

[21]Webster, loc. cit.

The present study is not so concerned with whether a respondent is married or single but rather if a married enrollee maintains a better attendance record than an enrollee who is single.

Educational background of farmer

It is commonly recognized that the more education a person has, the more he realizes the need for additional training. If one accepts the foregoing statement, Mack's study of the differences between educational backgrounds and adult education interests will become more significant.

Mack grouped his respondents into categories pertaining to the amount of formal schooling received. He found that persons with six years or less of formal education displayed the least interest in adult education. As the amount of education increased, the interest in adult education also increased. Ninety percent of the people included in the "high interest group" had graduated from high school.[22]

Most of the research pertaining specifically to the educational background of adult farmers has been to determine only the amount of formal schooling received. Many of our farmers today have less than a complete high school education which may help to explain the low percentage of farmers attending adult farmer classes.

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[22]John A. Mack, "Determining Community Needs for Adult Education" (unpublished Ed.D. dissertation, Cornell University, 1951), p. 158.

Webster's study revealed 35% of the enrollees had completed the eighth grade. Thirty-two percent had graduated from high school while only 4% had completed college. The enrollees averaged 10.1 grades completed in the public schools.[23]

Dickerson's research, involving almost 4700 young and adult farmers, revealed that 58.2% of the young farmers and 36.9% of the adult farmers had some high school education. Surprisingly enough, more adult farmers (5.8%) had some college training as compared to only 3.2% of the young farmers enrolled.[24]

Different findings have been reported from Guiler's study in Ohio, where 96.7% of the young farmers and 87.5% of the adult farmers had completed high schools. Only 16.7% of the young farmers had gone beyond the high school level as compared to 25% of the adult farmers. Twelve and one-half percent of the adult farmers had graduated from college.[25]

In an earlier study Hamlin found that 43% of the enrollees had not gone beyond the eighth grade. Only 11% had gone beyond high school.[26]

One can readily see that the amount of education

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[23]Webster, op. cit., p. 15.

[24]Dickerson, loc. cit.

[25]Guiler, op. cit., p. 21.

[26]H. M. Hamlin, "Factors Affecting Attendance at Agricultural Evening Schools" (University of Illinois, 1938), Mimeographed. p. 4.

differs from study to study and that this amount has been steadily increasing as our entire population believes in and receives more educational training.

In view of the available information concerning the amount of formal education of enrollees of adult farmer classes, the present study will attempt to determine if those farmers with more educational background maintain better records of attendance.

Enrolled in vocational agriculture in high school

One factor considered associated with adult farmer attendance is that of having been enrolled in vocational agriculture while in high school.

Colville discovered that 57% of the adult farmers in his study had vocational agriculture in high school. As one might expect this study revealed that a much higher proportion of the younger farmers had taken vocational agriculture in high school. Fourteen percent of those class members over 40 years of age had had high school vocational agriculture; 59% of those 35 to 40; 83% of those 30 to 35: and 89% of those 25 to 30 years of age.[27]

Guiler found that 86.7% of the young farmers included in his study had vocational agriculture in high school, while only 35% of the adult farmer group had had such training. Of those adult farmers under the age of 38, 80% had had vocational agriculture training in high

[27]Colville, op. cit., p. 23.

school.[28]

While these two studies support the premise that a high percentage of members of adult farmer classes will have had some high school vocational agriculture, they also point to the fact that a large percentage of those farmers 40 and over did not have the opportunity for organized instruction in agriculture. An attempt will be made in this study to compare actual attendance records of the respondents to determine if being enrolled in vocational agriculture while in high school is associated with attendance at adult farmer classes.

Farm status

On the premise that the farming status of the class member would be associated with subsequent attendance, many have included this factor in their studies. It is the general consensus that the better established more aggressive farmers attend adult classes, yet all studies do not fully support this hypothesis.

Hamlin's study in 1938 found 58% to be tenants, but the economic situation at that time would probably account for such a large percentage of tenancy.[29] Studies since that time, particularly since World War II, indicate a different trend.

Colville found only 6% of his adult farmers class-

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[28]Guiler, loc. cit.

[29]Hamlin, loc. cit.

ified as tenants. Thirty-one percent were owners, 22% were part owners, 39% were in partnership, 1% were hired hands, and 1% occupied miscellaneous positions.[30]

Dickerson, reporting on his research, stated that 54.7% of the young farmers were owner-operators, 20.6% were renters, 16.1% were farm hands, and the remainder were in miscellaneous categories. The adult farmer group showed 61.3% owner-operators, 24.3% renters, and 9.5% farm hands. The remainder were classified in miscellaneous categories.[31]

Webster's study revealed that 55% were farm operators, 30% were sons of farm operators, 11% were hired hands, and the remainder fell in several categories.[32] The terms "farm operators" and "sons of farm operators" are ambiguous, and of course could include owners, renters, managers, or hired men. This study would be more meaningful if one could know what was included within these two rather general terms.

Guiler found in his study that 77.5% of the adult farmers were owners as contrasted to none of the young farmers. Twelve and one-half percent of the adults rented their farms as contrasted to 16.6% of the young farmers. Many of the young farmers were in partnership at home or

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[30]Colville, op. cit., p. 28.

[31]Dickerson, op. cit., p. 90.

[32]Webster, op. cit., p. 22.

at home with income from one or more enterprises. Guiler stated:

> This information gives support to the general belief that young and adult farmers should be separated in the instructional program. For example, the fact that only five of the young farmers are operators of their farms in contrast to the large number of adults who are owner operators, should be taken into consideration when teaching farm lessons.[33]

These studies reveal that the farming status of enrollees in adult farmer classes varies considerably according to the state in which the study was conducted and the current economic condition at the time the study was made. An attempt will be made in this study to determine if the farming status of those farmers in the study is associated with their actual records of attendance.

Size of farm

Another factor which has been considered to have some association to attendance is the size of the farm of the enrollee. This may differ widely when considering the type of farming. For example, a farm for the production of broilers would be small when compared to a farm for the production of wheat and beef cattle. Yet, in a diversified or general type farming area, it is commonly believed that size of farm is an indication as to whether a farmer is receptive to and realizes the need for participating in an adult education program.

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[33]Guiler, op. cit., p. 24.

Myer found that enrollees in Delaware came from small farms -- generally ranging in size from 31 to 75 acres.[34]

Pierce's research revealed that less than 4.5% of the farmers enrolled lived on farms under 50 acres in size. Eighteen percent lived on farms from 50 to 99 acres, 45% on farms from 100 to 199 acres, and 32% on farms of 200 acres and more.[35] These data support the statement made earlier that the size of farm is associated with attendance, since the information given shows 77% of the farmers reporting are from farms of 100 acres or more.

Guiler found that 41.4% of the farmers studied were from farms of between 101 and 200 acres in size. Thirty percent were from farms between 201 and 300 acres, and 14.3% from farms over 300 acres.[36] Strangely enough, the young farmers tended to operate larger acreages than did the adults. Guiler felt this was true because of the higher percentage of renters among the young farmer group.

Hamlin found 60% of the farmers studied were operating farms under 160 acres in size.[37]

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[34]Frederic E. Myer, "A Study of the Needs of Out-of-School Young and Adult Farmers in Delaware With Regard to Agricultural Information and Training," Summaries of Studies in Agricultural Education, Supplement No. 8, Bulletin No. 256 (U.S. Department of Health, Education, and Welfare), p. 74.

[35]Pierce, op. cit., p. 48.

[36]Guiler, op. cit., p. 23.

[37]Hamlin, loc. cit.

The average size of farm has increased considerably in the last two decades to make more economical units, particularly in the use of farm machinery. This increase in average farm acreage coupled with the increased use of farm machinery might well explain why many of the adult farmer classes select topics pertaining to farm management and farm machinery.

These questions arise: "Does the size of farm have any association with attendance to adult farmer classes?" "Will the farmer from a large farm have a better attendance record than the farmer from a small farm?" This study will attempt to determine if any association exists.

Membership in other organizations

As the use of labor and time saving devices increased and the means of transportation and communication improved, farm people have had the time to participate in many additional activities. Many members of the farm population today enjoy the same opportunities for membership in civic, service, and social organizations formerly enjoyed only by residents of towns and cities.

Few studies have been made pertaining to the exact correlation existing between membership in organizations and attendance to adult farmer classes; however, these studies do reveal that members of adult farmer classes belong to many types of organizations.

Hamlin found in 1938 that 56% of the farmers stud-

ied were members of the Farm Bureau, 38% belonged to no general farm organization, and the remainder belonged to farm organizations other than the Farm Bureau.[38]

Guiler reported in his study 13 different organizations to which the farmers belonged. The five organizations most frequently mentioned were church, Farm Bureau, Community Club, Grange, and the F.F.A. Eighty-six percent of the young farmers and 79% of the adult farmers were church members. Fifty-two percent of the adult farmers belonged to the Farm Bureau in contrast to only 31% of the young farmers. Many more of the adult farmers held offices in the organizations to which they belonged than did the young farmers.[39]

If these two studies are representative, then one could surmise that farmers who attend meetings of civic, social, farm and church organizations also attend adult farmer classes.

The present study will attempt to determine if attendance at the many and varied community activities is associated with attendance at adult farmer classes.

On-farm visits by instructor

It is generally accepted that the more comprehensive higher quality programs involve a system of meaningful on-farm visits to the farms of the members enrolled.

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[38]Ibid.

[39]Guiler, op. cit., p. 32.

Ideally, a basic strength of the vocational agricultural program throughout the nation has been the on-farm visits of the teacher of vocational agriculture. This is true at all levels -- in-school students, young farmers, and adult farmers. A principle upon which a good agricultural program is founded is the ability of the teacher of vocational agriculture to relate his class room methods and materials to the needs of the students enrolled.

In using the factor "on-farm visits by the instructor" the writer is attempting to establish the association that this factor may have with attendance at adult farmer classes.

The initial on-farm visit by the teacher of vocational agriculture has been one of the primary methods in securing enrollments and subsequent attendance. Deyoe suggests that "preparatory to organizing a course for a group of adult farmers, a teacher should make visits to the farms of the persons likely to attend."[40] This visit also makes it possible for the teacher to secure information from which to plan the course.

Guiler found that 80% of the farmers studied felt the teacher should make more than one visit every three months. Forty-nine percent stated they would like to have the teacher visit them every other month. In the year that this study was made, the teacher visited each

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[40]George P. Deyoe, Supervised Farming in Vocational Agriculture (Danville, Illinois: The Interstate, 1943), p. 467.

student an average of three times. Guiler further stated that "according to the data received, some additional effort should be made toward increasing the number of visits per member throughout the year."[41]

Although research on the factor, "on farm visits by the instructor," is limited, the available evidence indicates that enrollments and attendance could be enhanced through more personal contact between the instructor and present or prospective enrollees. This study will attempt to determine whether this factor is associated with attendance.

Time of day - Day of week - Time of year

It is a rather obvious fact that the time of day, day of week, and time of year the adult farmer classes are held would be factors in maintaining a reasonable attendance.

Newcomer's study covering the possibility of an adult educational program in the Clarksville, Maryland area found that the farmers were interested in attending classes held during the winter months, early in the week, and in the evening hours.[42]

Murray and Biser in reporting on successful young

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[41]Guiler, op. cit., p. 93.

[42]Frank R. Newcomer, "The Possibility of Adult Education in Agriculture at Clarksville High School, Clarksville, Maryland," Summaries of Studies in Agricultural Education, Supplement No. 6, Bulletin No. 251 (U.S. Department of Health, Education, and Welfare), p. 63.

and adult farmer programs in Maryland found that classes were held in every month of the year, but that the large majority were held during the winter months. The majority of classes were held on Monday, Tuesday, Wednesday, and Thursday. Ninety-seven percent of the classes were conducted in the evening hours of these four days.[43]

Mack found the months preferred for adult classes were October through March with lesser preference shown for September, April, and May. June, July, and August received only 2.7% of the total votes as suitable months to hold classes. Mack also found that Monday through Thursday were the preferred days with only 7% indicating Friday and less than 2% indicating Saturday. The predominant times during the day for classes were 7 to 9 p.m. and 8 to 10 p.m. Almost 10% of the respondents indicated afternoon as a desirable time for classes, with 3% preferring forenoon and 3% late afternoon.[44]

Mack also studied how often farmers desired classes to be held. Sixty-five percent of the respondents preferred one meeting a week, 33% indicated two meetings per week, and 2% indicated three times or more a week.[45]

Parent was concerned with the relation between

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[43]Ray A. Murray and Lloyd C. Biser, "Successful Young and Adult Farmer Classes," Summaries of Studies in Agricultural Education, Supplement No. 7, Bulletin No. 253 (U.S. Department of Health, Education, and Welfare), p.48.

[44]Mack, op. cit., pp. 143-146.

[45]Ibid.

the time of day classes were held and the improved practices adopted by the class members. His study revealed an 18% increase in improved practices adopted when instruction was carried out through a combination of afternoon and evening hours. This combination was better than any other single time or any combination of two or more times.

In regard to the time of the year, Parent stated:

> The greatest percentage increase of improved practice adoption was gotten when adult classes were offered through-out the year. A considerable percentage increase of adoption was also attained when the instruction was offered during a combination of the winter and spring periods. When adult classes were offered during a combination of the fall and winter periods, and even when the instruction extended into the spring, percentage increases of improved practice adoption were noted. The winter period, when used alone for the instruction of adult classes, also showed a percentage increase of adoption, though the increase was considerably less than the above named combinations of periods.
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> It is obvious then that the most successful adult classes are conducted by teachers who offer instruction throughout the year. Considerable success is also apparent when a combination of the winter and spring periods are used for the instruction. A combination of the fall and winter periods which may or may not extend into the spring period also produce desirable results.[46]

The most popular months according to Dickerson's research were October through April with little interest in May and practically no interest in June, July, August, and September. He found that farmers favored the months of December, January, February, and March for adult classes.

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[46]Weber J. Parent, "Certain Factors Influencing the Success of Evening School Work in Vocational Agriculture" (unpublished Master's thesis, Louisiana State University, 1941), pp. 47-51.

Almost 95% preferred to meet only one night per week. The most popular times were from 8 to 10 p.m. with 7:30 to 9:30 p.m. next in favor. According to the data 91% of the young farmers and 94% of the adult farmers preferred evening meetings scheduled sometime between 7 and 11 p.m.[47]

Pierce found 48% of the young farmer classes and 3.8% of the adult farmer classes began in November. No classes began in April or May but some started during the summer months indicating that farmers will attend summer meetings. Approximately 50% of the classes were held on Monday night, fewer on Wednesday night, and still fewer on Thursday night. The most common times for meetings to begin were 7:30 p.m. and at 8:00 p.m. Approximately 70% preferred to have meetings begin at 8:00 p.m.[48]

From these studies one can summarize that the months of October through March are the most acceptable months, and the hours of 7:00 to 10:00 p.m. of the evenings Monday, Tuesday, Wednesday, and Thursday are the most acceptable time and days to hold adult farmer classes.

Place to hold meeting

Coupled with the time of year, day of the week, and time of day to hold adult classes would also be the

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[47]Dickerson, op. cit., pp. 70-76.

[48]Pierce, op. cit., pp. 50-53.

item of "place to hold the meetings." The first place to come to mind would probably be the classroom of the local vocational agricultural department. Yet, research reveals many other locations are also suitable. It appears that best results are obtained if the meeting place is within 10 miles of the majority of the farmers expected to attend and preferably no more than five miles distance. Studies seem to indicate that reasonable facilities are all that is necessary providing the average distance is not too great. Of course, suitable lighting, seating, and temperatures are essential for good learning to take place.

Parent's study stressing the adoption of improved practices revealed that more practices were adopted when the instruction was carried on in class members' homes. The number of practices adopted gradually decreased when instruction was held in churches, business places, and schools. Parent concluded by stating:

> For evening schools to be most successful, it appears that the instruction should be offered in places easily accessible to the evening school members, preferably in places where either the homes of members or churches are involved.[49]

Although Parent found the class members' homes to be the most desirable place to hold adult farmer classes, it is believed that where facilities are adequate, any other considerations relative to the place of class meeting would not be of prime importance.

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[49]Parent, op. cit., p. 50.

Attendance at previous classes

Previous research has indicated that attendance at previous meetings influences present attendance. Many studies indicate a large percentage of present enrollees has attended classes in the past. If classes meet their needs, it seems only natural that farmers would be inclined to attend meetings year after year.

Johnson noted in his study that 85 different individuals enrolled in his adult farmer classes over a five-year period. Forty-nine of these 85 farmers attended more than one year.[50]

Mack found that 38% of his respondents had attended adult classes before. Of those who had attended previous classes, 51% had attended only one year, 27% had attended two years, while only one person had attended nine years or more. Mack concluded, therefore, that adults participate in training sessions for specific reasons. They want training to meet certain needs and if and when those needs are met, they no longer attend.[51]

Pierce's study revealed that 33% of the young farmers and approximately 40% of the adult farmers had not previously enrolled in adult classes. Fifteen percent of

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[50]Delmar Johnson, "The Influence of High School Boys in Getting Their Dads to Enroll in Adult Farmer Classes and to Carry Out Improved Farming Practices," Summaries of Studies in Agricultural Education, Supplement No. 10, Bulletin No. 265 (U.S. Department of Health, Education, and Welfare), p. 50.

[51]Mack, op. cit., p. 89.

the young farmers and 19% of the adult farmers had more than three years of previous attendance.[52]

Dickerson found approximately 27% of the farmers in his study had attended classes the preceding year.[53]

Guiler reported that 70% of the young farmers and 65% of the adult farmers attending classes in the Canal Winchester, Ohio area had attended from one to four years. He found, however, that 37% of the adult farmers had attended young farmer classes from one to fourteen years prior to enrolling in the adult classes. Guiler concluded that "undoubtedly this continuance of the vocational agricultural program from young farmer classes to adult farmer classes is a contributing factor to these men being enrolled in the program at the present time."[54]

It was noted by Colville that more than one-half of the students had attended classes for only one or two years. Nine percent had attended for more than 12 years. Strangely enough, Colville found no significant relationship between the number of years of attendance to classes and the farming status of the students.[55]

It is apparent that a large percentage of the class members has a relatively poor record of continuous class attendance. This seems a bit irregular, for in an

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[52]Pierce, op. cit., p. 49.

[53]Dickerson, op. cit., p. 91.

[54]Guiler, op. cit., p. 18.

[55]Colville, op. cit., p. 25.

effective young and adult farmer program, the participants need to be enrolled from year to year. It seems impossible for farmers to receive help on all their problems in one year and, too, new problems are constantly arising. It would appear necessary, therefore, to have some continuity in the program over a period of years.

It is believed that better attendance records will be made by those farmers who have previously attended adult farmer classes. A statistical treatment of the data in the present study will support or reject this assumption.

Methods of instruction used

Teachers of agriculture and educators in adult work have been concerned with determining the best methods of instruction to use in working with adults. Students enrolled in adult classes are not a captive audience, although they may have tendered a minimum enrollment fee. For them to maintain regular attendance will require the instructor to recognize and utilize desirable methods of instruction.

Hamilton reported that the farmers included in his study stressed the methods of group discussion, demonstrations, tours, and field trips as the most desirable with less emphasis placed on lectures and the use

of outside speakers.[56]

Guiler revealed in his study that all methods of instruction seemed to be satisfactory. Adult farmers preferred more demonstrations than did the young farmers. Both groups, young farmers and adults, ranked demonstrations first, group discussion second, and panel discussion third as the most preferred methods of instruction.[57]

Although it is difficult to determine the correct methods to use from only two studies, discussions with many teachers of adults have led the writer to believe that the information given in these two studies is sound and representative of the methods which should be used for effective adult farmer instruction.

These studies have attempted to determine which methods of instruction are the most suitable for adult farmers. The present study, however, is attempting to determine if methods of instruction are actually associated with attendance. No attempt will be made to determine which methods are the most successful.

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[56]Forrest L. Hamilton, "A Study of the Problems and Procedures Used in Planning, Organizing and Carrying Out an Adult Education Program in Twenty-one Vocational Agriculture Departments in Southeastern Oklahoma," Summaries of Studies in Agricultural Education, Supplement No. 9, Bulletin No. 263 (U.S. Department of Health, Education, and Welfare), p. 34.

[57]Guiler, op. cit., p. 62.

Off-the-farm employment

In the past two decades, the sociological and economic situation of the American farmer has changed a great deal. As farms increased in size and larger investments became more and more necessary, many farmers operating small acreages began to seek employment off-the-farm to supplement their income. They were reluctant to leave farming entirely, yet were forced to secure adequate income for living from off-the-farm sources. How to meet the needs of these farmers who, in many instances, are performing the work of two persons has presented a challenge to adult education leaders.

Sweany found the part-time farmer in Michigan to be relatively stable. Over 90% owned their own farms; three-fourths of them expected to live in their present homes indefinitely. This study also revealed that the part-time farmer has problems similar to a full-time farmer but with emphasis in areas of gardening and landscaping, renting or purchasing, farm machinery, marketing surpluses, freezing and storing fruits and vegetables, and improving the appearance of the farm home and farmstead.[58] This study should benefit adult educators in areas where there is a high percentage of part-time farmers.

Pierce reported 21% of the young farmers and 14%

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[58]H. P. Sweany, "Some Educational Needs of Families Engaged in Part-time Farming in Michigan," Research Bulletin No. 3 (East Lansing, Michigan: Michigan State College Press, 1951), pp. 16-28.

of the adult farmers were part-time farmers. He concluded that:

> It is apparent that part-time farmers may need to have a program of instruction which would be peculiar to their needs and interest. At the present time no provision is made for such instructional meetings in areas where part-time farming is carried on, except that they are encouraged to attend the same meetings the full-time farmers attend. Apparently more work should be done in this area.[59]

With part-time farming increasing steadily, it is apparent that adult classes should be organized around the problem areas of farmers who are employed to some extent off-the-farm as well as full-time farmers.

The present study will attempt to ascertain if any association exists between attendance to adult farmer classes and off-the-farm employment.

Type of courses offered

The type of course to be offered in any local situation will be a matter of prime importance because subsequent success of the adult class could very well depend on this item.

Cook made the following statement about the type of course:

> Precautions must be taken not to permit farmers to influence the teacher to attempt too many units. Sometimes the group may want to spend two nights on swine, two on poultry, three on corn, two on legumes, and one on wheat, all of which need at least ten to twelve nights to complete. Instructors should make it clear that agriculture includes many enterprises

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[59]Pierce, op. cit., p. 44.

that cannot be covered in such a short time.[60]

Hamlin said the following in favor of the one unit type of course:

1. Interest is carried over from one meeting to another and accumulates as the course proceeds.
2. The thinking of the group is more connected and sequential and results in the end in more that is of value if it is continuous through the series.
3. There are more likely to be results in terms of new farm practices.
4. Attendance is more regular and consistent because every meeting leads toward another meeting of interest and the course has been sold to the members as a unit and not lesson by lesson.[61]

In contrast to these statements, it will be noted in the following studies that farmers may not always agree. Amsberry made a study of four evening schools in Iowa in order to determine the factors which contributed toward regular attendance in the comprehensive adult school. He had the following to say about the type of course:

> It has long been a matter of discussion among the instructors of adult classes as to whether one should teach a series of topics on one unit or whether he should use a series of topics of a general nature, even if the topics were unrelated. The survey clearly brought out the fact that the general topic method is preferable .... The general topic gives an opportunity to select those topics which are of current interest to the greatest number of pupils. The use of the unit topic methods, while it no doubt allows for a more thorough teaching job, does not interest

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[60] G. C. Cook, A Handbook on Teaching Vocational Agriculture (Danville, Illinois: The Interstate, 1938), pp. 426-427.

[61] H. M. Hamlin, "Part-time and Evening Classes in Vocational Agriculture in Illinois" Illinois Board for Vocational Education, Bulletin 79, pp. 41-42, 1941.

as large a percentage of the students in the class.[62]

Strong reviewed records from 307 evening schools from the office of the State Board for Vocational Education for a three-year period 1943-45. These records represented 143 communities in Iowa. Most of the evening schools consisted of 10 or 11 meetings. Strong reported:

> Of the 307 courses reviewed, over two-thirds were on current farm problems. An average of 14.5 more members was enrolled in the one-unit courses. The average attendance was also the largest in courses on current farm problems, being 6.5 more than the average attendance of the one-unit courses, and 7.2 more than the two unit courses. The persistency of attendance was in favor of courses on current farm problems, since members attending this type of course attended a larger percentage of the meetings than members attending either the one or two-unit courses.[63]

Strong concluded:

> There was little relationship between the different types of courses and the number of improved farm practices that the farmers used for the first time, or the number of farmers enrolled for follow-up work. The small difference that was found was in favor of the two-unit courses.
>
> Sixty-seven percent of the courses offered in 1945 were on current farm problems, and approximately the same percentage of instructors favored this type of course. However, the farmers wanted more courses on current farm problems, since 87% desired courses of this nature. Only 4% of the farmers favored a one-unit course. The remaining 9% wanted the two-unit course.[64]

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[62] R. L. Amsberry, "Factors Which Contribute Toward Regular Attendance in the Comprehensive Adult School," Agricultural Education Magazine, Vol. 15 (Danville, Illinois: The Interstate, January 1943), p. 131.

[63] Wayne D. Strong, "Organization of the Instructional Program in Agricultural Evening Schools in Iowa" (unpublished Master's thesis, Iowa State College, 1946), pp. 15-18.

[64] Ibid., pp. 48-49.

From the comments and studies reported here, apparently there is a difference of opinion regarding the type of course that makes the most successful adult farmer class. For this reason, this factor was included in this study to determine the type of course most closely associated with attendance to adult farmer classes.

Outside speakers

The various studies reviewed have revealed differences of opinion regarding the usefulness of resource persons or outside speakers in adult farmer classes.

Guiler reported 77% of the farmers included in his study felt that resource persons should be used at less than 30% of the class meetings. Twenty-two percent felt that resource persons could be used from 40 to 60% of the meetings.[65]

It was noted by Parent that teachers who conducted adult classes without the use of outside instructors found that members increased the adoptions of approved practices by more than 11%. This led Parent to conclude that when teachers are thoroughly acquainted with the subject matter to be taught, more successful adult classes can be conducted without the use of outside speakers.[66]

In contrast to these findings, Strong, in his study, reported that the enrollment and attendance in-

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[65]Guiler, op. cit., p. 58.

[66]Parent, op. cit., p. 51.

creased as the number of outside speakers increased. Strong compared classes that used only one speaker, 2 or 3, 4 or 5, and over 5 speakers. In all cases, as the use of speakers increased enrollment and attendance increased.[67]

From these studies, there appears to be some association between attendance to adult farmer classes and the use of resource persons. The differences in the results obtained in these studies, however, indicate that additional research should be undertaken. The present study will attempt to determine if any association exists between attendance to adult farmer classes and the use of outside speakers.

Social or recreational activities

Many persons have felt that social or recreational activities are necessary for large enrollments and persistent attendance. Refreshments have also been considered by some as an aid in attendance.

Colville reported that 62% of the farmers in his study listed social activities as one of the reasons for attending while 14% listed recreational activities.[68] These were not primary reasons, but were significant enough to be included in a summary of Colville's study.

Mullins noted that most of the farmers included in his study attended classes to associate with other far-

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[67]Strong, op. cit., pp. 33-34.

[68]Colville, op. cit., p. 27.

mers. Socializing with others in the same field of endeavor was an important reason for attending adult farmer classes.[69]

Pierce reported that in order of greatest frequency, the most common social and recreational activities engaged in by young and adult farmers were basketball, picnics, volleyball, and refreshments.[70]

Guiler found that volleyball was the main recreational activity engaged in after the discussion periods. Approximately 90% of the adults, and 100% of the young farmers played volleyball. Guiler pointed out, however, that some farmers utilized the recreational periods to carry on further discussion of the farm problems pertinent to them. Approximately 75% favored refreshments as being of "average" or "much" value to the class meetings.[71]

Many adult farmer classes include a variety of social and recreational activities and most classes have some kind of refreshments during or after the majority of the meetings. Adult farmers in general appear to favor some entertainment and refreshments at their meetings.

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[69]Erdman Mullins, "A Study of Factors Influencing Participation in the Program of Vocational Agriculture as the Basis of Developing an Adult Farmer Program in the Haysi Area of Dickenson County, Va.," Summaries of Studies in Agricultural Education, Supplement No. 10, Bulletin No. 265 (U.S. Department of Health, Education, and Welfare), p. 64.

[70]Pierce, op. cit., p. 64.

[71]Guiler, op. cit., pp. 65-66.

Physical activities have less appeal for older farmers. It seems important to plan entertainment and refreshments for class meetings as a means of increasing attendance.

While the importance of social and recreational activities seems to have become apparent from this review of studies, no definite association between these activities and class attendance has been determined. For this reason, an attempt will be made to determine if any association with attendance can be established.

Type of farming - Productive man work units

It is assumed that the type of farming in a community would have a bearing on the attendance to adult farmer classes since the farmers could not be expected to attend classes in which topics being discussed were entirely foreign to their immediate problems. One might expect little attendance to a class in range and pasture management in a highly specialized area of either broiler production or truck crops. It is assumed, therefore, that teachers of vocational agriculture would promote only those topics for classes that are pertinent to the area.

"Productive man work units" might also indicate the time available for farmers to attend classes. This item has not been recognized in previous studies as a factor associated with attendance to adult farmer classes. Apparently adult farmer programs studied were being

observed for seemingly less obvious factors relating to attendance. Guiler, however, surveyed the farmers in his study to determine the major sources of income. He found that swine, dairy, corn, and wheat were the most important enterprises of the farmers attending this Canal Winchester, Ohio farmer class. Enterprises of beef, sheep, pastures, poultry, and soybeans were also considered important in this community.[72] One can see that a diversified area such as this would necessitate a variety of topics over a period of several years in order to meet the needs of the farmers in the community.

The present study will compute each respondent's type of farming through the use of PMWU standards derived from a bulletin published by the Michigan State University Cooperative Extension Service. The type of farming of each respondent will be determined where 40% or more of the PMWUs are in that category. This study will then attempt to determine if the "type of farming" is associated with attendance to adult farmer classes.

Studies on Attendance at Adult Classes in General

Some studies have been rather specific in determining why farmers did or did not attend classes. Some of these studies are most revealing as to the exact reasons for and against attending.

Colville found that 99% of the respondents in

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[72]Guiler, op. cit., p. 26.

his study listed need for information as the primary reason for attending. Sixty-two percent wanted to associate with other farmers, 14% came for recreation, and 9% came because of a personal liking for the instructor.[73]

In Nicholson's study 9,000 questionnaires were sent to persons registered in part-time or evening classes, business and trade schools, and day colleges. Of the 5,211 returned, 58% were completed by men and 42% by women. Seventy-two percent of the men and 3.8% of the women were veterans. The first part of the questionnaire listed 30 possible reasons for adults attending school. The adult was asked to consider each reason and to indicate if it were a factor influencing his school attendance. After examining all reasons, the respondent was instructed to indicate by first, second, and third choices, the three most significant reasons for attending adult classes.

Significant choices of the men in respective order of importance according to Nicholson were:

Need for additional technical or specialized knowledge related to occupation

Belief that an education is necessary for successful life

Belief that studies will make him more secure in his position

Preparation for another occupation

Will help to earn more money

These five reasons made up 53% of all the signif-

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[73]Colville, op. cit., p. 28.

icant choices made by men.[74]

Differing sharply from the men, whose top five selections were all economic, the women made the following choices:

Desire to become familiar with fine arts, humanities, etc.

Belief that an education is necessary for successful life. (Same choice as men but only 8% as compared with 11% of men)

Preparation for new position (This was 4th ranked choice of men)

Desire for mental stimulation

Better understanding of human nature.[75]

From Nicholson's study one can see some of the reasons for people attending classes. He did not refer to the association of these reasons with actual records of attendance.

In a study by Murray and Ahalt of 202 farmers in two communities in Maryland, 51 indicated they did not wish to participate in adult meetings. The following reasons were offered by these farmers for not attending classes:[76]

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[74]David H. Nicholson, "Why Adults Attend School" (unpublished Ed.D. dissertation, University of Missouri, 1948), Mimeographed Summary.

[75]Ibid.

[76]Ray A. Murray and Arthur M. Ahalt, The Possibilities of Systematic Education for Young and Adult Farmers in Maryland. Part IV, "Survey of Farmers in Selected Communities." (College Park Maryland: University of Maryland, Agricultural Experiment Station), Miscellaneous Publication No. 208, 1954. pp. 65-76.

| | | | |
|---|---|---|---|
| Too busy | 13 | Work off the farm | 2 |
| Not interested | 9 | Retired | 2 |
| Too old | 8 | Ill and disabled | 2 |
| Too tired | 4 | No specific reason | 11 |

Thompson's study revealed that farm families in the Bixby, Oklahoma area did not participate in the activities of the community council because of:

1. Lack of notice and information
2. Pressure of work
3. The inconvenience of attending meetings during their busy season.[77]

Mullin, in his study of 80 farmers chosen at random, found that most farmers who participated in adult meetings did so because they lived close to the school, had a desire to learn improved practices, or desired to associate with other farmers. The principal reasons they did not attend were lack of time, lived too far from the school, did not know instruction was being offered, and were not invited.[78]

These studies have reported specific reasons for and against attending adult farmer classes; yet these specific reasons were not compared with actual records of attendance. The present study will attempt to determine

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[77]Gerald B. Thompson, "A Survey of the Participation of Farm Families in the Activities of the Bixby Community Council," Summaries of Studies in Agricultural Education, Supplement No. 6, Bulletin No. 251 (U.S. Department of Health, Education, and Welfare), p. 88.

[78]Mullins, loc. cit.

the association of specific factors with class attendance.

Summary

This review of studies has centered on factors believed to be associated with attendance to adult farmer classes. Some studies have dealt with the attendance of adults, including farmers, to different kinds of classes. Other studies have been concerned with combined groups of young and adult farmers. While the majority of these studies has focused on factors thought to be associated with attendance, no comparisons with attendance records were made. The present study will attempt to make comparisons between selected factors and actual attendance records.

# CHAPTER III

## PROCEDURE

### Introduction

During the 1956-57 academic year while a graduate student at Michigan State University, the writer became quite interested in the study of adult education in agriculture. It became apparent that a major portion of the future program of vocational agriculture could lay in the area of adult farmer education.

Drawing upon his own experiences with adult farmer classes and with the benefit of an intensive study of the literature dealing with adult education, the writer concluded that only a small portion of the potential adult farmer enrollees was being reached through organized class instruction. Some of the literature reviewed appears in Chapter II.

As a means of determining why more farmers were not attending adult classes, a study of the factors associated with attendance was begun. The factors included for study were considered to be characteristic of adult farmers or of adult farmer classes.

After consideration of the many techniques for gathering data, it was decided to secure the information needed through the use of a questionnaire.

Developing the Questionnaire

The development of the questionnaire used in this study had its beginning in the review of related studies including some study of factors related to attendance. From these studies were derived some of the factors which were included in the questionnaire in order to compare the findings at this time with those found in previous studies.

Some additional factors not previously studied but believed to be associated with attendance to adult farmer classes were selected and included. Most of these additional factors were secured from adult farmer class instructors.

During the school year, 1956-57, the writer was enrolled in a Seminar at Michigan State University dealing with correct procedures to follow in conducting research problems. All members of this class were more than helpful in discussing the relative merits of each factor. Additional factors were suggested, considered, and either accepted or rejected as being items of importance to include in the questionnaire.

During the early winter of 1957-58, the questionnaire was administered to two separate classes of adult farmers for their reactions pertinent to the form, structure, and/or content. A few minor changes came about in the questionnaire from this trial run, principally in word changes to overcome ambiguity. With these changes

completed, the questionnaire was used in this revised form in securing data from adult farmers enrolled in organized classes. (See Appendix)

Source of Data

The data for this study were gathered from adult farmers enrolled in classes in 39 centers in Michigan during February and March 1958. These months were considered the opportune period in which to find the majority of the classes in operation.

At this particular time, 88 classes of adult farmers were reported to be meeting regularly. A random sample of 50 departments of vocational agriculture were selected through the use of a table of random numbers.[1] Teachers in 39 of these 50 schools cooperated in gathering the data needed for this study. Of the remaining 11 teachers who did not furnish data, two were unable to organize their classes; four did not reply at all; four replied and were sent questionnaires which were never returned; and one had organized only a young farmers class.

Method Used in Securing Data

The local administrator and teacher of vocational agriculture in each of the selected schools were contacted by letter informing them of the study to be made and solic-

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[1]George W. Snedecor, Statistical Methods (Ames, Iowa: Iowa State College Press, 1956), Table No. 1.2, p. 10.

iting their cooperation. Replies were received from 39 teachers of vocational agriculture stipulating they would administer the questionnaire to the members of their adult farmer classes and indicating the approximate number of questionnaires needed. Eight hundred questionnaires were requested and were sent to the 39 cooperating teachers of vocational agriculture. These questionnaires were administered during one of the regular class meetings. The number of questionnaires per teacher varied from a minimum of eight to a maximum of 40.

It seemed that other data pertinent to the study could be collected from farmers who attended adult classes very little. Each teacher was requested to mail from three to five questionnaires to farmers in his service area who rarely attended classes. A self-addressed stamped envelope and a short explanatory statement were included with each of these additional questionnaires. The envelope was provided to encourage each farmer to mail his completed questionnaire directly to the writer. One hundred and sixty-five questionnaires were distributed to teachers for mailing to farmers making a total of 965 questionnaires to be completed.

A total of 490 questionnaires was returned of which 18 were discarded for not being complete and, therefore, not usable. Four hundred and twenty-eight usable group administered questionnaires and 44 usable mailed questionnaires were returned making a total of 472 ques-

tionnaires from which data were summarized.

In May and June of 1958, the cooperating teachers of vocational agriculture were again contacted to obtain the attendance records of those farmers who completed one of the questionnaires. Attendance records of the individual farmers plus information from the questionnaires supplied most of the data for this study. Some additional information pertaining to the subjects taught and the length in weeks of each class was secured from the records of the Division of Vocational Education, Department of Public Instruction, Lansing, Michigan.

Copies of all correspondence relating to the securing of these data can be found in the Appendix.

Treatment of Data

Each item of the questionnaire, the attendance records of each respondent, and the information secured from the State Department of Public Instruction were given a code number and transferred to a master code sheet. Some computation was necessary on items 9 and 10 of the questionnaire before final coding could take place. These items, pertaining to the number of productive man work units, were computed from standards developed by the Agricultural Economics Department of Michigan State University.[2]

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[2]Michigan State University, Cooperative Extension Service, "Farming Today - What it Costs, How it Pays," Department of Agricultural Economics, A.Ec. 679, 1957, p. 11.

The attendance records were categorized into five classifications. The farmers who attended from zero to 24% of the meetings were classified "poor"; those who attended from 25-49% were classified "fair"; those who attended from 50-74% were classified "good"; those who attended from 75-99% were classified "excellent"; and those who attended all of the meetings of their particular adult farmer class were classified "perfect."

IBM cards were punched from the information on the master code sheet. Cards were prepared for each of the 472 farmers who completed a questionnaire. All of the data pertaining to a particular respondent were punched on a separate card. The cards were processed by the "101" IBM machine which sorts, totals, and prints the results according to a prearranged wiring system. The totals of the five different attendance categories were grouped for each factor. From these totals, chi-square tests of independence were determined. The findings are reported in the following chapter.

# CHAPTER IV

# FINDINGS

## Introduction

Factors associated with attendance at adult farmer classes have been studied in the attempt to provide information which could assist teachers of vocational agriculture to organize and maintain programs of adult farmer education. No attempt has been made to stress the importance of attendance but rather to compare specific factors and attendance.

## Significant Factors

Using the chi-square test of independence, 13 of the 30 factors in this study were found to be factors associated with attendance at adult farmer classes. The 13 factors are listed below under their respective level of significance:

one percent

Distance from class center
Time of year classes are held
Way class is taught
Topics covered my farm problems
Time of day classes are held
Length of class in weeks

Subject of class meetings

five percent

All members allowed to discuss problems

Attended class in previous years

Ability of agricultural teacher

Personality of agricultural teacher

Type of farming

Riding with neighbor

Distance from class center

The distance the members of each class travel to attend meetings has generally been considered a deciding factor in organizing and conducting adult farmer classes. This study reveals, according to Table 3, that those persons who traveled the greatest distances had the better attendance records. Although the greatest number of those responding, 301 of 456, traveled less than five and one-half miles, they attended only an average of approximately 62% of the class meetings. Those persons, 155 of 456, who traveled five and one-half or more miles to class meetings, had average attendance records of approximately 65%. Eight and six-tenths percent of the former group, and 12.3% of the latter group had perfect attendance. Of the respondents who traveled less than five and one-half miles, 28.6% had attendance records in the 75 to 99% category. In comparison with this, 32.9% of the respondents who traveled five and one-half miles or more were in this

TABLE 3

RELATION BETWEEN DISTANCE FROM CLASS CENTER AND ATTENDANCE AT ADULT CLASSES*

| Miles | Attendance 0-24% | 25-49% | 50-74% | 75-99% | 100% | Total |
|---|---|---|---|---|---|---|
| Less than .5 | 0 | 2 | 4 | 0 | 0 | 6 |
| .5 to 1.49 | 3 | 9 | 10 | 9 | 6 | 37 |
| 1.5 to 2.49 | 17 | 11 | 18 | 13 | 4 | 63 |
| 2.5 to 3.49 | 5 | 10 | 28 | 24 | 6 | 73 |
| 3.5 to 4.49 | 2 | 17 | 21 | 21 | 6 | 67 |
| 4.5 to 5.49 | 6 | 11 | 15 | 19 | 4 | 55 |
| 5.5 to 6.49 | 6 | 8 | 18 | 18 | 3 | 53 |
| 6.5 to 7.49 | 2 | 7 | 9 | 7 | 2 | 27 |
| 7.5 to 8.49 | 4 | 5 | 7 | 6 | 2 | 24 |
| 8.5 to 9.49 | 0 | 0 | 5 | 1 | 3 | 9 |
| 9.5 & over | 6 | 5 | 3 | 19 | 9 | 42 |
| Total | 51 | 85 | 138 | 137 | 45 | 456 |

*Distance in miles

chi-square = 69.81 with 40 degrees of freedom; significant at the one percent level.

75 to 99% category. Of those respondents who traveled less than five and one-half miles, 30.8% had attendance records of 50 to 74%, while 27.1% of those who traveled five and one-half miles or more were in this attendance range. Of those respondents who traveled less than five and one-half miles, 20% attended 25 to 49% of the meetings, while of those respondents who traveled five and one-

one-half miles or more, 16.1% attended from 25 to 49% of the meetings. Eleven percent of those who traveled less than five and one-half miles and 11.6% of those who traveled five and one-half miles or more attended less than 25% of the meetings. Those respondents who attended 75% and more of the classes in which they were enrolled, lived an average of five and one-tenth miles from the class center. The respondents who attended 74% or less of the classes in which they were enrolled lived an average of four miles from the class center. If one observes Table 3, he may conclude that the percentage of farmers attending was greater as the distance from the center increased. This is not true because the potential number of farmers is less the closer the distance is to the center. Furthermore, these data do not imply that a greater percentage of farmers living five or more miles from the center attended adult farmer classes more than those within the five mile radius. The point of emphasis is that they were more regular in their attendance.

A correlation coefficient of .11 was derived to lend some support to the findings that regularity of attendance improves with distance from the class center.

Previous studies dealt with the factor of distance from the class center and its relationship to enrollments in adult farmer classes. These studies indicate that the majority of enrollees in adult farmer classes generally were from farms within five or six miles of the

class center. The findings of this study are similar in that 66% of those farmers responding lived within five and one-half miles of their class center; however, the present study is concerned with the factor of distance from the class center and its relationship to attendance. The findings reveal that percentage of meetings attended improves with distance from the class center. This may indicate that those persons traveling the greatest distance have a more definite purpose in attending.

Time of year classes are held

The time of year the classes are held has been considered of prime importance in organizing and maintaining successful adult farmer classes. Previous studies have revealed that the majority of classes are operated during winter months. No study, however, has dealt statistically with the attendance records of those farmers attending classes. The findings of this study support the previous research in that 321 of the 471 farmers responding stated that the classes they attended were held during the time of year suitable to them. This group had an average attendance record of approximately 68%. In contrast, a small group, 11 of 471, who said the "time of year classes are held" kept them from attending, had an average attendance record of approximately 35% of the meetings. Of the 471 respondents, 139 indicated the time of year that classes are held had no influence on their attendance. This latter group registered an aver-

age attendance of approximately 54%.

TABLE 4

RELATION BETWEEN TIME OF YEAR CLASSES ARE HELD AND ATTENDANCE AT ADULT CLASSES

| Attendance | Kept you from attending | No influence | Made you want to attend | Total |
|---|---|---|---|---|
| 0-24% | 4 | 23 | 26 | 53 |
| 25-49% | 5 | 37 | 44 | 86 |
| 50-74% | 1 | 44 | 99 | 144 |
| 75-99% | 1 | 26 | 115 | 142 |
| 100% | 0 | 9 | 37 | 46 |
| Total | 11 | 139 | 321 | 471 |

chi-square = 42.23 with 8 degrees of freedom; significant at the one percent level.

One finds quite contrasting statistics when comparing the group that was kept from attending with the group that found the time of year to hold classes suitable. Of the former group, 36.3% attended less than 25% of the meetings compared to 8.1% of the latter group. Forty-five and four-tenths percent of those kept from attending and 13.6% of those who found the time of year suitable attended 25 to 49% of the meetings. Nine and one-tenth percent of those who were kept from attending and 31% of those who found the time to hold classes suitable attended 50 to 74% of the classes. Nine and one-tenth percent of the group kept from attending and 35.8%

of the group who found the time of year suitable attended 75 to 99% of the class meetings. No respondent who was kept from attending classes because of the time of the year had perfect attendance. Of those respondents who found the time of year suitable, 11.5% had perfect attendance records.

The data for this study were collected in February and March. It appears reasonable to assume that the winter and early spring months are the most favorable for adult farmer classes since 68% of the respondents indicate this as compared to only 2.5% who felt holding classes at this time of year kept them from attending. The reasonably large group, 29.3%, who said the time of year had no influence on their attendance, might indicate the possibility of conducting some adult farmer classes on a year-round basis. This study reveals a definite association between the time of year the classes are held and attendance.

The way the class is taught

The methods of instruction of adult farmer classes have been studied to determine the instructional methods most suitable for adult farmers. Although methods of instruction such as lectures, group discussions, field trips, tours, and panels are used with varying degrees of success, the writer found no investigator who had attempted to determine statistically if these methods are associated with

attendance. In the present study all methods of instruction were grouped together under the heading, "the way the class is taught," in the belief that more respondents would understand this terminology rather than saying "method of instruction." They would then be able to indicate that "the way the class is taught" kept them from attending, had no influence, or encouraged them to attend classes.

TABLE 5

RELATION BETWEEN WAY CLASS IS TAUGHT AND ATTENDANCE AT ADULT CLASSES

| Attendance | Kept you from attending | No influence | Made you want to attend | Total |
|---|---|---|---|---|
| 0-24% | 0 | 18 | 35 | 53 |
| 25-49% | 0 | 31 | 55 | 86 |
| 50-74% | 0 | 49 | 93 | 142 |
| 75-99% | 0 | 29 | 112 | 141 |
| 100% | 0 | 6 | 39 | 45 |
| Total | 0 | 133 | 334 | 467 |

chi-square = 15.13 with 4 degrees of freedom; significant at the one percent level.

Three hundred and thirty-four of the 467 farmers who responded to this item on the questionnaire indicated that they were satisfied with the methods of instruction. The approximate average attendance of this group was 66%.

The remaining number, 133 of 467, indicated that the instructional methods used had "no influence" on their attendance. This group recorded an approximate average attendance of 57%. No farmer indicated that instructional methods "kept him from attending." It would appear that suitable methods of instruction were used in all classes from which data were collected. The large majority of those farmers with the better attendance records might possibly indicate they were more favorably influenced to attend by the methods of instructions. The way the class is taught is a significant factor of attendance at the one percent level in this study.

Topics covered my farm problems

By including this item in the questionnaire, an attempt was made to determine if farmers are more inclined to attend classes in which their problems are considered. Analysis of the data indicates this is true.

Of the 471 farmers responding to this item, 367 indicated that consideration of topics covering their farm problems made them want to attend classes. This group recorded an average attendance of approximately 66%. Ninety farmers responded that having topics which covered their farm problems had "no influence" on their attendance. This group recorded an average attendance of approximately 57%. The much smaller group, 14 of 471 respondents, indicated the topics did not cover their farm problems.

Their average attendance record of approximately 24% certainly substantiates their feelings in this matter. One might assume that this group was interested in something other than problems relating to farming or that the classes they attended covered farm topcis not related to their specific farm problems.

TABLE 6

RELATION BETWEEN TOPICS COVERED MY FARM PROBLEMS AND ATTENDANCE AT ADULT CLASSES

| Attendance | Kept you from attending | No influence | Made you want to attend | Total |
|---|---|---|---|---|
| 0-24% | 8 | 12 | 33 | 53 |
| 25-49% | 5 | 19 | 62 | 86 |
| 50-74% | 1 | 37 | 107 | 145 |
| 75-99% | 0 | 12 | 129 | 141 |
| 100% | 0 | 10 | 36 | 46 |
| Total | 14 | 90 | 367 | 471 |

chi-square = 54.64 with 8 degrees of freedom; significant at the one percent level.

Time of day classes are held

The analysis of the data of this study reveals that the "time of day classes are held" is a significant factor at the one percent level and is associated with attendance. Related studies brought out that the most commonly used periods are between 7:00 p.m. and 11:00 p.m.

with class meetings generally two to three hours in length. Although the present study did not attempt to determine the actual time to hold adult farmer classes, it did reveal that the time a class is held, whatever it might be in each community, is an important factor to consider in organizing and conducting adult farmer classes.

TABLE 7

RELATION BETWEEN TIME OF DAY CLASSES ARE HELD AND ATTENDANCE AT ADULT CLASSES

| Attendance | Kept you from attending | No influence | Made you want to attend | Total |
|---|---|---|---|---|
| 0-24% | 6 | 18 | 28 | 52 |
| 25-49% | 5 | 30 | 49 | 84 |
| 50-74% | 1 | 59 | 85 | 145 |
| 75-99% | 1 | 23 | 117 | 141 |
| 100% | 0 | 12 | 34 | 46 |
| Total | 13 | 142 | 313 | 468 |

chi-square = 48.31 with 8 degrees of freedom; significant at the one percent level.

Of the 468 respondents, 313 indicated that the "time of day classes are held" made them want to attend. This group recorded an average attendance of approximately 67%. The group, 142 of 468, who indicated the "time of day clases are held" had no influence on their

attendance had an average attendance of approximately 57%. While the average attendance record of this second group is lower than the first group, it does indicate that about 30% of the farmers responding would not be influenced by the "time of day classes are held." Parent's study reviewed in Chapter II revealed that a combination of afternoon and evening hours resulted in more approved practices being adopted.

Only 13 of the 468 respondents indicated that the "time of day classes are held" kept them from attending. This small group recorded an average attendance of approximately 31%. One might assume that the respondents in this small group had conflicts which prevented them from attending classes at the generally approved times.

Length of class in weeks

The length of time an adult class meets has been considered of major importance by many persons studying adult farmer classes. Previous studies have generally concluded that the most successful classes extend over periods of time not exceeding five months. These studies report that the most common months for adult farmer classes extend from November through March.

The present study substantiates previous research in that attendance appears to be better when the classes are less than 20 weeks in length. Twenty different cate-

TABLE 8

RELATION BETWEEN LENGTH OF CLASSES IN WEEKS AND ATTENDANCE AT ADULT CLASSES

| Number of Weeks | Attendance 0-24% | 25-49% | 50-74% | 75-99% | 100% | Total |
|---|---|---|---|---|---|---|
| 6 | 7 | 2 | 4 | 1 | 0 | 14 |
| 9 | 3 | 4 | 16 | 24 | 3 | 50 |
| 10 | 3 | 9 | 11 | 17 | 2 | 42 |
| 11 | 0 | 7 | 12 | 5 | 4 | 28 |
| 12 | 5 | 6 | 14 | 8 | 2 | 35 |
| 13 | 4 | 2 | 5 | 20 | 9 | 40 |
| 14 | 3 | 1 | 11 | 9 | 3 | 27 |
| 15 | 6 | 14 | 6 | 5 | 7 | 38 |
| 16 | 1 | 6 | 10 | 21 | 7 | 45 |
| 17 | 2 | 6 | 12 | 10 | 1 | 31 |
| 20 | 0 | 12 | 10 | 1 | 0 | 23 |
| 22 | 2 | 1 | 3 | 4 | 0 | 10 |
| 23 | 5 | 1 | 2 | 1 | 0 | 9 |
| 27 | 0 | 3 | 3 | 7 | 3 | 16 |
| 31 | 3 | 3 | 6 | 0 | 0 | 12 |
| 32 | 1 | 1 | 6 | 2 | 0 | 10 |
| 35 | 0 | 0 | 0 | 4 | 4 | 8 |
| 36 | 3 | 1 | 1 | 0 | 1 | 6 |
| 48 | 3 | 5 | 8 | 0 | 0 | 16 |
| 52 | 2 | 2 | 5 | 3 | 0 | 12 |
| Total | 53 | 86 | 145 | 142 | 46 | 472 |

chi-square = 207.55 with 76 degrees of freedom; significant at the one percent level.

gories of class lengths were listed. These ranged from six to 52 weeks. Three hundred fifty of the 472 respondents who attended classes which were held over a period less than 20 weeks had an average attendance record of approximately 66%. The remaining respondents, 122 of 472, who attended classes held over a period of 20 or more weeks recorded an average attendance of approximately 55%. This difference would appear even more significant if a class which met during a six weeks period were deleted from the first group; and two classes, meeting during a 27 weeks period and a 35 weeks period, were deleted from the second group. Percentages would then become 67% for the first group and 49% for the second group. One hundred eighty-eight of the respondents who attended 75% and more of the meetings were enrolled in classes averaging 15.5 weeks in length. Those respondents who attended 74% or less of the meetings were enrolled in classes averaging 18.1 weeks in length.

The data from this study reveal that those classes meeting over a period of 20 or more weeks can generally expect a lower average attendance. The findings of this study would cast some doubt on the belief that adult farmers will attend classes as regularly over long periods of time.

Subject of class meetings

Previous investigators in adult farmer education

have tried to determine whether classes with one subject or two or more subjects were more popular and successful. Studies reviewed in Chapter II reveal different conclusions in that some investigators report that the one-subject courses are more successful; while other investigators have concluded that two-subject or multiple-subject classes are desired by adult farmers. Findings

TABLE 9

RELATION BETWEEN SUBJECT OF CLASS MEETINGS AND ATTENDANCE AT ADULT CLASSES

| Subject | Attendance 0-24% | 25-49% | 50-74% | 75-99% | 100% | Total |
|---|---|---|---|---|---|---|
| Farm Mangt. | 16 | 48 | 75 | 67 | 20 | 226 |
| Farm Mech. | 8 | 11 | 15 | 17 | 3 | 54 |
| Dairy | 2 | 3 | 6 | 23 | 9 | 43 |
| Fruit Prod. | 4 | 5 | 6 | 6 | 5 | 26 |
| Crops & Soils | 4 | 3 | 15 | 11 | 2 | 35 |
| Livestock | 3 | 5 | 8 | 0 | 0 | 16 |
| Farm Mech. Crops & Soils | 6 | 3 | 3 | 3 | 2 | 17 |
| Farm Mangt. Crops & Soils | 8 | 7 | 11 | 9 | 3 | 38 |
| Soils & Landscaping | 0 | 0 | 3 | 2 | 2 | 7 |
| Farm Mech. & Dairy | 2 | 1 | 3 | 4 | 0 | 10 |
| Total | 53 | 86 | 145 | 142 | 46 | 472 |

chi-square = 69.42 with 36 degrees of freedom; significant at the one percent level.

of the present study appear to support both conclusions in that average attendance figures are very similar for both one-subject and two-subject courses.

The present study reveals that 139 of the 472 farmers responding attended 13 one-subject classes with an average attendance of approximately 64%. The 333 farmers who attended 26 two-subject or multiple-subject courses recorded an average attendance of approximately 63%. This latter group included 16 classes entitled "Farm Management," a title which appeared to represent courses involving several subjects during the period the class is in session.

The four classes in Dairying and the one class in Soils and Landscaping with high average attendance records of 79% and 80% respectively, would indicate that these subjects were of great interest to those farmers attending. The 31 classes in Crops and Soils, Farm Management, Fruit Production, Farm Mechanics and Dairy, Farm Management and Farm Mechanics, and Farm Mechanics with average attendance figures of 64%, 64%, 63%, 60%, 56%, and 59%, respectively, indicate a reasonably high degree of interest in these subjects. The two classes in Livestock Production and the one class in Farm Mechanics and Crops and Soils with average attendance records of 45% and 49%, respectively, indicate a lessening degree of interest. It appears that class members attending less than one-half of the meetings would possibly find it difficult to fol-

low the regular sequence of instruction which in turn might discourage future attendance.

The analysis of the data of this study indicates the subject of the class meeting is significantly associated with attendance at the one percent level.

All members allowed to discuss problems

Allowing all members to discuss their farm problems during class meetings was a significant factor. This appears in keeping with generally accepted practices of adult farmer classes because member discussion is considered one of the strengths of the program.

TABLE 10

RELATION BETWEEN ALL MEMBERS ALLOWED TO DISCUSS PROBLEMS AND ATTENDANCE AT ADULT CLASSES

| Attendance | Kept you from attending | No influence | Made you want to attend | Total |
|---|---|---|---|---|
| 0-24% | 1 | 16 | 35 | 52 |
| 25-49% | 0 | 27 | 56 | 83 |
| 50-74% | 0 | 33 | 112 | 145 |
| 75-99% | 0 | 24 | 117 | 141 |
| 100% | 0 | 6 | 40 | 46 |
| Total | 1 | 106 | 360 | 467 |

chi-square = 19.76 with 8 degrees of freedom; significant at the five percent level.

An overwhelming majority, 360 of 467, indicated that freedom of discussion made them want to attend. This majority group had an average attendance record of approximately 66%, indicating that the factor, "all members allowed to discuss problems," was associated with attendance.

Not to be overlooked, however, is the group which indicated that being allowed to discuss their problems during class meetings had no influence on their attendance. This group, 106 of 467, had an approximate average attendance record of 56%.

Of the 467 farmers responding, only one indicated that this freedom of discussion kept him from attending classes. This one person attended less than 25% of the class meetings.

The analysis of these data indicates that when class members are allowed to discuss their problems and to exchange ideas with those members having similar problems, attendance increases. One may assume, therefore, that this factor is associated with attendance and that teachers of adult farmers should consider the use of this method of instruction in conducting classes.

Attended class in previous years

It was revealed in the review of studies that investigators do not agree on the influence of previous attendance on present attendance. Furthermore, no research was found in which previous and present attendance was compared statistically. It is believed, however, that

farmers will continue to attend classes year after year if these classes meet their individual needs.

Two hundred and twenty-five farmers of the 457 responding in this study indicated that attendance to adult classes in previous years made them want to attend the present classes. This group recorded an average attendance of approximately 67%.

TABLE 11

RELATION BETWEEN ATTENDANCE IN PREVIOUS YEARS AND ATTENDANCE AT ADULT CLASSES

| Attendance | Kept you from attending | No influence | Made you want to attend | Total |
|---|---|---|---|---|
| 0-24% | 0 | 35 | 17 | 52 |
| 25-49% | 1 | 45 | 36 | 82 |
| 50-74% | 0 | 76 | 67 | 143 |
| 75-99% | 0 | 54 | 83 | 137 |
| 100% | 0 | 21 | 22 | 43 |
| Total | 1 | 231 | 225 | 457 |

chi-square = 18.49 with 8 degrees of freedom; significant at the five percent level.

In comparison to this group, 231 of 457 responding, indicated that attendance to classes in previous years had no influence on their attendance. Farmers in this group recorded an average attendance of approximately 59%.

Only one farmer of the 457 responding indicated that previous attendance kept him from attending present

classes.

These data appear to agree with previous studies in that approximately 50% of the farmers indicate no influence, while a similar percentage indicates previous attendance made them want to attend present classes. These data are significant, however, in that those persons who indicated that previous attendance made them want to attend present classes, had a 10% greater attendance over those who said previous attendance had no influence on their present class attendance.

Ability of agricultural teacher

The ability of the instructor of adult farmers is a factor which is considered of great importance. Previous studies, however, have not attempted to evaluate just how important this factor may be. Where the instructor of adult farmers is also the teacher of high school students of vocational agriculture, it is especially important that the person have above-average ability.

Of the 469 respondents, 354 indicated that the ability of the agricultural teacher made them want to attend adult farmer classes. This group recorded an average attendance of approximately 55%. One hundred and thirteen respondents indicated that the instructor's ability had no influence on their attendance. This group's average attendance was approximately 44%. Only two of the 469 farmers responding indicated that the instructor's ability kept them from attending; yet, these two farmers

recorded an average attendance of 38%.

TABLE 12

RELATION BETWEEN ABILITY OF AGRICULTURAL TEACHER AND ATTENDANCE AT ADULT CLASSES

| Attendance | Kept you from attending | No influence | Made you want to attend | Total |
|---|---|---|---|---|
| 0-24% | 0 | 17 | 36 | 53 |
| 25-49% | 1 | 30 | 52 | 83 |
| 50-74% | 1 | 34 | 110 | 145 |
| 75-99% | 0 | 26 | 116 | 142 |
| 100% | 0 | 6 | 40 | 46 |
| Total | 2 | 113 | 354 | 469 |

chi-square = 16.92 with 8 degrees of freedom; significant at the five percent level.

According to these data, farmers are more inclined to attend classes regularly when they respect the ability of their instructor. When over 75% of the respondents indicate that the ability of the instructor made them want to attend class, the importance of able instructors becomes obvious.

Personality of agricultural teacher

Much of the success of adult farmer classes depends on the personality of the teacher of vocational agriculture. This has been stated so many times it is almost a truism. Moreover, the writer found no study in

which a statistical comparison was made between the personality of the teacher and attendance at adult farmer classes.

TABLE 13

RELATION BETWEEN PERSONALITY OF AGRICULTURAL TEACHER AND ATTENDANCE AT ADULT CLASSES

| Attendance | Kept you from attending | No influence | Made you want to attend | Total |
|---|---|---|---|---|
| 0-24% | 1 | 20 | 32 | 53 |
| 25-49% | 0 | 35 | 49 | 84 |
| 50-74% | 0 | 50 | 95 | 145 |
| 75-99% | 0 | 37 | 104 | 141 |
| 100% | 0 | 9 | 36 | 45 |
| Total | 1 | 151 | 316 | 468 |

chi-square = 17.91 with 8 degrees of freedom; significant at the five percent level.

The present study reveals that 316 of the 468 farmers responding indicated that the personality of the agricultural teacher made them want to attend classes. This group maintained an average attendance of approximately 66%. Of the 468 farmers responding, 151 indicated the personality of the agricultural teacher had no influence on their attendance. The latter group recorded an average attendance of approximately 58%. Only one of the 468 farmers said that the personality of the agricultural tea-

cher kept him from attending.

In view of these statistics it would appear that the teacher of vocational agriculture who displays the personality characteristics of easily meeting and talking with farmers, carrying on a person-to-person public relations program, and being identified with adult programs, encourages better attendance. Further studies on the relationship between the personality of the teacher of vocational agriculture and success in conducting classes for adult farmers are needed.

Type of farming

The data from the 471 farmers responding to items nine and ten (number of animals and acres of crops) on the questionnaire were grouped into one of eight types of farming categories based on 40% or more "productive man work units." The two largest groups, general farming and dairying, recorded an average attendance of approximately 65%. These two groups made up 74% of all persons responding. Those farmers who dealt mainly with livestock, cash grain, fruit, vegetables, and poultry recorded average attendances of approximately 59%, 57%, 61%, 62%, and 69%, respectively. Those persons who listed themselves as non-farmers recorded an average attendance of only 33%.

The general, dairy, and cash grain farmers in combination recorded an average attendance of approximately 62%. The smaller groups of livestock, fruit,

vegetables, and poultry farmers and the non-farm group registered an average attendance of approximately 57%.

TABLE 14

RELATION BETWEEN TYPE OF FARMING AND ATTENDANCE AT ADULT CLASSES

| Type of Farming* | Attendance 0-24% | 25-49% | 50-74% | 75-99% | 100% | Total |
|---|---|---|---|---|---|---|
| General | 20 | 31 | 51 | 60 | 20 | 182 |
| Livestock | 1 | 3 | 5 | 2 | 1 | 12 |
| Cash Grain & Crops | 15 | 12 | 24 | 15 | 8 | 74 |
| Dairy | 12 | 31 | 54 | 55 | 14 | 166 |
| Fruit | 3 | 4 | 5 | 5 | 3 | 20 |
| Vegetables | 1 | 0 | 0 | 2 | 0 | 4 |
| Poultry | 0 | 0 | 5 | 2 | 0 | 7 |
| Non-farmer | 1 | 5 | 0 | 0 | 0 | 6 |
| Total | 53 | 86 | 145 | 141 | 46 | 471 |

* 40% or more PMWU

chi-square = 42.85 with 28 degrees of freedom; significant at the five percent level.

When attendance records were examined, it was revealed that poultry farmers, dairymen, and men engaged in general farming are more consistent in attending adult classes than farmers who are engaged in other types of farming. Non-farmers are not inclined to attend classes.

Based on the method of categorizing respondents, the attendance records, and the chi-square test of inde-

pendence, these data reveal that "type of farming" is significantly associated with attendance at adult farmer classes.

Riding with neighbor

The factor of a farmer being influenced to attend adult farmer classes because he was able to "share a ride" to the meetings with neighbors proved significant at the five percent level. This factor has not been included in previous studies of adult farmer classes.

TABLE 15

RELATION BETWEEN RIDING WITH NEIGHBOR AND ATTENDANCE AT ADULT CLASSES

| Attendance | Kept you from attending | No influence | Made you want to attend | Total |
|---|---|---|---|---|
| 0-24% | 0 | 42 | 10 | 52 |
| 25-49% | 0 | 66 | 17 | 83 |
| 50-74% | 0 | 117 | 26 | 143 |
| 75-99% | 0 | 98 | 44 | 142 |
| 100% | 0 | 29 | 17 | 46 |
| Total | 0 | 352 | 114 | 466 |

chi-square = 11.69 with 4 degrees of freedom; significant at the five percent level.

Of the 466 respondents to this factor, 114 farmers indicated that being able to ride to the meetings with their neighbors made them want to attend. This

group recorded an average attendance of approximately 69%. The 352 respondents who indicated this factor had no influence on their attendance recorded an average attendance record of approximately 61%. No respondent indicated this factor kept them from attending.

Since one-fourth of the respondents indicated that riding with their neighbors made them want to attend adult classes, it would appear that teachers of vocational agriculture might wish to encourage neighbors to attend adult classes together. By riding with one another, attendance of one farmer could influence the attendance of his neighbor.

Additional Significant Items

It may be interesting to note at this time that two items, "number of meetings" and "individual or group respondent" were significant at the one percent level. While this study was not concerned with these two items as factors associated with attendance, the treatment of the data does reveal that an association does exist.

Number of meetings

With the exception of one class which met 21 times, the average attendance of classes meeting more than 10 times was higher than those classes which met only 10 times. The farmers attending classes which met for 10 meetings recorded an average attendance of approximately 57%. Those farmers attending classes meeting for

more than 10 meetings recorded an average attendance of approximately 63%. This is an indication that farmers will attend classes which meet for more than 10 meetings and will attend more regularly than previously believed.

TABLE 16

RELATION BETWEEN NUMBER OF MEETINGS AND ATTENDANCE AT ADULT CLASSES

| Number of Meetings | Attendance | | | | | |
|---|---|---|---|---|---|---|
| | 0-24% | 25-49% | 50-74% | 75-99% | 100% | Total |
| 10 | 23 | 17 | 50 | 51 | 15 | 156 |
| 11 | 3 | 6 | 16 | 8 | 2 | 35 |
| 12 | 6 | 13 | 16 | 27 | 7 | 69 |
| 14 | 9 | 16 | 20 | 17 | 9 | 71 |
| 15 | 6 | 25 | 36 | 17 | 3 | 87 |
| 16 | 0 | 3 | 2 | 9 | 5 | 19 |
| 17 | 1 | 2 | 0 | 5 | 2 | 10 |
| 21 | 5 | 1 | 2 | 1 | 0 | 9 |
| 28 | 0 | 3 | 3 | 7 | 3 | 16 |
| Total | 53 | 86 | 145 | 142 | 46 | 472 |

chi-square = 74.04 with 32 degrees of freedom; significant at the one percent level.

When one views the data from another position, slightly different results are obtained. Those farmers who attended 75% and more of the class meetings in which they were enrolled were attending classes which met for an average of 11.8 times. Those farmers who attended 74%

or less of the class meetings in which they were enrolled were attending classes which met for an average of 12.2 times. This may indicate that although farmers will attend classes regularly which meet more than 10 times, the regularity of attendance begins to decline after 12 meetings.

Individual or group respondents

Four hundred and twenty-eight respondents completed the questionnaire during one of their regular adult class meetings. The "individual" respondents were persons who attended classes very little. They were mailed questionnaires to be completed individually. The large difference in the percentage of attendance between the "individual" (34%) and the "group" (66%) respondents was observed long before a statistical analysis was made.

TABLE 17

RELATION BETWEEN INDIVIDUAL OR GROUP RESPONDENTS AND ATTENDANCE AT ADULT CLASSES

| Attendance | Individual | Group | Total |
|---|---|---|---|
| 0-24% | 21 | 32 | 53 |
| 25-49% | 11 | 75 | 86 |
| 50-74% | 9 | 136 | 145 |
| 75-99% | 3 | 139 | 142 |
| 100% | 0 | 46 | 46 |
| Total | 44 | 428 | 472 |

chi-square = 73.91 with 4 degrees of freedom; significant at the one percent level.

Factors Not Significant

The remaining 17 factors with which the present research was concerned were not found to be associated with attendance at adult farmer classes in Michigan according to the chi-square test of independence. The information gathered concerning these 17 factors may be of interest, however, in revealing some of the characteristics of the respondents in this study. Since no significant relationship was found to exist between these 17 factors and attendance, the emphasis should be on what the totals revealed.

Age of farmer

Of the 463 respondents, 337 were between 30 and 55 years-of-age; 90 were between 35 and 39 years-of-age.

TABLE 18

RELATION BETWEEN AGE OF FARMER AND ATTENDANCE AT ADULT CLASSES

| Attendance | Under 25 | 25-34 | 35-44 | 45-54 | 55 & over | Total |
|---|---|---|---|---|---|---|
| 0-24% | 2 | 9 | 19 | 12 | 6 | 48 |
| 25-49% | 7 | 19 | 26 | 21 | 12 | 85 |
| 50-74% | 17 | 36 | 48 | 30 | 12 | 143 |
| 75-99% | 10 | 36 | 50 | 35 | 11 | 142 |
| 100% | 4 | 9 | 23 | 7 | 2 | 45 |
| Total | 40 | 109 | 166 | 105 | 43 | 463 |

The entire group averaged slightly less than 38.5 years-of-age which is younger than reported in studies reviewed in Chapter II. This indicates that adult farmer classes today are attracting a younger group of farmers than attended in past years.

Marital status

Data from the 469 persons responding reveal that 421 or 89% are married. This percentage is considerably higher than that reported in the 1950 census.[1] This

TABLE 19

RELATION BETWEEN MARITAL STATUS OF FARMER AND ATTENDANCE AT ADULT CLASSES

| Attendance | Married | Single | Total |
|---|---|---|---|
| 0-24% | 47 | 5 | 52 |
| 25-49% | 79 | 7 | 86 |
| 50-74% | 126 | 17 | 143 |
| 75-99% | 127 | 15 | 142 |
| 100% | 42 | 4 | 46 |
| Total | 421 | 48 | 469 |

source, which indicated that 62% of the farmers were married, included all rural males over 14 years of age. Since

[1]U.S., Bureau of Census, Seventeenth Census of the United States: 1950. Population. Table 3, Vol. II, pp. 2D-29.

over 91% of the respondents in this study were over 25 years of age, the disparity between 89% and 62% might well be explained.

Education of farmer

The educational background of the 452 persons responding to this part of the questionnaire varied considerably. Three-hundred and one respondents had completed 12 years or more of schooling. Fifteen of these had com-

TABLE 20

RELATION BETWEEN EDUCATION OF FARMER AND ATTENDANCE AT ADULT CLASSES

| Grades Completed | Attendance 0-24% | 25-49% | 50-74% | 75-99% | 100% | Total |
|---|---|---|---|---|---|---|
| 6 & less | 0 | 0 | 0 | 3 | 0 | 3 |
| 7 | 0 | 1 | 3 | 2 | 0 | 6 |
| 8 | 5 | 14 | 33 | 22 | 8 | 82 |
| 9 | 1 | 1 | 2 | 12 | 4 | 20 |
| 10 | 6 | 8 | 3 | 9 | 1 | 27 |
| 11 | 2 | 2 | 6 | 3 | 0 | 13 |
| 12 | 34 | 43 | 75 | 70 | 23 | 245 |
| 13 | 2 | 5 | 7 | 5 | 2 | 21 |
| 14 | 1 | 5 | 6 | 3 | 2 | 17 |
| 15 | 0 | 1 | 1 | 1 | 0 | 3 |
| 16 or more | 1 | 2 | 3 | 6 | 3 | 15 |
| Total | 52 | 82 | 139 | 136 | 43 | 452 |

pleted four years or more of college. Only nine persons had completed less than eight years of schooling. The average schooling completed was slightly over 11 years.

The respondents who attended 75% and more of the classes in which they were enrolled had completed an average of 11.1 years of schooling. Those who attended 74% or less of the classes in which they were enrolled had completed an average of 11.2 years of schooling.

Years of vocational agriculture

Although vocational agriculture has been taught over 40 years, only 221 of the 421 respondents had been enrolled in this program while in high school. Two-hundred of these 421 respondents had had no vocational agriculture at all. Those respondents who attended 75%

TABLE 21

RELATION BETWEEN YEARS OF VOCATIONAL AGRICULTURE AND ATTENDANCE AT ADULT CLASSES

| Attendance | 0 | 1 | 2 | 3 | 4 | Total |
|---|---|---|---|---|---|---|
| 0-24% | 21 | 4 | 9 | 3 | 6 | 43 |
| 25-49% | 40 | 4 | 4 | 9 | 19 | 76 |
| 50-74% | 56 | 9 | 16 | 16 | 35 | 132 |
| 75-99% | 61 | 14 | 8 | 14 | 30 | 127 |
| 100% | 22 | 5 | 0 | 3 | 13 | 43 |
| Total | 200 | 36 | 37 | 45 | 103 | 421 |

and more of the classes in which they were enrolled had received an average of slightly more than 1.2 years of vocational agriculture in high school. Those who attended 74% and less of the meetings in which they were enrolled had received slightly less than an average of one year of vocational agriculture while in high school. This would indicate that adult farmer programs could be of extreme importance to those farmers who did not have the benefit of instruction in vocational agriculture in high school. This may also indicate the necessity of providing systematic instruction for these farmers in order for them to keep abreast of changing technology in agriculture.

Farm status

It has been the belief of many that the status of farmers could be associated with attendance. This was not the case in this study because no association could be determined at either the five percent or one percent level of significance. It is interesting to note that 258 of 457 respondents were farm owners. The "owner" and the "owner and renter" groups made up 85% of all respondents. This is quite a contrast with Hamlin's findings in 1938 when 58% of the farmers were tenants.[2] Only 9.8% of the farmers in this study were class-

[2]H. M. Hamlin, "Factors Affecting Attendance at Agricultural Evening Schools" (University of Illinois, 1938) Mimeographed. p. 4.

ified as "renter." Of course, the economic situation in 1938 and 1958 could account for this great difference. The difference might also be that Hamlin's study was made in Illinois, and the present study was made in Michigan. Only 1.3% of the persons in the present study were farm laborers.

TABLE 22

RELATION BETWEEN FARM STATUS OF FARMER AND ATTENDANCE AT ADULT CLASSES

| Attendance | Owner | Owner Renter | Manager | Renter | Laborer | Total |
|---|---|---|---|---|---|---|
| 0-24% | 31 | 14 | 2 | 5 | 0 | 52 |
| 25-49% | 45 | 28 | 2 | 6 | 2 | 83 |
| 50-74% | 75 | 40 | 8 | 16 | 2 | 141 |
| 75-99% | 80 | 40 | 5 | 9 | 2 | 136 |
| 100% | 27 | 10 | 0 | 8 | 0 | 45 |
| Total | 258 | 132 | 17 | 44 | 6 | 457 |

Size of farm

The largest group of farmers in this study operated farms of 260 to 499 acres in size, although relatively large groups were also found on farms ranging from 100 to 139 acres, from 140 to 179 acres, from 180 to 219 acres, and from 220 to 259 acres. The overall average size farm of all respondents was approximately 276 acres. Only 4.8% of the farmers operated farms of less than 70 acres. Four

and three-tenths percent of the farmers responding operated farms of 500 or more acres in size. Thirty-eight percent of the farmers operated farms of 100 to 179 acres, while 27% of the farmers operated farms of 180 to 259 acres in size.

TABLE 23

RELATION BETWEEN SIZE OF FARM IN ACRES AND ATTENDANCE AT ADULT CLASSES

| Acres | Attendance 0-24% | 25-49% | 50-74% | 75-99% | 100% | Total |
|---|---|---|---|---|---|---|
| Under 10 | 0 | 0 | 1 | 0 | 0 | 1 |
| 10-29 | 0 | 1 | 2 | 1 | 0 | 4 |
| 30-49 | 0 | 2 | 4 | 3 | 0 | 9 |
| 50-69 | 0 | 1 | 3 | 3 | 1 | 8 |
| 70-99 | 6 | 9 | 12 | 11 | 5 | 43 |
| 100-139 | 13 | 7 | 18 | 22 | 8 | 68 |
| 140-179 | 8 | 17 | 17 | 28 | 6 | 76 |
| 180-219 | 5 | 12 | 25 | 15 | 5 | 62 |
| 220-259 | 4 | 13 | 18 | 19 | 6 | 60 |
| 260-499 | 11 | 17 | 36 | 33 | 14 | 111 |
| 500-999 | 5 | 2 | 8 | 5 | 0 | 20 |
| Total | 52 | 81 | 144 | 140 | 45 | 462 |

The respondents who attended 75% and more of the classes in which they were enrolled had farms averaging 228 acres in size. Those who attended 74% or less of the

classes in which they were enrolled had farms averaging 239 acres in size. The significance of this difference was not determined. This seemingly large average size of farm is indicative of the changes that have taken place in present day farming. Generally speaking, larger farms are required for efficient operation and for an income sufficient for a reasonable standard of living.

Livestock and crops PMWU

The computation of productive man work units is one method of measuring the size of a farming operation. In the present study, the PMWU were computed for both livestock and crop enterprises, and then were totaled. Three hundred and nine farmers of the 471 responding had less than 300 PMWU in livestock enterprises. Only 39 farmers reported 500 or more PMWU in livestock with the average for all farmers being approximately 260 PMWU per farm.

Of the 471 respondents, 373 had less than 300 PMWU in crop enterprises. Only 37 farmers reported more than 500 PMWU in crop enterprises with the average of all farmers being approximately 238 PMWU per farm.

In totaling both livestock and crop PMWU, the average of all farmers was found to be approximately 448 per farm. This may indicate that present day farmers are using additional labor to help operate their farms in addition to all the labor saving devices now being

TABLE 24

RELATION BETWEEN LIVESTOCK PMWU AND ATTENDANCE AT ADULT CLASSES

| PMWU | Attendance 0-24% | 25-49% | 50-74% | 75-99% | 100% | Total |
|---|---|---|---|---|---|---|
| Under 100 | 24 | 25 | 31 | 30 | 14 | 124 |
| 100-199 | 8 | 12 | 29 | 38 | 7 | 94 |
| 200-299 | 10 | 15 | 30 | 25 | 11 | 91 |
| 300-399 | 5 | 12 | 26 | 26 | 7 | 76 |
| 400-499 | 3 | 14 | 11 | 14 | 5 | 47 |
| 500-599 | 2 | 4 | 9 | 2 | 1 | 18 |
| 600-699 | 0 | 3 | 4 | 2 | 1 | 10 |
| 700-799 | 1 | 0 | 0 | 1 | 0 | 2 |
| 800-899 | 0 | 1 | 2 | 3 | 0 | 6 |
| 900-999 | 0 | 0 | 1 | 0 | 0 | 1 |
| 1000 & more | 0 | 0 | 2 | 0 | 0 | 2 |
| Total | 53 | 86 | 145 | 141 | 46 | 471 |

used. As seen in Table 26, 150 of the 471 farmers had less than 300 PMWU. One hundred eighty-four farmers reported over 500. Ninety-nine of 471 had over 700 PMWU in their yearly operation. The farmers who attended 75% and more of the class meetings in which they were enrolled reported an average of 446 PMWU. Those who attended 74% and less of the class meetings in which they were enrolled reported an average of 457 PMWU in a year's operation.

TABLE 25

RELATION BETWEEN CROPS PMWU AND ATTENDANCE AT ADULT CLASSES

| PMWU | Attendance 0-24% | 25-49% | 50-74% | 75-99% | 100% | Total |
|---|---|---|---|---|---|---|
| Under 100 | 15 | 22 | 41 | 29 | 14 | 121 |
| 100-199 | 16 | 29 | 43 | 53 | 12 | 153 |
| 200-299 | 7 | 18 | 33 | 32 | 9 | 99 |
| 300-399 | 6 | 6 | 5 | 13 | 4 | 34 |
| 400-499 | 2 | 2 | 12 | 7 | 4 | 27 |
| 500-599 | 2 | 3 | 6 | 2 | 1 | 14 |
| 600-699 | 1 | 3 | 1 | 0 | 0 | 5 |
| 700-799 | 1 | 0 | 0 | 1 | 0 | 2 |
| 800-899 | 1 | 0 | 0 | 1 | 0 | 2 |
| 900-999 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1000 & over | 2 | 3 | 4 | 3 | 2 | 14 |
| Total | 53 | 86 | 145 | 141 | 46 | 471 |

Off-the-farm employment

Many farmers today are employed part-time off their farms to help meet some of their expenses. This is particularly true during slack farming seasons. According to the findings of the present study, 97 of the 386 farmers reported working 100 or more days off the farm during 1957. The largest group, however, 180 of 386, worked less than 10 days off the farm.

TABLE 26

RELATION BETWEEN TOTAL LIVESTOCK AND CROPS PMWU AND ATTENDANCE AT ADULT CLASSES

| PMWU | Attendance 0-24% | 25-49% | 50-74% | 75-99% | 100% | Total |
|---|---|---|---|---|---|---|
| Under 100 | 8 | 8 | 9 | 8 | 6 | 39 |
| 100-199 | 6 | 14 | 15 | 11 | 7 | 53 |
| 200-299 | 6 | 8 | 22 | 19 | 3 | 58 |
| 300-399 | 8 | 9 | 19 | 36 | 5 | 77 |
| 400-499 | 7 | 7 | 21 | 22 | 3 | 60 |
| 500-599 | 4 | 6 | 22 | 11 | 8 | 51 |
| 600-699 | 2 | 9 | 9 | 9 | 5 | 34 |
| 700-799 | 3 | 14 | 7 | 9 | 3 | 36 |
| 800-899 | 4 | 4 | 5 | 7 | 3 | 23 |
| 900-999 | 3 | 2 | 5 | 2 | 1 | 13 |
| 1000 & over | 2 | 5 | 11 | 7 | 2 | 27 |
| Total | 53 | 86 | 145 | 141 | 46 | 471 |

Those farmers who attended 75% and more of the classes in which they were enrolled were employed off their farms slightly more than an average of 50 days. The farmers who attended 74% or less of the classes in which they were enrolled averaged slightly more than 57 days working off their farms. Possibly some farmers do not operate efficient sized farms or they are caught in the cost-price squeeze affecting agriculture today.

TABLE 27

RELATION BETWEEN OFF-THE-FARM EMPLOYMENT AND ATTENDANCE AT ADULT CLASSES

| Number of days | Attendance 0-24% | 25-49% | 50-74% | 75-99% | 100% | Total |
|---|---|---|---|---|---|---|
| Less than 10 | 19 | 26 | 60 | 59 | 16 | 180 |
| 10-24 | 5 | 7 | 20 | 16 | 7 | 55 |
| 25-49 | 3 | 8 | 1 | 10 | 0 | 22 |
| 50-99 | 3 | 7 | 8 | 10 | 4 | 32 |
| 100-149 | 1 | 3 | 10 | 6 | 3 | 23 |
| 150-199 | 2 | 1 | 5 | 6 | 1 | 15 |
| 200 & over | 10 | 16 | 9 | 15 | 9 | 59 |
| Total | 43 | 68 | 113 | 122 | 40 | 386 |

Membership in organizations

On the premise that farmers who are members of farm, church, civic, and service organizations also attend adult farmer classes, this factor was included in the present study. No association of this factor with attendance was found according to the chi-square test of independence. Information concerning membership in organizations is found in Tables: 28, 29, and 30. According to Table 28, 209 of 405 farmers reporting were members of two or more organizations which met once a month. Each respondent was a member of slightly under an average of two organizations which met once a month.

TABLE 28

RELATION BETWEEN MEMBERSHIP IN ORGANIZATIONS MEETING ONCE A MONTH AND ATTENDANCE AT ADULT CLASSES

| Attendance | 0 | 1 | 2 | 3 | 4 | 5 | more than 5 | Total |
|---|---|---|---|---|---|---|---|---|
| 0-24% | 8 | 10 | 14 | 11 | 3 | 1 | 1 | 48 |
| 25-49% | 15 | 18 | 23 | 12 | 7 | 1 | 0 | 76 |
| 50-74% | 33 | 29 | 33 | 19 | 3 | 4 | 1 | 122 |
| 75-99% | 30 | 35 | 33 | 14 | 5 | 2 | 0 | 119 |
| 100% | 10 | 8 | 7 | 7 | 3 | 3 | 2 | 40 |
| Total | 96 | 100 | 110 | 63 | 21 | 11 | 4 | 405 |

Data from Table 29 indicate that 172 of the 404 farmers reporting were not members of any organization which met once a week. Ninety-one of the 404 farmers were members of two or more organizations which met once a week. Each of the 404 respondents were members on the average of less than one organization which met once a week.

From Table 30 one finds that 307 of the 403 respondents were not members of any organization which met twice a month. Only 97 of the 403 respondents were members of one or more organizations which met twice a month.

The findings of this study indicate that membership in organizations has no influence on attendance to adult farmer classes.

TABLE 29

RELATION BETWEEN MEMBERSHIP IN ORGANIZATIONS MEETING ONCE A WEEK AND ATTENDANCE AT ADULT CLASSES

| Attendance | 0 | 1 | 2 | 3 | 4 | Total |
|---|---|---|---|---|---|---|
| 0-24% | 23 | 16 | 7 | 1 | 1 | 48 |
| 25-49% | 34 | 25 | 13 | 2 | 1 | 75 |
| 50-74% | 48 | 47 | 21 | 6 | 0 | 122 |
| 75-99% | 51 | 42 | 17 | 5 | 4 | 119 |
| 100% | 16 | 11 | 9 | 4 | 0 | 40 |
| Total | 172 | 141 | 67 | 18 | 6 | 404 |

TABLE 30

RELATION BETWEEN MEMBERSHIP IN ORGANIZATIONS MEETING TWICE A MONTH AND ATTENDANCE AT ADULT CLASSES

| Attendance | 0 | 1 | 2 | 3 | 4 | 5 | more than 5 | Total |
|---|---|---|---|---|---|---|---|---|
| 0-24% | 38 | 6 | 3 | 1 | 0 | 0 | 0 | 48 |
| 25-49% | 52 | 11 | 7 | 4 | 1 | 0 | 0 | 75 |
| 50-74% | 87 | 15 | 12 | 3 | 2 | 1 | 1 | 121 |
| 75-99% | 92 | 12 | 12 | 2 | 1 | 0 | 0 | 119 |
| 100% | 38 | 1 | 0 | 1 | 0 | 0 | 0 | 40 |
| Total | 307 | 45 | 34 | 11 | 4 | 1 | 1 | 403 |

On-farm visits by instructor

It has long been contended that one of the strengths of the vocational agricultural program can be the on-farm instruction conducted by the teacher of vocational agriculture. The review of research, however, revealed no study which found a relationship between the number of visits made to class member's farms by the teacher of vocational agriculture and the member's attendance. The treatment of the data in this study did not

TABLE 31

RELATION BETWEEN ON-FARM VISITS BY INSTRUCTOR AND ATTENDANCE AT ADULT CLASSES

| Attendance | 0 | 1 | 2 | 3 | 4 | 5 | more than 5 | Total |
|---|---|---|---|---|---|---|---|---|
| 0-24% | 18 | 9 | 7 | 4 | 2 | 5 | 4 | 49 |
| 25-49% | 23 | 14 | 11 | 13 | 11 | 5 | 3 | 80 |
| 50-74% | 36 | 16 | 18 | 17 | 9 | 12 | 17 | 125 |
| 75-99% | 37 | 22 | 21 | 12 | 9 | 11 | 18 | 130 |
| 100% | 11 | 5 | 6 | 8 | 2 | 3 | 4 | 39 |
| Total | 125 | 66 | 63 | 54 | 33 | 36 | 46 | 423 |

find any association to exist. Of the 423 farmers who responded to this item, 125 or 29% reported the teacher had not visited their farm in the last 12 months. One hundred fifteen of the respondents indicated the teacher had vis-

ited their farm four or more times in the last 12 months. The number of visits by teachers of vocational agriculture who cooperated in this study averaged slightly more than 2.2 per farm. There was no difference in the number of visits between those farmers who attended 75% and more and those who attended 74% or less of the class meetings in which they were enrolled. This may indicate that class attendance is not influenced by the number of visits made by the teacher of vocational agriculture.

Gross income

The factor of "gross income" was listed as optional on the questionnaire to allow those respondents who did not wish to answer the freedom to leave this portion blank. No association between the gross income of the respondents and their attendance was found to exist.

The 353 farmers who did respond had an average income of approximately $8,860.00. Of the 353 respondents, 19 had gross incomes under $1,200.00, 57 had gross incomes under $2,500.00, and 108 had gross incomes under $5,000.00. There were 84 farmers with gross incomes over $15,000.00, 161 with gross incomes over $10,000.00, and 245 with gross incomes over $5,000.00. The farmers who attended 75% and more of the classes in which they were enrolled had gross incomes averaging $8,458.00. Those farmers who attended 74% or less of the classes in which they were enrolled had gross incomes averaging $9,153.00. Net incomes computed from the data received would not be meaningful because of

the tremendous differences in efficiency and types of farming of the individual respondents. This information does indicate that farming today is big business requiring large investments.

TABLE 32

RELATION BETWEEN GROSS INCOME AND ATTENDANCE AT ADULT CLASSES

| Income | Attendance 0-24% | 25-49% | 50-74% | 75-99% | 100% | Total |
|---|---|---|---|---|---|---|
| $250-599 | 0 | 0 | 2 | 2 | 1 | 5 |
| $600-1199 | 2 | 1 | 4 | 4 | 3 | 14 |
| $1200-2499 | 7 | 7 | 7 | 11 | 6 | 38 |
| $2500-4999 | 5 | 11 | 13 | 17 | 5 | 51 |
| $5000-9999 | 9 | 16 | 24 | 27 | 8 | 84 |
| $10,000-14,999 | 6 | 18 | 21 | 24 | 8 | 77 |
| $15,000 & over | 7 | 15 | 32 | 24 | 6 | 37 |
| Total | 36 | 68 | 103 | 109 | 37 | 353 |

Classes for spouse at same time

This factor was included in this study in an effort to determine if the husband and wife attending classes at the same time had any association with attendance. No association was found to exist in this study.

The overwhelming majority, 409 of 454 respondents, indicated this item had no influence on their attendance. Thirty-seven respondents reported this factor made them

TABLE 33

RELATION BETWEEN CLASSES FOR SPOUSE AT SAME TIME AND ATTENDANCE AT ADULT CLASSES

| Attendance | Kept you from attending | No influence | Made you want to attend | Total |
|---|---|---|---|---|
| 0-24% | 1 | 47 | 4 | 52 |
| 25-49% | 4 | 71 | 6 | 81 |
| 50-74% | 3 | 123 | 12 | 138 |
| 75-99% | 0 | 130 | 9 | 139 |
| 100% | 0 | 38 | 6 | 44 |
| Total | 8 | 409 | 37 | 454 |

want to attend which could indicate that husband and wife were able to attend class together or a class was held for wives at the same time that husbands were meeting. Only eight reported this factor kept them from attending. This factor was not associated with attendance.

Need for agricultural information

It was revealed in previous studies that the individual's need for information was a primary reason for attending adult classes. The present study supports previous research but no significant association with attendance was found. Of the 470 respondents, 386 or 82% reported the need for agricultural information made them want to attend classes.

TABLE 34

RELATION BETWEEN NEED FOR AGRICULTURAL INFORMATION AND ATTENDANCE AT ADULT CLASSES

| Attendance | Kept you from attending | No influence | Made you want to attend | Total |
|---|---|---|---|---|
| 0-24% | 0 | 12 | 41 | 53 |
| 25-49% | 0 | 19 | 67 | 86 |
| 50-74% | 1 | 24 | 119 | 144 |
| 75-99% | 0 | 21 | 121 | 142 |
| 100% | 0 | 7 | 38 | 45 |
| Total | 1 | 83 | 386 | 470 |

Of the 470 respondents, 83 or 17% reported this factor had no influence on their attendance. Only one person indicated the need for agricultural information kept him from attending.

Use of special speakers

Many teachers of adult farmer classes utilize special speakers part-time in their instructional programs. A review of previous studies has revealed that special speakers are both an advantage and a disadvantage.

Of the 461 who responded to this factor, 286 reported that using special speakers part-time made them want to attend. One hundred seventy-three indicated that

the use of special speakers had no influence on their attendance. Only two farmers reported the use of special speakers kept them from attending. With this large percentage, 62% or 286 of 461 indicating special speakers made them want to attend, teachers of vocational agriculture may include more special speakers into their instructional programs. In such cases teachers should organize a portion of the meeting to provide opportunities for group discussion, a highly valued technique for teaching classes.

TABLE 35

RELATION BETWEEN USE OF SPECIAL SPEAKERS AND ATTENDANCE AT ADULT CLASSES

| Attendance | Kept you from attending | No influence | Made you want to attend | Total |
|---|---|---|---|---|
| 0-24% | 0 | 21 | 30 | 51 |
| 25-49% | 0 | 35 | 47 | 82 |
| 50-74% | 0 | 59 | 84 | 143 |
| 75-99% | 2 | 46 | 92 | 140 |
| 100% | 0 | 12 | 33 | 45 |
| Total | 2 | 173 | 286 | 461 |

Place selected to hold classes

The place selected to hold classes has been considered important in previous studies. This factor was

not significant in the present study. Of the 471 respondents to this factor, 201 or 43% reported the meeting place made them want to attend. Classes can be held in a center where appropriate facilities are available for a particular class without fear that the attendance of the members will decrease.

TABLE 36

RELATION BETWEEN PLACE SELECTED TO HOLD CLASSES AND ATTENDANCE AT ADULT CLASSES

| Attendance | Kept you from attending | No influence | Made you want to attend | Total |
|---|---|---|---|---|
| 0-24% | 1 | 32 | 20 | 53 |
| 25-49% | 1 | 51 | 33 | 85 |
| 50-74% | 0 | 87 | 58 | 145 |
| 75-99% | 0 | 73 | 69 | 142 |
| 100% | 0 | 25 | 21 | 46 |
| Total | 2 | 268 | 201 | 471 |

Two hundred sixty-eight of the 471 respondents reported the meeting place had no influence on their attendance which may indicate that they were not concerned with the particular location where classes were held. Probably other factors were more important to this group. Only two respondents indicated the meeting place kept them from attending.

Variety of subjects covered

The factor, variety of subjects covered, did not prove to be significant in the present study. The large majority, 321 of 468, in the "made you want to attend" category may indicate, however that the farmers in this study were interested in discussing more than one subject

TABLE 37

RELATION BETWEEN VARIETY OF SUBJECTS COVERED AND ATTENDANCE AT ADULT CLASSES

| Attendance | Kept you from attending | No influence | Made you want to attend | Total |
|---|---|---|---|---|
| 0-24% | 2 | 16 | 35 | 53 |
| 25-49% | 4 | 28 | 52 | 84 |
| 50-74% | 2 | 49 | 93 | 144 |
| 75-99% | 0 | 35 | 106 | 141 |
| 100% | 0 | 11 | 35 | 46 |
| Total | 8 | 139 | 321 | 468 |

during the period the class is in operation. Of the 468 respondents, 139 reported that covering a variety of subjects had no influence on their attendance. Only eight farmers reported that covering a variety of subjects kept them from attending adult farmer classes. It appears that the topics covered in the classes were not pertinent to

their major farm problems, a factor found to be highly significant.

Entertainment and/or refreshments provided

The provision for refreshments and/or entertainment at adult farmer classes has been considered quite extensively in previous studies. The present study found

TABLE 38

RELATION BETWEEN ENTERTAINMENT AND/OR REFRESHMENTS PROVIDED AND ATTENDANCE AT ADULT CLASSES

| Attendance | Kept you from attending | No influence | Made you want to attend | Total |
|---|---|---|---|---|
| 0-24% | 0 | 34 | 19 | 53 |
| 25-49% | 1 | 51 | 34 | 86 |
| 50-74% | 2 | 94 | 48 | 144 |
| 75-99% | 1 | 85 | 53 | 139 |
| 100% | 0 | 33 | 12 | 45 |
| Total | 4 | 297 | 166 | 467 |

no association between this factor and attendance. While 166 of the 467 respondents reported that having entertainment and/or refreshments made them want to attend, 297 farmers reported that this factor had no influence on their attendance. Only four farmers indicated this factor kept them from attending. While providing entertain-

ment and/or refreshments may add to the enjoyment and congeniality of the class, they have no association with improved attendance.

Summary

The statistical treatment, the chi-square test of independence, of the data gathered for this study indicates that 13 of the 30 factors being studied are associated with attendance to adult farmer classes in Michigan.

Seven factors were significant at the one percent level: distance from class center, time of year classes are held, the way the class is taught, topics covered my farm problems, time of day classes are held, length of class in weeks, and the subject of class meetings.

Six factors were significant at the five percent level: all members allowed to discuss problems, attendance in previous years, ability of agricultural teacher, personality of agricultural teacher, type of farming, and riding with neighbor.

The additional items, "number of meetings" and "individual or group respondent," although not included in the 30 selected factors, were found to be significant at the one percent level. The item, "individual or group respondent," refers to whether the questionnaire was mailed to a farmer to complete or was completed by a farmer during a regular meeting of a group of farmers attending an adult class.

The remaining 17 factors included in this study were not significant at either the one or the five percent level. The information gathered may be of interest, however, in their agreement or disagreement with the findings of previous research.

Findings of the following factors were in agreement with findings of previous research: age of farmer; years enrolled in vocational agriculture in high school; membership in farm, civic, religious, and social organizations; off-the-farm employment; need for agricultural information; variety of subjects covered; and use of special speakers.

Findings of the following factors were not in agreement with the findings of previous research: marital status, educational background, farming status, size of farm, place selected to hold classes, and entertainment and/or refreshments provided.

Factors that had not been studied to any extent previously were: productive man work units, teacher visits to farms, gross income, and classes for spouse. The information presented in this study of these four factors may be of assistance to persons engaged in the area of adult farmer education.

The findings revealed in the present study in one state suggests that research should be carried on to further substantiate the 13 factors found to be associated with attendance. Another method of treating and analyz-

ing data such as multiple regression, which measures interrelationships of factors, may also find significances existing in the remaining 17 factors. The importance of adult farmer education in the present and coming years is a challenge to research to determine additional factors associated with attendance at adult farmer classes.

# CHAPTER V

## SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

### Introduction to Problem

It has been assumed that educational programs for adult farmers should be an important segment of the total program of vocational agriculture in local communities throughout the United States. Although teachers of vocational agriculture have conducted or supervised many classes for adult farmers, only approximately 6% of the potential adult farmer students are being reached.

### Purpose of Study

The purpose of this study was to determine what association existed between 30 selected factors and attendance at adult farmer classes. It was believed that information of this kind will enable teachers of vocational agriculture to organize classes that will be acceptable to adult farmers and encourage larger enrollments and regular attendance.

Previous studies related to adult farmer education have been primarily concerned with characteristics of farmers who attend adult classes. No association of actual attendance records and these characteristics of farmers has been determined.

Procedures

A questionnaire was used to gather the data pertaining to the selected factors studied in this investigation. The development of the questionnaire had its beginning in the review of related studies. Additional factors not previously studied but believed to be associated with attendance to adult farmer classes were included.

The data for this study were gathered from 428 adult farmers enrolled in classes in 39 randomly selected centers in Michigan during February and March 1958. Additional information was secured by mail from 44 adult farmers who attended only a few of the classes in the same 39 centers. The actual attendance records of each of the 472 farmers were secured from the teachers of the adult classes during the months of May and June 1958. The attendance records of the 472 farmers were classified into five categories: the records of those farmers who attended from 0 to 24% of the meetings were classified "poor"; records of those who attended 25 to 49% were classified "fair"; records of those who attended 50 to 74% were classified "good"; records of those who attended 75 to 99% were classified "excellent"; and records of those who attended all of the meetings of their particular adult farmer class were classified "perfect." Some additional information was secured from the records of the Division of Vocational Education, Department of Pub-

lic Instruction, Lansing, Michigan.

Each item of the questionnaire, the attendance records of each respondent, and the information secured from the State Department of Public Instruction were coded and transferred to a master data sheet. The data on items nine and ten of the questionnaire were computed to productive man work units before coding.

IBM cards were punched from the information on the master data sheet. One card contained all of the data from one farmer who completed an acceptable questionnaire. The cards were processed by the "101" IBM machine which sorts, totals, and prints the results. The data for each factor were totaled for farmers grouped in each of the five different attendance categories. From these totals, statistical relationships were determined.

Summary of Findings

Using the chi-square test of independence, the 30 selected factors were analyzed to ascertain the relationship between each factor and attendance at adult farmer classes. Thirteen factors were found to be associated with attendance.

Seven of the 13 factors were found to be significantly associated with attendance at adult farmer classes at the one percent level:

1. Distance from class center. The findings revealed the percentage of meetings attended improves with distance

from the class center within the area normally served by the school. Within school districts one can conclude that distance is not a factor preventing good attendance. It appears that those persons sincerely interested in a particular class will attend regularly regardless of the distance.

2. Time of year classes are held. A large majority, 68%, indicated "the time of year classes are held," in this case February and March, made them want to attend. The data for this factor indicate that attendance to adult farmer meetings is best during winter and early spring months.

3. Way the class is taught. It was not the purpose of this study to determine what methods of instruction for adult farmers were associated with attendance, but was to ascertain if there were any association between how the member felt about the way the class was taught and actual attendance. An association was found to exist for those farmers with the best attendance records were more favorably influenced to attend because of approved methods of instruction being used. One could conclude that teachers of adult farmers should determine early in the class the most favorable ways in which to conduct classes for those attending. In view of these findings, it would seem that future investigations may be undertaken to determine the relation between specific methods or tech-

niques of instruction and attendance at adult farmer classes.

4. Topics covered my farm problems. Farmers attended a higher percentage of class meetings when their own farm problems were studied. It is importnat, therefore, for the teacher to offer instruction in subject areas closely related to class members' farm problems.

5. Time of day classes are held. Sixty-seven percent of the respondents indicated "time of day classes are held" made them want to attend. These farmers had a 10% greater attendance than the smaller group, 30%, who indicated "time of day classes are held" had no influence on their attendance. One would expect that offering instruction at a time of day suitable to the majority of farmers in the community will aid in maintaining attendance.

6. Length of class in weeks. According to the analysis of the data, attendance was higher when the classes were less than 20 weeks in length. Those farmers who attended classes less than 20 weeks in length had significantly better attendance record than those farmers who attended classes more than 20 weeks in length. One can deduce, therefore, that classes should be less than 20 weeks in length if attendance is to be maintained at a high level.

7. Subject of class meetings. This study indicates that

the subject of the class meetings is significantly associated with attendance. This factor, in conjunction with the significance of the factor "topics covered my farm problems," would indicate that regular attendance will be enhanced by selecting subjects for class meetings which are important to the farmers attending. It would seem necessary, therefore, for teachers of vocational agriculture to consider only subjects of interest to the farmers of the community in organizing adult farmer classes.

The remaining six of the 13 factors found to be associated with attendance at adult farmer meetings were significant at the five percent level:

1. All members allowed to discuss problems. Over 75% of the respondents indicated being allowed to discuss their problems made them want to attend adult farmer classes. This indicates that where class members are allowed to discuss their problems and exchange ideas with those members having similar problems, attendance increases.
2. Attended class in previous years. Although 50% of the farmers indicated "no influence" on this factor, those persons who indicated previous attendance "made them want to attend" had a greater attendance than those who said previous attendance had "no influence" on their present attendance. One can conclude, therefore, that those farmers who have attended classes in

previous years tend to be interested in continuing their education by attending present classes.

3. Ability of agricultural teacher. An overwhelming majority, 75%, indicated the ability of the instructor "made them want to attend" class. Only two farmers indicated the ability of the agricultural teacher "kept them from attending." One can infer from these figures that successful adult farmer programs require persons who have the ability to work with adults.

4. Personality of agricultural teacher. Sixty-seven percent of the respondents indicated the personality of the agricultural teacher "made them want to attend." Attendance records support these data in that attendance was better among members of this group than among those who said the personality of the agricultural teacher had "no influence" on their attendance. It appears that the teacher of vocational agriculture who displays the personality characteristics of easily meeting and talking with farmers will induce better attendance. Carrying out good person-to-person relations encourages farmers to attend classes more regularly. It is recognized that a subtle screening process may have already taken place pertaining to the personality of the teacher of vocational agriculture in this study in that only one person indicated this factor kept him from attending. This factor may

have been even more significant if more respondents had indicated this factor of personality "kept them from attending."

Since this investigation treated personality as a simple factor, it does not identify characteristics of a personality that may be significantly associated with attendance. An investigation that seeks to determine if certain types of personalities are associated with attendance would tend to clarify this factor in terms of helping to identify more successful teachers of adult farmer classes.

5. Type of farming. Poultry farmers, dairymen, and general farmers were more regular in attendance than were persons engaged in other types of farming. It may be recognized that these three groups of farmers are generally engaged in year-round operations which may indicate an availability for attending classes. Those farmers who operate a seasonal type of farming such as fruit, cash grain, or vegetables may not be as available during the time classes are generally meeting. Non-farmers who were considered members of adult farmer classes had lower attendance records than any kind of farmer.

6. Riding with neighbor. Although only one-fourth of the respondents indicated that riding with their neighbor "made them want to attned," the attendance of this

group was higher than those respondents who indicated "no influence." One might infer from the difference in the attendance records of these two groups that farmers who share rides are more highly motivated or encouraged to attend adult classes regularly. Teachers should encourage farmers to share rides to take advantage of this factor for promoting attendance.

Two additional items included in the statistical analysis proved to be significant at the one percent level. They pertained to the number of meetings and the comparison of responses obtained from class members by mail with those responses obtained in class meetings.

1. Total number of meetings. The average attendance to classes meeting more than 10 times was at a higher level than those classes meeting only 10 times. However, attendance increased only for two additional meetings. After this point, attendance tended to decrease somewhat again. This is an indication that farmers will attend classes which meet for more than 10 meetings and probably will do so if additional meetings are felt to be valuable.
2. Individual or group respondents. Forty-four persons were mailed the questionnaire to be completed individually. These 44 were people who had attended classes very little. Their average attendance was 34%. The group respondents completed the questionnaire during one of their regular adult class meetings. Their av-

erage attendance was 66%. This large difference was expected before any statistical treatment was carried out. The inclusion of these 44 individual respondents was for the purpose of gaining a sample of adult farmers who were known to attend classes very irregularly. Their responses when analyzed were consistent with persons among class respondents who attended fewer classes.

The remaining 17 factors were not found to be associated with attendance at adult farmer classes according to the chi-square test of independence. The data gathered did, however, reveal important information that may be significant in practice if persons believe that a significant association does exist where none was found.

Of the entire group, 40 respondents were under 25 years of age, 109 were between 25 and 34, 166 were between 35 and 44, 105 were between 45 and 54, and 43 were 55 and over. The average was slightly less than 38.5 years of age. Eighty-nine percent were married.

Sixty-seven percent of the respondents had completed 12 years or more of school. Only nine farmers had less than eight years of school. Fifteen had completed four or more years of college. The average schooling completed was slightly over 11 years. Only a little over 50% of the respondents had had some vocational agriculture in high school.

Over 85% of the respondents were classified as

either "owners" or "owners and renters." Ten percent were "renters," three percent were "managers," and only one percent were "farm laborers." Although 48% worked less than 10 days off their farms, one-fourth reported 100 or more days in off-the-farm employment.

The average size of farm of the respondents was 276 acres. Five percent were less than 70 acres, 4% were over 500 acres, 38% were between 100 and 179 acres, 27% were between 180 and 259 acres, and 24% were between 260 and 499 acres. Although one-third of the respondents had less than 300 PMWU, approximately 40% reported over 500 PMWU in their farming operations. The average was 448 PMWU per farm.

The average gross income of the respondents of $8,860.00 indicates that farming today is big business. Although 21% had gross incomes of less than $2500.00, one-fourth exceeded a gross income of $15,000.00.

Twenty-nine percent of the respondents reported the instructor had not visited their farms in the past year. Over 27% reported that the instructor had made four or more visits to their farms in the last year. An average of two visits to each respondent's farm was made by the teachers of vocational agriculture who cooperated in this study.

In regard to the operation of adult classes, 70% indicated that covering a variety of subjects made them want to attend. Twenty-nine percent reported this factor

had no influence on their attendance. Although 63% of the respondents indicated that having entertainment and refreshments had no influence on their attendance, 34% indicated this factor made them want to attend. Thirty-seven percent of the farmers reported the use of special speakers part-time had no influence on their attendance. Sixty percent indicated the use of special speakers part-time made them want to attend.

While 57% of the respondents indicated the place selected to hold classes did not influence their attendance, 42% reported this factor made them want to attend. The overwhelming majority, 90%, indicated that having classes for their spouse at the same time that they attended classes had no influence on their attendance. Eighty-two percent of the respondents reported the need for agricultural information made them want to attend classes. Seventeen percent indicated this factor did not influence their attendance.

In addition to attending adult farmer classes, each respondent belonged to an average of 3.6 organizations.

It should be emphasized here that some of the findings of this study do not agree with some of the findings reported in Chapter II. It may appear that the findings of these 17 factors not found significantly associated with attendance in this study may cast some doubt on their importance. However, they may have an important

bearing on attendance, in general, at adult farmer classes. It is believed that the findings of this study represent the conditions in adult farmer education. It would seem that other research workers may wish to substantiate the 13 factors found to be associated with attendance at adult farmer classes in Michigan or even check the 17 not found to be associated. This may be done by following a similar technique in other states or by the use of other statistical analyses that isolate factors that may be related and also associated with attendance. Significant relationships may be found with the remaining 17 factors if other methods of treating and analyzing data are used.

Full consideration by teachers of the 13 significant factors should result in maintaining a higher percentage of attendance of adult farmers at class meetings.

Recommendations

This investigation and the implications of the findings suggest further action that might be undertaken on the state or local level to promote and improve adult education in agriculture. Recommendations in these areas are presented below:

1. Similar studies using a different statistical treatment such as multiple or partial correlation or factor analysis to determine or isolate factors associated with attendance would be desirable to substantiate

or refute the findings reported here.

2. The techniques used in this study of 30 selected factors be applied to research in adult farmer education in other states or in other years to obtain data and, thereby, test the findings under a variety of conditions.
3. Other factors in such other studies may be isolated and identified for teachers of vocational agriculture to use in securing larger enrollments and a higher percentage of attendance at class meetings.
4. State educational leaders in recognizing the importance of a continuing educational program for those persons beyond public school age should be concerned with providing more educational opportunities for adults. Assistance should be given teachers of vocational agriculture to aid them in reaching a larger number of farmers. Data from this study should be helpful in counseling teachers of adult farmers.
5. In communities where successful teachers of adults are assigned non-vocational secondary school responsibilities, rather than adult farmer classes, state leaders should encourage their assignment in adult farmer education.
6. To encourage regular attendance teachers of vocational agriculture should organize and conduct their adult farmer classes during the late fall, winter, and early spring months. Because attendance tended to decrease

where classes which held more than 12 scheduled meetings were continued more than 20 weeks, state leaders and teachers should probably study carefully the values that have been considered inherent in programs continuing throughout the year with more class meetings to determine if such values can be justified when attendance drops.

7. To encourage regular attendance, teachers of vocational agriculture should deal with problems of adult farmers and utilize discussion methods of instruction.
8. Teachers of vocational agriculture should assist farmers in pooling rides to adult classes and encourage attendance from year to year.
9. An investigation, surveying farmers who do not attend adult farmer classes to determine why, may reveal information of value to teachers of vocational agriculture in organizing and conducting classes for adult farmers.

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# APPENDIX

QUESTIONNAIRE

This questionnaire is to gather information from adult farmers attending evening classes in Michigan. The information you supply will be held confiden-

| | | | |
|---|---|---|---|
| Attended in previous years | | | |
| Ability of agricultural teacher | | | |
| The way the class is taught | | | |
| Need for agricultural information | | | |
| Special speakers used part-time in teaching classes | | | |
| Topics covered my farm problems | | | |
| Personality of agricultural teacher | | | |
| Riding with neighbor | | | |
| Variety of subjects covered | | | |
| Place selected to hold classes | | | |
| Entertainment and/or refreshments provided | | | |
| Time of day classes held | | | |

15. Please indicate (✓) your approximate total value of products sold from farming in 1957. (optional)

| $250-599 | 600-1199 | 1200-2499 | 2500-4999 | 5000-9999 | 10,000-14,999 | 15,000 & over |
|---|---|---|---|---|---|---|
| | | | | | | |

Original letter to teachers of Vocational Agriculture

East Lansing, Michigan
February , 1958

Mr. _____
Teacher of Vocational Agriculture
_____, Michigan

Dear Mr. _____:

The problem of adult education recognized by teachers is one of reaching those who have the greatest need for instruction. Often these persons do not attend any of our adult farmer classes. Some may attend a few meetings.

Under Dr. Paul Sweany's direction, I am making a study of factors that appear to be associated with attendance at adult farmer classes in Michigan. It is believed that the information obtained in this study will enable teachers of vocational agriculture to plan and organize their adult farmer classes so as to secure larger enrollments and better attendance.

The data needed in this study is to be collected through the use of a questionnaire administered by teachers in their adult farmer classes. This questionnaire can be completed in approximately fifteen minutes. The information gathered will be analyzed to show the correlations between individual factors and attendance. Data collected will not be identified with any individual school, adult class, class member, or teacher.

Your adult farmer class is one of 50 selected at random to aid in gathering the information needed. In order to maintain the randomness of the sample, it is essential that all classes selected participate in the study. Would you be willing to help gather the information needed? I am enclosing a copy of the questionnaire to be used.

If you will assist in this study, please return the enclosed self-addressed card indicating the approximate number of questionnaires needed as soon as possible. I will greatly appreciate your assistance in this matter.

Yours very truly,

Philip B. Davis

Postal card enclosed in original letter to teacher of vocational agriculture

I will administer your questionnaires to my adult farmer class.

I will need _____ questionnaires.

Signed _____

Original contact letter to superintendent

East Lansing, Michigan
Feburary , 1958

Mr. _____
Superintendent of Schools
_____, Michigan

Dear Mr. _____:

Under the direction of Dr. Paul Sweany of Michigan State University, I am making a study of characteristics of adult farmers that appear to be associated with attendance at adult farmer classes in Michigan. It is believed that the information obtained in this study will enable teachers of vocational agriculture to plan and organize their adult farmer classes to reach a larger clientele.

The adult farmer class conducted by your teacher of vocational agriculture, _____, is one of 50 classes selected at random to help furnish the information needed. In order to maintain the randomness of the sample, it is essential for all classes selected to participate in the study.

The information needed is to be obtained from class members through a short questionnaire administered in an adult farmer class meeting. Only about fifteen minutes is needed to complete the questionnaire.

The data collected will be analyzed to show the correlations between these characteristics and attendance. Data gathered will not be identified with any individual school, adult class, class member, or teacher.

We greatly appreciate the cooperation of your teacher of vocational agriculture and his adult farmer class in this study.

Yours very truly,

Philip B. Davis

Letter with questionnaires

East Lansing, Michigan
February , 1958

Mr. _____
Teacher of Vocational Agriculture
_____, Michigan

Dear Mr. _____:

I am enclosing the number of questionnaires that you suggested would be sufficient for your adult farmer class. I believe these questionnaires are self-explanatory, but I would like for you to encourage each member to fill out the form completely. To insure the confidence of each member completing the questionnaire at your class meeting, would you please seal the completed questionnaires in the self-addressed stamped manila envelope in the presence of the class? (It might be well to mention to the class members prior to handing out the questionnaires that you intend to do this.)

Since it is important in this study that we have some data from farmers who attend only one or two class meetings, I am enclosing five questionnaires to be sent to five farmers who have only attended one or two of your class meetings. To make less work for you, I have enclosed with each questionnaire to individual farmers a short statement of explanation for you to sign. If you will then address these five envelopes (perhaps at the same time your class members are completing their questionnaires), this additional assistance will be greatly appreciated. You will note there is a self-addressed stamped envelope in each of the five envelopes you will address so that the farmer can return the questionnaire directly to me.

I will be contacting you in the future to get the attendance record of each farmer who completed one of the questionnaires. I will send a list of the names of these farmers so it will merely entail you placing the number of meetings each one attended beside his name.

I want to thank you very much for your cooperation in helping gather the information needed.

Yours very truly,

Philip B. Davis

Explanatory note for questionnaires administered individually

A study is being made of farmers who attend or have attended some of the classes conducted by teachers of vocational agriculture in Michigan by Philip B. Davis, a graduate student at Michigan State University. It is believed that this study will help teachers of vocational agriculture to organize their programs to provide more assistance to the farmers in their service area.

Will you please complete the enclosed questionnaire and send it to Philip B. Davis in the envelope provided? The information you provide will be held confidential.

Letter to teacher for attendance records

East Lansing, Michigan
May , 1958

Mr. _____
Teacher of Vocational Agriculture
_____, Michigan

Dear Mr. _____:

In my letter enclosed with the questionnaires you circulated concerning this study of attendance to adult farmer classes, I indicated that I would be contacting you in the future for the attendance record of each person in your class who completed one of the questionnaires. The future has been replaced by the present, and I am now in need of that attendance record.

Would you please indicate below the number of adult farmer class meetings that were held during the school year, 1957-58, and the number of times each person listed was in attendance? Please return this letter to me in the enclosed envelope.

Total number of adult farmer meetings (1957-58) _____.

Number of adult farmer meetings attended:

| | | | |
|---|---|---|---|
| Name | _____ | Name | _____ |
| Name | _____ | Name | _____ |
| Name | _____ | Name | _____ |
| Name | _____ | Name | _____ |
| Name | _____ | Name | _____ |

I very sincerely appreciate the assistance you have given me in this study. Your cooperation has made this study representative of all adult farmer classes in Michigan. If I may be of assistance to you, please feel free to call upon me.

Yours very truly,

Philip B. Davis

## BIOGRAPHICAL SKETCH OF AUTHOR

Philip Barr Davis was born on January 9, 1926 in Harrisonville, Missouri and received his elementary and secondary school education in the Harrisonville school system. He served 27 months in Naval Aviation during and immediately following World War II. Following his discharge in 1946, he matriculated at Oklahoma State University, majoring in Agricultural Education. In 1947 he married Madalyn Lackey of Okmulgee, Oklahoma. Upon graduation in 1950, he was employed at Grove, Oklahoma as the teacher of vocational agriculture. He established the department of vocational agriculture at Grove and taught in that community for six consecutive years. He was awarded a Master of Science degree in Agricultural Education from Oklahoma State University in 1953.

During the 1956-57 academic year, he was employed as part-time instructor at Michigan State University and began work toward an advanced degree. In the 1957-58 year he continued his study toward a Ph.D. degree in Teacher Education.

At present he is employed as Assistant Professor, Agricultural Education, Oregon State College, Corvallis, Oregon. He holds membership in the Oregon Vocational Ag-

ricultural Teachers Association, American Vocational Association, and Phi Delta Kappa. He is a member of the First Methodist Church, Corvallis, Oregon.