PRACTICES OF TEACHERS OF VARYING PROFICIENCY IN CONDUCTING PROGRAMS OF SUPERVISED FARMING IN VOCATIONAL AGRICULTURE IN MICHIGAN

Thesis for the Degree of Ph. D.

MICHIGAN STATE COLLEGE

Raymond Andrew Garner

1951

THESIS



This is to certify that the

thesis entitled

PRACTICES OF TEACHERS OF VARYING PROFICIENCY IN CONDUCTING PROGRAMS OF SUPERVISED FARMING IN VOCATIONAL AGRICULTURE IN MICHIGAN

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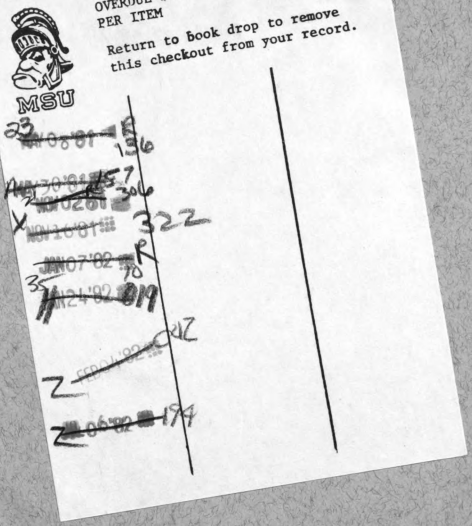
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PRACTICES OF TEACHERS OF VARYING PROFICIENCY IN CONDUCTING PROGRAMS OF SUPERVISED FARMING IN VOCATIONAL AGRICULTURE IN MICHIGAN

By

RAYMOND ANDREW GARNER

A THESIS

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

DOCTOR OF PHILOSOPHY

Division of Education

1951

THESIS

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Likewise, he is indebted to the teachers, students, parents and all others who cooperated so wholeheartedly in supplying data for this study.

A special debt of gratitude is owed by the writer to the members of his family. Without their constant encouragement and assistance, this study could never have been made.

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CHAPTER I

INTRODUCTION

THE PROBLEM

This is a study of the practices used by two groups of teachers of varying proficiency in conducting programs of supervised farming in vocational agriculture. The major effort in this study has been directed toward finding answers to two principal questions: (1) Do two selected groups of teachers of vocational agriculture in Michigan use practices in conducting programs of supervised farming that are recommended by teacher trainers and supervisors in agricultural education? (2) If the two groups of teachers do not use recommended practices in conducting programs of supervised farming, what are the reasons?

PURPOSES OF STUDY

The specific purposes of this study may be stated as follows:

1. To prepare a statement of practices in conducting programs of supervised farming recommended by leaders in agricultural education.

2. To devise a method for measuring effectiveness of programs of supervised farming.

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3. To determine the extent that two groups of teachers, of varying effectiveness, follow practices recommended by leaders in agricultural education in conducting programs of supervised farming.

4. To discover some of the reasons for variable practices in conducting programs of supervised farming among two groups of teachers of varying effectiveness in conducting programs of supervised farming.

5. In the light of the findings, to present some recommendations which might bring about improvements in the conduct of programs of supervised farming.

THE EVOLVING CONCEPT OF SUPERVISED FARMING

The experience provided rural boys enrolled in the public secondary schools while they engage in farming activities under the guidance and supervision of their teachers, has been recognized as an essential phase of the program in vocational education in agriculture. Indeed, the framers of the Federal, legislative Act,[1] which made this education possible, had in mind the desirability of such training when they included the

---

[1] Public No. 347, 64th Congress, S. 703. Approved February 23, 1917. United States Statutes at Large of the United States of America, 64th Congress, Volume XXXIX, Part 1, Public Laws (Washington: Government Printing Office, 1917), p. 929.

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[2] Ibid.,

mandatory requirement "That in order to receive the benefits of such appropriations . . . such schools shall provide for directed or supervised practice in agriculture, either on a farm provided for by the school or other farm, for at least six months per year . . ."[2]

As this program of farmer-training developed and expanded, new ideas and concepts evolved with the result that more appropriate designations have been adopted to describe the pattern of training that emerged. At various times in the history of agricultural education, that aspect of the training which is carried out on a farm has been referred to by such terms as project, home project, project program, supervised farm practice, supervised practice program, farming program, supervised farming and supervised farming program. Still, new concepts and new patterns have not eliminated certain fundamental elements. The basic structure of the program remains essentially as it was in the beginning, a cooperative effort between the home and school to provide a highly individualized type of instruction in the pupil's farm environment. Changes that have come about appear to have been centered primarily on modifying purposes, scope and techniques of carrying out the work.

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[2] Ibid., Section 10, p. 934.

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In the early history of vocational agriculture, the terms "project" or "home project" were frequently used words by workers in vocational agriculture when referring to the farming activities carried out by the student under the direction of the teacher. A review of the writings of some of the early leaders in vocational agriculture such as Dadisman,[3] Heald,[4] Nolan,[5] Schmidt,[6] Stimson,[7] and Storm[8] reveals that the term "project" loomed large in the thinking of these men. Even though the word does not appear in the Smith-Hughes Act, Dadisman demonstrated the tendency to associate the term with the Act when he wrote "The underlying principles of the

---

[3] Samuel H. Dadisman, Methods of Teaching Vocational Agriculture (Boston: Richard G. Badger, The Gorham Press, 1921), 142 pp.

[4] F. E. Heald, The Home Project as a Phase of Vocational Agricultural Education, Federal Board for Vocational Education, Bulletin No. 21, Agricultural Series No. 3 (Washington: Government Printing Office), 1918, 43 pp.

[5] Aretas W. Nolan, The Teaching of Agriculture (Boston: Houghton Mifflin Company, 1918), ix + 277 pp.

[6] G. A. Schmidt, Projects and the Project Method in Teaching Vocational Agriculture (New York: The Century Co., 1926), xxvii + 360 pp.

[7] Rufus W. Stimson, Vocational Agricultural Education by Home Projects (New York: The MacMillan Company, 1919), xxxviii + 468 pp.

[8] A. V. Storm and Kary C. Davis, How to Teach Agriculture (Philadelphia: J. B. Lippincott Company, 1921), vi + 434 pp.

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Smith-Hughes Act had the project idea in mind in developing the type of instruction mentioned in the Act."[9]

Consequently, the practice of a student having a home project in a single farm enterprise, such as a dairy heifer or an acre of potatoes "for at least six months per year," gained acceptance as satisfying the minimum legal requirement of the Smith-Hughes Act "for directed or supervised practice in agriculture."

Although many teachers may have recognized the limited opportunities for learning in such a restricted program and have encouraged their students to engage in educational activities in all major enterprises of the home farm, there are indications that the pattern of the single home project is still used by many teachers. Watson reveals this tendency while confessing the serious shortcomings of the programs of supervised farming in Vermont:

> In recent years the programs in Vermont have ranged from poor to fair with altogether too few really good ones. Too many boys conducted a project type of program rather than developing one which was well balanced and comprehensive in scope.[10]

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[9] Dadisman, op. cit., p. 43.

[10] Cola D. Watson, "Farming Programs--a Point of Emphasis," The Agricultural Education Magazine, 18:166, March, 1946.

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Perhaps, the failure of some teachers to develop broader programs of training on the farm can be traced to an inclination to show more concern for meeting legal requirements than for providing maximum learning opportunities for the students. A state supervisor indicates that such may be the case when he states:

> I believe the general opinion of state supervisors and agriculture teachers is that our supervised practice program in the past has been meeting a set requirement of a law rather than accomplishing a definite purpose in training.[11]

Lane concurred in this viewpoint when, nearly twenty years ago, he reviewed project development in vocational agriculture. In so doing, he pointed the way toward making a greater use of the instructional possibilities of the experience. The four phases of project development as Lane saw them were:

> (1) The phase of the project as an application of learning rather than as a means of learning. The project was something tacked on to the course of study, often, merely to meet the requirements of six months directed or supervised farm practice . . . The content was about agriculture, predominantly informational, and with emphasis on fundamental principles and science taught as such.
>
> (2) The phase of the project as a purposeful activity on the part of the learner . . . The work on a cut-and-dried course of study still held sway on the main line track, while the project work ran

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[11] L. M. Sasman, "Supervised Practice in Farming," The Agricultural Education Magazine, 5:38, September, 1932.

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> along a separate narrow-gage track parallel to the main line.
>
> (3) The phase of continuation projects . . . efforts were made, while still pursuing the time-honored courses of study, to take some time off for individual instruction on projects continued from preceding years.
>
> (4) The present phase of the long-time, comprehensive program of farming . . . farming programs . . . are based on specific and appropriate types of farming in which the boy desires to engage and upon which the instruction, both group and individual, is centered.[12]

When Lane spoke of "continuation projects" and "long-time comprehensive program of farming" he apparently was voicing the forward thinking of those men who had found the home project in a single enterprise entirely inadequate to provide for the farm training of a student; that such a training program to be adequate must include a variety of learning experiences in the major enterprises of the home farm. Such a comprehensive program, according to a recent Federal bulletin,[13] "aids the individual student in developing abilities, acquiring skills, and solving real farming problems on his own

---

[12] C. H. Lane, "Review of Problems in Vocational Education in Agriculture," The Agricultural Education Magazine, 5:140, March, 1933.

[13] W. A. Ross, D. M. Clements, and E. J. Johnson, Directing Vocational Agriculture Day-School Students in Developing Their Farming Programs, U. S. Office of Education, Vocational Division Bulletin No. 225, Agricultural Series No. 56 (Washington: Government Printing Office, 1944), p. 8.

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14 Ibid.,

level, and should lead to a definite goal--satisfactory establishment in a farming occupation." As an illustration of the extent to which the leadership had moved away from the home project idea over a thirty-year period, a recommendation appears in this bulletin that:

> Under ordinary conditions the farming program of a student of vocational agriculture should include as it develops under supervision:
>
> 1. At least one major cash project started early in the student's career, continued, expanded in scope, and improved in quality over a period of several years.
> 2. One or more minor cash projects fitted into the long-time program as needed and as opportunity arises.
> 3. One or more contributory projects, increasing in number, scope, and quality in keeping with major and minor projects.
> 4. One or more improvement projects started or continued each year for the purpose of improving the farm or the farm home.
> 5. Sufficient supplementary farm jobs carried out under the supervision of the instructor, to develop the desired skills and managerial ability.[14]

If this pattern of a broadened, comprehensive program typifies the farm training that currently should prevail, then it becomes obvious that the single home project, in itself, should no longer be regarded as affording adequate farm experience for the student but

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[14] Ibid., p. 67.

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should be looked upon as a part of a larger program. Cook took cognizance of such a development when he stated that, "The term 'project' as used in the beginning of the program during recent years has become recognized as a unit in the individual's farming program."[15]

On the other hand it would be highly presumptuous to infer that the idea of a broad, comprehensive program of supervised farming has gained complete acceptance. Perhaps this would be true as an ideal but certainly not in practice.

Data presented in Table I show a summarization of the kinds of supervised farming programs conducted in the departments of vocational agriculture in Michigan over a five-year period. The percentage of students enrolled in and completing productive enterprise projects plus other supervised farming seems to be quite generally accepted as an indication of a broadened, comprehensive program. Examination of these data reveals that departments of vocational agriculture in Michigan had, on the average, a little over half of their students engaging in this type of farming activity.

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[15] Glen C. Cook, A Handbook on Teaching Vocational Agriculture (Danville, Illinois: Interstate Printers & Publishers, 1947, Fifth Edition), p. 278.

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TABLE I

SUMMARY OF INDIVIDUALS ENROLLED IN AND COMPLETING PRODUCTIVE ENTERPRISE PROJECTS PLUS OTHER SUPERVISED PRACTICE IN MICHIGAN DEPARTMENTS OF VOCATIONAL AGRICULTURE*

Year	Individuals Enrolled	Productive Enterprise Projects Plus Other Supervised Practice	Per Cent
1940-41	6884	3724	54.10
1941-42	6813	3903	57.29
1942-43	6741	3801	56.39
1943-44	7188	3497	48.65
1944-45	6306	3777	59.90

* From data on file in the Office of Vocational Education, Department of Public Instruction, Lansing, Michigan

Pearson[16] presented data for the United States as a whole which seem to indicate a trend toward the development of broadened programs of supervised farming completed over a four-year period by the individuals enrolled in all-day classes in the United States showed that the percentage of the students completing productive

[16] James H. Pearson, Mimeographed Summary, on file in the U. S. Office of Education, "Kinds of Supervised Farm Practice Programs Completed by Individuals in All-Day Classes."

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enterprise projects and other supervised practice increased from 52.6 per cent in the school year 1937-38 to 54.8 per cent in 1938-39, to 58.3 per cent in 1939-40, and continued to increase to 61.1 per cent in 1940-41.

Pearson's data seem to support Tabb's belief that progress has occurred in the conduct of programs in farm training for students enrolled in vocational agriculture. Tabb relates:

> We started out to meet the project-for-six-months requirement in the Smith-Hughes Act. After a few years we evolved the idea of more than one project. Then came farm practice, consisting of as many production projects as a boy could well have, whether related or not, perhaps an improvement project, and some supplementary practice. It seems that now we are getting around to the idea that a boy should have a farming program consisting of such things as will give him the most valuable training in the kind of farming he is likely to engage in.[17]

In later sections of this report, particularly in references to related literature, the reader will find various designations used by writers when referring to the educational activities in farming carried on by the student under the direction of the teacher of vocational agriculture. Perhaps it might provide a better understanding of these terms if an attempt were made to show the time when a particular designation seemed to

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[17] W. R. Tabb, "Developing Supervised Farming Programs," The Agricultural Education Magazine, 19:51, September, 1946.

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predominate among workers in vocational agriculture. Necessarily, the limits of each period are only approximations and there is considerable overlapping between periods. Roughly the divisions might be:

Period I -- From the introduction of the "home-project" by R. W. Stimson in 1908 to the passage of the Smith-Hughes Act in 1917. Possibilities of using the project as a method of instruction began to emerge.[18]

Period II -- From the passage of the Smith-Hughes Act in 1917 to 1930. Project idea was dominant.

Period III -- From 1930 to 1940. Students' directed training activities commonly referred to as supervised practice.

Period IV -- From 1940 to present. The designation supervised farming used to indicate directed farming activities of the student.

Sanders, one of the first to adopt the term supervised farming explains:

> . . . the term "supervised farming" is preferred to "supervised practice" as it seems to be more expressive of the aims and ideals that are becoming generally recognized. True, the boy's supervised practice program consisting chiefly of production enterprises, improvement projects and supplementary farm jobs, may fall far short of the ideal of a farming program, but it represents, or should represent, at least a small-scale farming program for the individual engaged in it. Certainly

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[18] A. C. Monahan, and others, Agricultural Education in Secondary Schools, The Eleventh Yearbook of the National Society for the Study of Education, Part II (Bloomington, Illinois: Public School Publishing Co., 1912) 104 pp.

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> this would be true when the complete program for four or more years is considered even if it were not true of the program for a single year.[19]

In the remaining pages of this thesis, the writer will use the designation "supervised farming" whenever possible; although it should be apparent that occasions will demand that the term be considered interchangeably with other designations prevailing at a given time to describe the educational activities in farming carried on by students under the supervision of the teacher of vocational agriculture.

IMPORTANCE OF STUDY

Probably, leaders in the field would be the first to admit that the programs of supervised farming conducted by teachers of vocational agriculture have not measured up to the fullest expectations. Occasionally, the reader will find individuals pointing out outstanding achievements in supervised farming such as was done by Bradford[20] and Howard[21] but these instances are rather

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[19] H. W. Sanders, "What Progress Has Been Made in Planning Supervised Farming?" The Agricultural Education Magazine, 10:88, November, 1937.

[20] H. E. Bradford, "Supervised Practice Trains Boys for the Business of Farming," The Agricultural Education Magazine, 12:10-11, July, 1939.

[21] Carl G. Howard, "Teacher Activities in Supervised Farming," The Agricultural Education Magazine, 13:

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rare. Furthermore, they refer to programs of selected teachers and not to a cross section of teachers. On the other hand, there have been numerous references to the serious inadequacies of the supervised farming programs as they have existed down through the years.

Only recently a state supervisor observed that "The supervision of farming programs of all-day students is probably the weakest phase of our program in vocational agriculture."[22] That the problem has been a persistent one is revealed by Magill who wrote nearly twenty years ago that "Supervised farm practice has been a weak spot in vocational agriculture . . . we have talked and written glibly about supervised practice on the one hand and then have gone supremely on teaching informational agriculture to groups of students."[23]

About the same time Dickinson voiced a similar opinion and indicated that the condition was not restricted to any one area when he wrote: "One of the weakest links in the chain of teaching vocational agriculture is project

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8-9, July, 1940; 13:28-29, August, 1940; 13:48-49, September, 1940.

[22] H. R. Culver, "Supervising Farming Programs," The Agricultural Education Magazine, 22:137, December, 1949.

[23] Edmund C. Magill, "Planning Supervised Farm Practice," The Agricultural Education Magazine, 6:57, October, 1933.

supervision. This situation is not confined to any few states, but appears to be common throughout the country."[24]

Spanton, speaking as Federal agent for the eleven states in the Pacific region offered support for Dickinson's contention that weak programs of supervised farming existed generally by stating:

> In spite of the importance attached to farm practice by the Smith-Hughes Act, it is a matter of common knowledge that this phase of vocational education in agriculture has never attained as high a standard of proficiency as is desirable or as the framers of the act anticipated.[25]

Observations such as the above would lead us to believe that weak programs of supervised farming exist quite commonly throughout the country. Stafford goes one step further and indicates that weak programs even exist among students who have a special interest in farming. He states: ". . . even with selected students, boys who are definitely interested in preparing to farm, supervised practice is, all too frequently, a weak link in our program."[26]

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[24] Sherman Dickinson, "Supervising Practice in Vocational Agriculture," The Agricultural Education Magazine, 5:106, January, 1933.

[25] W. T. Spanton, "Supervised Farm Practice and the Smith-Hughes Act," The Agricultural Education Magazine, 5:185, June, 1933.

[26] Tal H. Stafford, "How to Improve Supervised Farming Programs," The Agricultural Education Magazine, 19:230, June, 1947.

Fay points his finger at the project and identifies it with what he believes to be an unsatisfactory program of supervised farming:

> Our present program of supervised practice leaves much to be desired, consisting too frequently of only one project, usually so small in scope as to fail to challenge the boy, or to command Dad's respect, and offering little chance for practicing better methods.[27]

Likewise, Dickinson condemned the limiting influence of the project and expressed a very low opinion of supervised farming programs in general:

> The one unique phase of our vocational agriculture program has been supervised practice. This, unfortunately in the early days, was almost universally spoken and thought of as meaning a "project," and to this day we are paying the penalty. The vast majority of our students who carry on any home practice at all, still are numbered among the "one-project boys." We cannot but realize that the most of our supervised practice is sketchily planned, inadequately studied, superficially executed, and miserably accounted. Much splendid work is being done, but far too much is of less than mediocre calibre.[28]

The most damning criticism of all was voiced by Starrak when he sharply declared:

> . . . supervised farm practice programs are too often non-existent except in the reports submitted to the state supervisor. Of course, all teachers may have one or two supervised farming practice projects to which they can point with

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[27] Ivan Fay, "It Depends on the Teacher," The Agricultural Education Magazine, 13:91, November, 1940.

[28] Sherman Dickinson, "Needed Adjustments and Direction in Vocational Agriculture," The Agricultural Education Magazine, 9:54, October, 1936.

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> pride, and a few teachers may have several, but I am personally convinced from my own observations and from confessions of teachers themselves that a serious discrepancy exists between state reports on supervised practice and the actual supervised programs in existence on the home farms. If I am seriously wrong on this, I would welcome evidence to the contrary for it is a matter of major concern to me, as it should be to all involved. Aside from the moral implications of the discrepancy referred to, our program cannot attain its maximum efficiency unless the supervised farm practice is real and genuine, rather than imaginary and deceptive.[29]

If one can accept the judgments presented by the men cited, then the quality of supervised farming programs must be at a low level, indeed. It is not known to what extent the statements made were based upon objective evidence. It would seem, however, that all of these persons have had extensive opportunities to acquaint themselves with the effectiveness of supervised farming programs in the respective states where they have been employed as state supervisors or teacher trainers so their views should carry the weight of informed opinion.

To the writer's knowledge there has been no comprehensive study completed which would adequately support or refute the opinions stated above. Pearson's analysis, referred to earlier in this chapter, indicates that there may be a trend toward enlarging the scope of

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[29] J. A. Starrak, "Our Program--Good or Poor?" The Agricultural Education Magazine, 16:9, July, 1943.

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the individual supervised farming programs carried by students but obviously such a summary would not be sufficient to reveal the quality of such programs.

How to improve the situation is a problem. If supervised farming programs generally operate at the low standards which have been described, it will not be easy to find a satisfactory corrective. For a problem as complex as this one appears to be, it would seem that a variety of approaches will need to be used in order to work out a satisfactory solution. Consequently, the writer does not pretend that this study will point the way to a complete and final solution of the problem, but he hopes it will help.

Perhaps, if teachers were better informed on ways and means used by the more able teachers in conducting programs of supervised farming, they could modify their practices to set up a pattern which would contribute materially toward raising their own levels of accomplishment in this important phase of instruction in vocational agriculture.

As has been stated previously, one of the purposes of this study has been to determine the extent that two groups of teachers of varying effectiveness follow recommended practices in conducting programs of supervised farming. If practices used by teachers in conducting superior programs can be clearly pointed up, conceivably

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they might be helpful to less effective teachers actively teaching as well as to others who are preparing to teach. If such were the case, the general quality of supervised farming programs might thereby be improved.

METHOD OF INVESTIGATION

In order to provide the reader with a general view of the various approaches and sources of data used in satisfying the purposes indicated in this study, a brief outline of the procedures employed is presented at this point. A more detailed description of each phase of the investigation will be developed in appropriate sections of this report. The major divisions of the procedure used in conducting this study are indicated below:

1. Establishing a list of recommended practices in supervised farming. This has been accomplished by an exhaustive search of the literature to determine practices recommended by teacher trainers, state supervisors, and staff members in agricultural education of the vocational division of the U. S. Office of Education. On the basis of recommendations of these leaders, a list of ten working principles for conducting supervised farming has been drawn up. These are presented in Chapter IV.

2. Selecting the teachers included in the study. There were three principal considerations kept in mind in choosing the teachers who cooperated in this study:

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(1) that teachers with the more effective and the less effective programs of supervised farming be determined (2) that the determination should be based on an objective approach (3) that the identity of the teachers in so far as associating them with superior or inferior programs of supervised farming should be avoided. Briefly, the steps in selecting the teachers were as follows:

a. A list of items was prepared based on the annual Final Report of Supervised Practice Program[30] of the Office of Vocational Education of the Department of Public Instruction in Michigan. All of the items were possible measures of effectiveness of school programs of supervised farming. This report is required of all schools in Michigan which operate a reimbursable program in vocational education in agriculture.

b. These items were submitted to five state supervisors and to two teacher trainers in agricultural education in Michigan. It was requested of each of these men that he add any items which could be obtained from the annual Final Report of Supervised Practice Program that in his opinion were significant measures of effectiveness of supervised

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[30] See Appendix K.

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farming. By virtue of their positions, background and experience, it was felt that these men were well qualified to perform this assignment.

c. A compilation was made of these items and they were then submitted to a jury for validation and weighting as measures of effectiveness of school programs of supervised farming. The jury was composed of the five supervisors and two teacher trainers referred to above and fourteen other teacher trainers and supervisors. All of these men were considered to be expert in their understanding of supervised farming.

d. The names of Michigan teachers of vocational agriculture who had completed three years of teaching in their present positions were determined. Eighty-four of the 201 schools, maintaining departments of vocational agriculture in Michigan in September 1948, employed teachers who had been on the job three years or longer.

e. Copies of the Final Report of Supervised Practice submitted January 1, 1949; January 1, 1948; and January 1, 1947 by the eighty-four teachers, who had completed at least three years of teaching on the job where they were employed on September 1, 1948, were examined. The data summarized on these reports

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relate to the programs of supervised farming of high-school students only. Measures of effectiveness validated by the jury of supervisors and teacher trainers were applied to these reports.

f. The eighty-four departments were arranged in rank order on the basis of scores obtained when the measures of effectiveness of supervised farming programs were applied to each Final Report of Supervised Practice Program.

3. Studying the programs of supervised farming in the schools selected. It had been planned to study the thirteen top-ranking and the thirteen bottom-ranking departments. Before it was possible to complete these studies, there had been changes in the teaching personnel of departments ranking seventh and twelfth from the top and eighth from the bottom. It was possible to substitute departments ranking next in order which meant that those ranking fourteenth and fifteenth from the top were included with the top group while the department ranking fourteenth from the bottom became a part of the bottom group. Thus, a total of twenty-six departments were studied, the number that it was feasible for the writer to investigate.

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farming. All of these men cooperated. One day was used to visit each of the twenty-six departments. The teacher was interviewed as well as representative students and/or one or both of the students' parents. In several instances it was possible to talk to all three members of the family. Altogether, 187 home contacts were made.

DEFINITIONS

Certain terms relating to supervised farming, are used rather frequently by workers in vocational agriculture. Since their meanings, as used in this thesis, may not be clearly understood by all readers of this report, definitions of these terms are presented. In instances when an official definition has been adopted for any of the terms listed below, it is copied here.

The four definitions that follow are from the Office of Vocational Education in Michigan.[31]

Productive enterprise project: A business venture for profit, usually limited to a production cycle in a farm enterprise.

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[31] Final Report of Supervised Practice Program, Voc. Ed. Form No. 241 (Lansing, Michigan: State Board of Control for Vocational Education), p. 1. See Appendix K.

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Improvement project: A project intended to increase appreciably the real estate value of the farm, or improve the efficiency of the farm business.

Supplementary farm practice: Practice which has as its purpose development of ability in certain jobs or practices carefully selected by the teacher in conference with the student.

Placement for farm experience: Placement of a student on a farm--usually a town boy who is lacking in farm experience--or transfer to a suitable farm of a student who has too limited facilities on his home farm.

The definitions for the terms which are given below were taken from a bulletin prepared in the U. S. Office of Education.[32]

Production project: A business venture for profit involving a series of farm jobs usually following a production cycle in a farm enterprise.

Continuation project: A project, continued from year to year, giving considerable repetitive experiences in a given enterprise.

Contributory project: A production project in a student's supervised farming program, the products of

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Major project: A production project which normally yields the major income in a student's supervised farming program.

Minor project: A production project which ordinarily yields less income than a major project in a student's supervised farming program, but which may be fitted into the program so as to utilize and balance labor more effectively and yield a quick cash return on a small investment.

Long-time supervised farming program: The total farming program, including project selection, planning, and development over a period of years on the part of a student of vocational agriculture as supervised by his instructor.

The following definitions have been supplied by the writer:

Farm enterprise: A productive undertaking which consists of the growing for profit of a particular kind of crop or livestock such as dairy cattle or corn.

Vocational education in agriculture: Educational activities relating to training present and prospective farmers for proficiency in agriculture as a phase of the instructional program provided through the public school with financial assistance from the Federal government.

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Vocational agriculture: A term meaning the same thing as vocational education in agriculture.

Agricultural Education: A broad term referring to all types of education in agriculture including vocational agriculture.

School program of supervised farming: All of the activities in farming carried on by students under the supervision of their teacher of vocational agriculture.

Student program of supervised farming: All of the activities in farming carried on by a student under the supervision of his teacher of vocational agriculture.

Teacher trainer: A member of a department of teacher education in a college or university designated to train present and prospective teachers of vocational agriculture.

State supervisor: A person engaged in the administration and supervision of vocational education in agriculture on the state level.

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CHAPTER II

PLANNING AND CONDUCTING THE STUDY

In this chapter the procedures followed in developing a method for measuring effectiveness of programs of supervised farming are described in detail. After showing how this method was used to determine teachers who were asked to co-operate in this study, there is presented a description of the interviewing technique which was employed to gather data from them. Finally, limitations of the study are pointed out and basic assumptions are stated.

DETERMINING MEASURES OF EFFECTIVENESS OF SCHOOL PROGRAMS OF SUPERVISED FARMING

As has been stated previously, one phase of this study involved a determination of the teachers with the more effective and those with the less effective programs of supervised farming. It was desired that this selection should be made on the basis of recorded data since it was believed that such an approach would lend to greater objectivity.

A source of data which is objective in character and which showed promise of revealing information that could be used to measure effectiveness of school programs of supervised farming is the form Final Report of

Supervised Practice Program.[1] For the purpose of brevity, this form will be referred to as Form 241 whenever later references are made to it in this report.

This report must be filed annually for all Michigan departments of vocational agriculture with the Office of Vocational Education of the Department of Public Instruction in Lansing, Michigan. It is a statistical summary of the individual supervised farming programs conducted by all students enrolled in a given department of vocational agriculture. It was felt that an examination and an analysis of these summaries might reveal information which would reflect the quality of supervised farming programs reported.

Proceeding on this basis, a list of possible measures of effectiveness in conducting school programs of supervised farming was drawn up. In preparing this list the writer was able to take advantage of his fairly extensive experience in supervised farming first as a teacher of vocational agriculture in high school and later as a teacher trainer in college. Each measure was of such character that it could be applied to data reported on Form 241. The initial list which was prepared is as follows:

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[1] See Appendix K.

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Percentage of students enrolled in supervised farming who have completed one or more productive enterprise projects and other supervised practice.

Percentage of students enrolled in supervised farming who have completed both livestock and crop productive enterprise projects.

Average number of productive enterprise projects completed by students enrolled in supervised farming.

Percentage of students enrolled in supervised farming who, having completed two or more years of supervised farming, show at least one continuous productive enterprise project.

Percentage of students enrolled in supervised farming who show increasing scope in productive projects repeated in two or more successive years.

Percentage of students enrolled in supervised farming completing supervised farming programs.

Since it seemed probable that there might be additional measures of effectiveness of programs of supervised farming which could be applied to Form 241, it was decided to solicit suggestions of other possible measures of effectiveness from the five state supervisors and two of the teacher trainers in vocational education in agriculture in Michigan. The names of these men are listed in Appendix B. It was believed that their familiarity with Form 241, coupled with their background and experience, made these men well qualified to suggest other possible measures of effectiveness which could be applied to data on file in the Office of Vocational Education in the Michigan Department of Public Instruction.

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When the information was requested, each state supervisor or teacher trainer was invited to submit his suggestions for additional measures of effectiveness on a form such as appears in Appendix C. Examination of this form reveals that the preliminary list of measures which the writer had proposed was presented along with the request for suggestions of other possible measures of effectiveness. This listing was made as an aid to the respondents who, otherwise, might have consumed considerable time writing down many of the same items listed by the writer.

All of these men suggested at least one additional measure but there was considerable duplication in the ideas submitted. When these had been compiled, it was revealed that five additional measures had been suggested. They were as follows:

Average number of improvement projects completed by students enrolled in supervised farming.

Average number of supplementary farm practices completed by students enrolled in supervised farming.

Percentage of students enrolled in supervised farming who complete farm placement experience.

Percentage of students enrolled in supervised farming who complete supplementary farm practice only.

Percentage of students enrolled in supervised farming with productive enterprise projects which are important in the county where the department is located.

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possible measures were available that might be applied to Form 241 to determine the effectiveness of school programs of supervised farming.

VALIDATION OF MEASURES OF EFFECTIVENESS

The need for further investigation seemed fairly obvious before it would be possible to use these suggested measures to determine effectiveness of school programs of supervised farming. For instance, the need for validation of the measures was apparent.

In order to determine the validity of each of the measures, the writer turned to a jury of experts. The members of this jury consisted of the two teacher trainers and the five state supervisors who had been surveyed previously when the list of measures was prepared, together with eleven teacher trainers and two supervisors from other States and one member of the agricultural education staff of the Office of Education, Washington, D. C. The fourteen men who served on the jury, in addition to the seven from Michigan, are listed in Appendix D.

Each of the twenty-one men was asked to indicate his judgment of the relative value of the eleven suggested measures of effectiveness, using the form which appears in Appendix E. Examination of this form will reveal that the respondent was presented six different numbers which

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he might employ to report his estimate of the relative value of each measure. These numbers represent a continuum of values extending from zero (0) "no value" to six (6) "extremely valuable." It is assumed that these six options provided ample opportunity for each of the jurymen to show rather precisely his judgment of the relative value of the eleven suggested measures.

The form, listing the eleven proposed measures and directions for evaluating them, was sent to each of the twenty-one members of the jury, together with the letter shown in Appendix F. All of the men co-operated by returning the completed form.

The distribution of the value ratings on the eleven suggested measures made by the twenty-one members of the jury is shown in Table II. On two of the measures, percentage of students enrolled in supervised farming who complete farm placement experience (Measure IX) and percentage of students enrolled in supervised farming who complete supplementary farm practice only (Measure X) there was so little agreement among the members of the jury, as indicated by the extreme variation in the ratings reported, that it seemed best to omit them from further consideration as measures of effectiveness of school programs of supervised farming. Further examination of Table II reveals that the jury tended to be in agreement on the remaining nine measures. A

TABLE II

VALUE RATINGS PLACED ON ELEVEN POSSIBLE MEASURES OF EFFECTIVENESS OF SCHOOL PROGRAMS OF SUPERVISED FARMING BY A JURY OF TWENTY-ONE EXPERTS

Value Rating	Distribution of Ratings on Eleven Measures										
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI

TABLE II

VALUE RATINGS PLACED ON ELEVEN POSSIBLE MEASURES OF EFFECTIVENESS OF SCHOOL PROGRAMS OF SUPERVISED FARMING BY A JURY OF TWENTY-ONE EXPERTS

Value Rating	Distribution of Ratings on Eleven Measures										
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI
0	0	1	1	1	1	0	0	0	3	2	1
1	2	2	0	0	0	1	1	2	6	6	2
2	0	1	1	3	7	0	0	0	3	4	3
3	4	5	5	9	5	5	1	7	5	2	2
4	8	11	10	7	7	12	14	4	3	5	11
5	7	1	4	1	1	3	5	8	1	2	2
Total	21	21	21	21	21	21	21	21	21	21	21
Median	4	4	4	3	3	4	4	4	2	2	4

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notable exception, however, prevailed in the ratings given by one member of the jury. It was fairly obvious that he did not place a very high value on any of the suggested measures. He rated seven of the measures zero while the remaining four were given a rating of only one.

In order to prevent undue influence by extreme ratings, the median was adopted as a measure to indicate the central tendency of each of the distribution of ratings. When the median was determined for the distribution of value ratings on each of the measures, it is revealed in Table II that seven of the measures had a median value rating of four (4). As the form in Appendix E indicates, a value rating of four means that a measure was judged "highly valuable." Two of the measures had a median value rating of three (3) which means that the measures were considered "above average value."

Summary. Considering only the eleven measures of effectiveness presented in this section, it seems fairly obvious that the jury of experts employed in this study would place a premium upon productive enterprise projects in determining measures of excellence of school programs of supervised farming. In six of the seven measures to which the jury gave the greatest value in determining schools with the more effective programs of supervised

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It appears that the jury would also consider it important that the students complete programs of supervised farming that they start since the item "percentage of students enrolled in supervised farming completing supervised farming programs" is the seventh measure rated "highly valuable" in determining the excellence of the combined programs of supervised farming in a department of vocational agriculture. Lesser value is given by the jury to the measure "average number of improvement projects" and to the measure "average number of supplementary farm practices" completed by students enrolled in supervised farming.

There was general lack of agreement on the value of the suggested measures "percentage of students enrolled in supervised farming who complete farm placement experience" and "complete supplementary practice only" so it seemed advisable to omit them from further consideration as measures for determining effectiveness of school programs of supervised farming.

WEIGHTING OF MEASURES OF EFFECTIVENESS

After using the jury to validate the nine measures of effectiveness, it remained to develop a method of applying them to Form 241 in such a way that greater

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weight could be given to those measures considered most valuable by the jury. In order to allow for such differences, a plan of weighting was devised whereby a standard point value was assigned arbitrarily to each measure on the basis of the median rating value received by the measure when rated by the jury.

The maximum point value which could be allocated to a school program of supervised farming for any measure was 100. Theoretically, this point value might have been given to a school if some suggested measure of effectiveness had received a median value rating of five (5) or "extremely valuable" from the jury. Actually, no measure received a median value rating of five so under this plan it became impossible for a school to earn as many as 100 points on any measure. By arbitrarily assigning a point value of 100 to a median value rating of five (5) and reducing this proportionally as the median value descended to zero (0), the point values shown in Table III were derived.

Using the maximum points assigned to each median value rating in Table III, it became a simple matter to determine the maximum number of points which a school program of supervised farming could receive on any of the nine measures. These point values are revealed in Table IV.

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TABLE III

MAXIMUM VALUE RATINGS DERIVED WHEN SUGGESTED MEASURES OF EFFECTIVENESS WERE RATED BY A JURY OF EXPERTS

Median Value Rating Received	Description of Value Rating	Maximum Points Assigned
5	Extremely Valuable	100
4	Highly Valuable	80
3	Above Average Value	60
2	Below Average Value	40
1	Limited Value	20
0	No Value	0

In order to make it clear just how weighting was taken into consideration in determining the number of points a school would receive on a given measure, two illustrations are presented below.

First, if the measure were expressed in per cent, as most of them were, a percentage of the point value assigned to a measure was taken to determine the number of points which a school program of supervised farming should be given on that measure. For example, in reference to the measure "Percentage of students enrolled in supervised farming who have completed one or more productive enterprise projects and other supervised practice," School A in Table V, page 47, had 97.14 per cent of its students enrolled in supervised farming who

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TABLE IV

MAXIMUM POINT-VALUES ASSIGNED TO MEASURES OF EFFECTIVENESS ON THE BASIS OF THE MEDIAN VALUE RATING RECEIVED WHEN THE MEASURES WERE RATED BY A JURY OF EXPERTS

	Measure of Effectiveness	Median Rating Received	Maximum Points Assigned
I.	Percentage of students enrolled in supervised farming who have completed one or more productive enterprise projects and other supervised practice.	4	80
II.	Percentage of students enrolled in supervised farming who have completed both livestock and crop productive enterprise projects.	4	80
III.	Average number of productive enterprise projects completed by students enrolled in supervised farming.	4	80
IV.	Average number of improvement projects completed by students enrolled in supervised farming.	3	60
V.	Average number of supplementary farm practices completed by students enrolled in supervised farming.	3	60
VI.	Percentage of students enrolled in supervised farming who, having completed two or more years of supervised farming, show at least one continuous productive enterprise project.	4	80

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TABLE IV (CONTINUED)

	Measure of Effectiveness	Median Rating Received	Maximum Points Assigned
VII.	Percentage of students enrolled in supervised farming who show increasing scope in productive enterprise projects repeated in two or more successive years.	4	80
VIII.	Percentage of students enrolled in supervised farming completing supervised farming programs.	4	80
XI.	Percentage of students enrolled in supervised farming with productive enterprise projects which are important in the county where the department is located.	4	80

had completed one or more productive enterprise projects and other supervised practice. Table IV shows that this measure had been assigned a point value of eighty (80) points. By taking 97.14 per cent of 80 the figure 77.71 is derived, the number of points which School A received on the measure.

When the measure was not expressed in per cent as was the case with measures III, IV, and V, the median value rating was secured and the maximum point value determined as shown in Table IV. Since these measures all had a direct relationship to effectiveness of school

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programs of supervised farming, the school showing the greatest amount of the measure was arbitrarily assigned the point value given the measure on the basis of its value rating. Other schools received proportionally of the base point value depending on how well they showed up on the measure.

Reference to Table VII, page 56, illustrates how this procedure was used in applying the measure "average number of productive enterprise projects completed by students enrolled in supervised farming." According to Table IV, page 38, 80 is the maximum number of points which a school could receive on this measure when the effectiveness of its program of supervised farming is determined. School DD showed the greatest average number of productive enterprise projects per student, or 2.76. School DD, consequently, received the maximum point score of 80 on this measure. School EE, which is listed immediately below School DD in Table VII, had only an average of 0.96 productive enterprise projects per student. School EE, therefore, received proportionally of the base point value, 80 for Measure III, in the same ratio that its average number of productive enterprise projects per student (0.96) stood to the average number of productive enterprise projects per student for School DD (2.76). Thus, School EE received 27.83 points on Measure III out of the possible 80 points

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allocated to School DD for having the department with the highest average number of productive enterprise projects per student. In a similar manner points were derived for other schools.

DETERMINING COUNTIES IN MICHIGAN IN WHICH PRODUCTIVE ENTERPRISES ARE IMPORTANT

One additional step was necessary before all of the measures which appear in Table IV could be applied to Form 241 to determine the effectiveness of the respective school programs of supervised farming in Michigan. It was necessary to determine the productive enterprises which are important in the various counties of Michigan before Measure XI could be applied to Form 241.

Specialists at Michigan State College were asked to supply this information. All of the men consulted had had numerous opportunities to acquaint themselves thoroughly with the type of agriculture practiced in all sections of Michigan. All of these men were, or had been, extension specialists in agriculture at Michigan State College. Consequently, their work had brought them in close contact with the existing patterns of farming practiced in the State. It is believed that they are exceedingly well qualified to pass judgment on the productive enterprises in their fields of specialization

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that are important in the counties of Michigan. The names of the specialists, their positions, and the productive enterprises on which they were asked to judge importance, are listed in Appendix G.

In order to provide a basis for common understanding, it seemed necessary to present a definition to indicate the condition under which a productive enterprise could be considered important. Consequently, the following definition for importance was developed:

An enterprise is considered important in a county when several of the farmers receive, either directly or indirectly, a substantial part of their income from the enterprise; when it has been proved to have a place in the established pattern of farming practiced in a given area; when it is included in the farming programs of a majority of the farmers or, if not included in the farming programs of a majority of the farmers, is adapted to their farms.

Each specialist was presented with an outline map of the counties of Michigan upon which he was asked to indicate the counties in which he felt a given productive enterprise was important. Examination of maps in Appendix J reveals the counties in which the various productive enterprises were judged important.

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DETERMINING MICHIGAN TEACHERS OF VOCATIONAL AGRICULTURE WHO HAD TAUGHT THREE YEARS OR LONGER ON THEIR JOBS

Before applying the measures to Form 241 to determine effectiveness of school programs of supervised farming, it seemed desirable to limit the number of programs studied to those schools in which the teacher of vocational agriculture had been employed for three years or longer in a job which he held on September 1, 1948. Under this plan nearly all of the students enrolled in vocational agriculture during the school year, September 1948 to June 1949, would have had their current instructor as their only teacher of vocational agriculture. Under such an arrangement it seemed logical to assume that this teacher of vocational agriculture had been primarily responsible for the quality of the supervised farming programs which prevailed in his department and the influence of a previous teacher would be negligible.

According to an annual directory[2] published by the Office of Vocational Education in the Department of Public Instruction in Lansing, Michigan, there were 201 departments of vocational agriculture in Michigan during

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[2] Vocational Agricultural Departments 1948-1949, Office of Vocational Education, Mimeographed Publication (Lansing, Michigan: Department of Public Instruction, 1948), 5 pp.

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the school year 1948-1949. Among other data, this directory lists the names of teachers of vocational agriculture and the school in which they were located.

Using a permanent employment file of teachers of vocational agriculture kept in the Office of Vocational Education, the names of the men were checked to determine those who had been employed in the position which they occupied on September 1, 1948, for three years or longer. It was determined that eighty-four men fell into this category. The quality of their programs of supervised farming, as measured by the nine criteria which appear in Table IV, page 38, was determined. As indicated previously, these nine criteria were applied to Form 241 which each of these men had prepared for his department and filed with the Office of Vocational Education. It is assumed that the data relating to the kinds of farming programs carried and completed by students were reported reliably.

APPLICATION OF MEASURES OF EFFECTIVENESS TO DETERMINE SCHOOLS INCLUDED IN STUDY

Examination of the data compiled as a result of applying the nine measures of effectiveness of school programs of supervised farming to Form 241, reveals some significant facts about the kinds of projects and other farming activities completed by the students enrolled in

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The data, which were accumulated as a result of using the nine measures of effectiveness, are presented in the nine tables which follow. It has been pointed out previously that each of the nine measures are expressed either as an average or as a percentage of the students enrolled in supervised farming who completed a certain kind of activity. Consequently, the enrollments are presented on which these percentages and averages were calculated.

Students enrolled in vocational agriculture and carrying individual programs of supervised farming during a given school year have their programs summarized and reported by their teacher on Form 241. This form is due in the Office of Vocational Education on January 1 of the year following the time when the farming programs were carried. Since calculations were made on the basis of the annual reports submitted on January 1, 1949, the enrollments in departments during the school year 1947-48 were used with the exceptions of collecting data on Measure VI, percentage of students enrolled in supervised farming who, having completed two or more years of supervised farming, show at least one continuous productive enterprise project and Measure VII, percentage of students enrolled in supervised farming who show

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In the application of these two measures it seemed desirable to calculate percentages on the basis of the 1945-46 enrollments since this arrangement allowed a study of individual supervised farming programs over a three-year period to determine those students who had productive enterprise projects which were continuous as well as those who had productive enterprise projects which showed increasing scope.

Table V, for example, shows the enrollment in the eighty-four schools during the school year 1947-48 while Table X reveals the same information for the year 1945-46. In general, one finds substantially larger enrollments in 1947-48 than in 1945-46. This fact is indicated in the mean enrollment of 47.89 in 1947-48 as compared to 43.04 in 1945-46. The combined enrollments in the eighty-four departments increased 11.28 per cent from 1945-46 to 1947-48.

That the number of students enrolled in the eighty-four departments was quite widely dispersed is indicated by the range and standard deviation of the enrollments in both years. The high enrollment in 1945-46 was eighty-six while the low was twenty. In 1947-48 there was an even greater spread in enrollments, ranging from a low of sixteen to a high of 111. In the latter year, as Table V

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TABLE V

COMPILATION OF DATA ON SCHOOL PROGRAMS OF SUPERVISED FARMING WHEN MEASURE OF EFFECTIVENESS NO. I IS APPLIED TO EIGHTY-FOUR DEPARTMENTS OF VOCATIONAL AGRICULTURE*

School	Enrollment 1947-48	Students with One or More Productive Projects and Other Supervised Practice	Per Cent with One or More Productive Projects and Other Supervised Practice	Points Measure I (Possible Points 80)
A	35	34	97.14	77.71
B	33	20	60.61	48.49
C	91	40	43.96	35.17
D	77	40	51.95	41.56
E	46	20	43.48	34.78
F	72	26	36.11	28.89
G	47	41	87.23	69.78
H	48	42	87.50	70.00
I	63	61	96.83	77.46
J	37	22	59.46	47.57
K	36	0	0.00	0.00
L	63	56	88.89	71.11
M	16	8	50.00	40.00
N	26	11	42.31	33.85
O	50	23	46.00	36.80
P	26	23	88.46	70.77
Q	45	27	60.00	48.00
R	65	58	89.23	71.38
S	38	21	55.26	44.21
T	36	12	33.33	26.66
U	36	31	86.11	68.89
V	41	23	56.10	44.88
W	34	19	55.88	44.70
X	91	72	79.12	63.30
Y	48	14	29.17	23.34
Z	43	28	65.12	52.10
AA	78	0	0.00	0.00
BB	56	54	96.43	77.14

*MEASURE OF EFFECTIVENESS NO. I: Percentage of students enrolled in supervised farming who have completed one or more productive enterprise projects and other supervised practice.

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TABLE V (CONTINUED)

School	Enrollment 1947-48	Students with One or More Productive Projects and Other Supervised Practice	Per Cent with One or More Productive Projects and Other Supervised Practice	Points Measure I (Possible Points 80)
CC	52	50	96.15	76.92
DD	38	29	76.32	61.06
EE	26	20	76.92	61.54
FF	49	33	67.35	53.88
GG	87	69	79.31	63.45
HH	93	41	44.09	35.27
II	41	31	75.61	60.49
JJ	49	16	32.65	26.12
KK	36	25	69.44	55.55
LL	53	29	54.72	43.78
MM	81	77	95.06	76.05
NN	77	55	71.43	57.14
OO	44	35	79.55	63.64
PP	43	35	81.40	65.12
QQ	58	43	74.14	59.31
RR	64	51	79.69	63.75
SS	55	25	45.45	36.36
TT	26	13	50.00	40.00
UU	42	23	54.76	43.81
VV	35	10	28.57	22.86
WW	35	25	71.43	57.14
XX	36	22	61.11	48.89
YY	46	34	73.91	59.13
ZZ	24	13	54.17	43.34
AAA	47	28	59.57	47.66
BBB	41	21	51.22	40.98
CCC	42	17	40.48	32.38
DDD	31	25	80.65	64.52
EEE	43	29	67.44	53.95
FFF	38	20	52.63	42.10
GGG	47	29	61.70	49.36
HHH	53	32	60.38	48.30
III	39	18	46.15	36.92
JJJ	56	25	44.64	35.71
KKK	30	26	86.67	69.34
LLL	55	40	72.73	58.18
MMM	77	56	72.73	58.18
NNN	111	100	90.09	72.07
OOO	29	23	79.31	63.45

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TABLE V (CONTINUED)

School	Enrollment 1947-48	Students with One or More Productive Projects and Other Supervised Practice	Per Cent with One or More Productive Projects and Other Supervised Practice	Points Measure I (Possible Points 80)
PPP	37	17	45.95	36.76
QQQ	46	36	78.26	62.61
RRR	49	34	69.39	55.51
SSS	43	33	76.74	61.39
TTT	36	21	58.33	46.66
UUU	48	43	89.58	71.66
VVV	33	14	42.42	33.94
WWW	46	31	67.39	53.91
XXX	54	28	51.85	41.48
YYY	30	23	76.67	61.34
ZZZ	27	8	29.63	23.70
AAAA	73	54	73.97	59.18
BBBB	26	24	92.31	73.85
CCCC	33	15	45.45	36.36
DDDD	34	25	73.53	58.82
EEEE	38	20	52.63	42.10
FFFF	64	28	43.75	35.00
Total	4023	2573	-	4250.51
Mean	47.89	30.63	63.95	50.60
Sigma	18.61	17.12	-	16.56

shows, there were substantially more of the schools with enrollments of seventy or more than in 1945-46.

Table V has been set up primarily to reveal the results that were obtained when the measure of effectiveness, percentage of students enrolled in supervised

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farming who have completed one or more productive enterprise projects and other supervised practice, was applied to the final reports of supervised farming of the eighty-four schools in which the teacher of vocational agriculture had been in the position which he occupied on September 1, 1948, three years or longer.

As described earlier in this chapter, the number of points earned by any school was determined by taking a percentage of the total points possible on the measure. Each of the percentages in the column headed, per cent with one or more productive projects and other supervised practice, was multiplied by eighty to derive the point values indicated in the column headed, points Measure I. For instance, the point value 77.71 was calculated by taking 97.14 per cent of eighty.

Considering all of the 4023 students enrolled in classes in vocational agriculture in the eighty-four schools, Table V shows that 2573 or 63.95 per cent had one or more productive projects and other supervised practice. It is evident, however, that extreme variations exist in the percentages of students in a school who completed this type of program. Two of the schools, K and AA, did not have any students who had completed this kind of supervised farming program. Some of the schools, notably A, I, BB, CC, and MM showed up very

well on this measure and received very close to the maximum number of points available to any school.

Assuming that the data were reliably reported, it would be impossible for a student to have the comprehensive type of farming program recommended by the national leadership[3] and reported on page eight, unless he could be counted among those with one or more productive enterprise projects and other supervised practice. As Table V brings out, there were many students who did not have this type of farming program.

Information presented in Table VI sheds further light on the character of the supervised farming programs which were carried by students in the eighty-four schools. Here is revealed the results of applying the measure, percentage of students enrolled in supervised farming who have completed both livestock and crop productive enterprise projects, to the final reports submitted by the eighty-four teachers.

It is shown in Table VI that only 793, or 19.71 per cent of the 4023 students had individual programs of supervised farming which included both livestock and

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[3] W. A. Ross, D. M. Clements, and E. J. Johnson, Directing Vocational Agriculture Day-School Students in Developing Their Farming Programs, U. S. Office of Education, Vocational Division Bulletin No. 225, Agricultural Series No. 56 (Washington: Government Printing Office, 1944), p. 8.

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TABLE VI

COMPILATION OF DATA ON SCHOOL PROGRAMS OF SUPERVISED FARMING WHEN MEASURE OF EFFECTIVENESS NO. II IS APPLIED TO EIGHTY-FOUR DEPARTMENTS OF VOCATIONAL AGRICULTURE*

School	Enrollment 1947-48	Students with Both Livestock and Crop Projects	Per Cent with Both Livestock and Crop Projects	Points Measure II (Possible Points 80)
A	35	18	51.43	41.14
B	33	1	3.03	2.42
C	91	26	28.57	22.86
D	77	18	23.38	18.70
E	46	0	0.00	0.00
F	72	6	8.33	6.66
G	47	3	6.38	5.10
H	48	9	18.75	15.00
I	63	36	57.14	45.71
J	37	4	10.81	8.65
K	36	5	13.89	11.11
L	63	0	0.00	0.00
M	16	5	31.25	25.00
N	26	2	7.69	6.15
O	50	0	0.00	0.00
P	26	7	26.92	21.54
Q	45	8	17.78	14.22
R	65	19	29.23	23.38
S	38	6	15.79	12.63
T	36	7	19.44	15.55
U	36	13	36.11	28.89
V	41	2	4.88	3.90
W	34	1	2.94	2.35
X	91	6	6.59	5.27
Y	48	4	8.33	6.66
Z	43	19	44.19	35.35
AA	78	27	34.62	27.70
BB	56	12	21.43	17.14
CC	52	20	38.46	30.77
DD	38	26	68.42	54.74

*MEASURE OF EFFECTIVENESS NO. II: Percentage of students enrolled in supervised farming who have completed both livestock and crop productive enterprise projects.

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TABLE VI (CONTINUED)

School	Enrollment 1947-48	Students with Both Livestock and Crop Projects	Per Cent with Both Livestock and Crop Projects	Points Measure II (Possible Points 80)
EE	26	0	0.00	0.00
FF	49	3	6.12	4.90
GG	87	34	39.08	31.26
HH	93	16	17.20	13.76
II	41	12	29.27	23.42
JJ	49	1	2.04	1.63
KK	36	3	8.33	6.66
LL	53	6	11.32	9.06
MM	81	34	41.98	33.58
NN	77	20	25.97	20.78
OO	44	6	13.64	10.91
PP	43	15	34.88	27.90
QQ	58	14	24.14	19.31
RR	64	18	28.13	22.50
SS	55	6	10.91	8.73
TT	26	9	34.62	27.70
UU	42	17	40.48	32.38
VV	35	0	0.00	0.00
WW	35	3	8.57	6.86
XX	36	4	11.11	8.89
YY	46	4	8.70	6.96
ZZ	24	0	0.00	0.00
AAA	47	13	27.66	22.13
BBB	41	6	14.63	11.70
CCC	42	2	4.76	3.81
DDD	31	0	0.00	0.00
EEE	43	8	18.60	14.88
FFF	38	4	10.53	8.42
GGG	47	7	14.89	11.91
HHH	53	5	9.43	7.54
III	39	10	25.64	20.51
JJJ	56	12	21.43	17.14
KKK	30	20	66.67	53.34
LLL	55	26	47.27	37.82
MMM	77	4	5.19	4.15
NNN	111	5	4.50	3.60
OOO	29	2	6.90	5.52
PPP	37	6	16.22	12.98
QQQ	46	23	50.00	40.00
RRR	49	3	6.12	4.90

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School	Enrollment 1947-48	Students with Both Livestock and Crop Projects	Per Cent with Both Livestock and Crop Projects	Points Measure II (Possible Points 80)
SSS	43	9	20.93	16.74
TTT	36	9	25.00	20.00
UUU	48	13	27.08	21.66
VVV	33	0	0.00	0.00
WWW	46	5	10.87	8.70
XXX	54	18	33.33	26.66
YYY	30	20	66.67	53.34
ZZZ	27	0	0.00	0.00
AAAA	73	3	4.11	3.29
BBBB	26	10	38.46	30.77
CCCC	33	1	3.03	2.42
DDDD	34	0	0.00	0.00
EEEE	38	12	31.58	25.26
FFFF	64	2	3.13	2.50
Total	4023	793	-	1317.47
Mean	47.89	9.44	19.71	15.68
Sigma	18.61	8.77	-	14.18

crop productive enterprise projects. Further examination of the data reveals that there were only six of the eighty-four schools in which fifty per cent or more of the students had both livestock and crop productive enterprise projects. On the other hand, there were ten schools in which none of the students included both kinds of projects in their individual farming programs. In many other schools relatively few of the students

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carried both livestock and crop projects. This was evidenced by the fact that there were thirty-two of the eighty-four schools in which fewer than ten per cent of the students included both livestock and crop productive enterprise projects in their individual programs of supervised farming.

It is interesting to find that the sigmas of the points earned by the eighty-four schools on Measure I and on Measure II are approximately the same. In the former case it is 16.56 while in the latter it is 14.18. Yet the mean number of points received by the schools on Measure I was 50.6 while the corresponding mean on Measure II was 15.68. Thus, in either instance, the scores were dispersed about the mean in a similar pattern but in the case of Measure I there was a much higher mean. Of course, on either measure, the maximum score possible was the same.

Examination of Table VII shows the results obtained when the measure, average number of productive enterprise projects completed by students enrolled in supervised farming, is applied to the annual reports of supervised farming filed by the teachers of vocational agriculture in the eighty-four departments who had taught three years or longer in the position which they held on September 1, 1948.

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TABLE VII

COMPILATION OF DATA ON SCHOOL PROGRAMS OF SUPERVISED FARMING WHEN MEASURE OF EFFECTIVENESS NO. III IS APPLIED TO EIGHTY-FOUR DEPARTMENTS OF VOCATIONAL AGRICULTURE*

School	Enrollment 1947-48	Average Number Productive Projects Per Student	Points Measure III (Possible Points 80)
A	35	2.14	62.03
B	33	.67	19.42
C	91	1.27	36.81
D	77	1.58	45.80
E	46	.43	12.46
F	72	.57	16.52
G	47	1.02	29.57
H	48	1.29	37.39
I	63	2.16	62.61
J	37	.70	20.29
K	36	.97	28.12
L	63	.92	26.67
M	16	1.50	43.48
N	26	.58	16.81
O	50	.46	13.33
P	26	1.31	37.97
Q	45	1.04	30.14
R	65	1.83	53.04
S	38	1.21	35.07
T	36	.56	16.23
U	36	1.50	43.48
V	41	.80	23.19
W	34	.76	22.03
X	91	.70	20.29
Y	48	.56	16.23
Z	43	1.63	47.25
AA	78	1.65	47.83
BB	56	1.52	44.06
CC	52	1.63	47.25
DD	38	2.76	80.00
EE	26	.96	27.83

*MEASURE OF EFFECTIVENESS NO. III: Average number of productive enterprise projects completed by students enrolled in supervised farming.

TABLE VII (CONTINUED)

School	Enrollment 1947-48	Average Number Productive Projects Per Student	Points Measure III (Possible Points 80)
FF	49	.78	22.61
GG	87	1.48	42.90
HH	93	.69	20.00
II	41	1.61	46.67
JJ	49	.67	19.42
KK	36	.78	22.61
LL	53	.96	27.83
MM	81	2.40	69.57
NN	77	1.26	36.52
OO	44	1.30	37.68
PP	43	1.53	44.35
QQ	58	1.60	46.38
RR	64	1.84	53.33
SS	55	1.11	32.17
TT	26	1.15	33.33
UU	42	1.55	44.93
VV	35	.40	11.59
WW	35	1.03	29.86
XX	36	.81	23.48
YY	46	.87	25.22
ZZ	24	.54	15.65
AAA	47	1.09	31.59
BBB	41	1.07	31.01
CCC	42	.50	14.49
DDD	31	.77	22.32
EEE	43	1.19	34.49
FFF	38	1.03	29.86
GGG	47	.98	28.41
HHH	53	.77	22.32
III	39	.92	26.67
JJJ	56	.75	21.74
KKK	30	2.23	64.64
LLL	55	2.13	61.74
MMM	77	.84	24.35
NNN	111	1.01	29.28
OOO	29	.90	26.09
PPP	37	.70	20.29
QQQ	46	1.52	44.06
RRR	49	.78	22.61
SSS	43	1.65	47.83
TTT	36	1.08	31.30

TABLE VII (CONTINUED)

School	Enrollment 1947-48	Average Number Productive Projects Per Student	Points Measure III (Possible Points 80)
UUU	48	1.60	46.38
VVV	33	.48	13.91
WWW	46	1.11	32.17
XXX	54	1.59	46.09
YYY	30	2.57	74.49
ZZZ	27	.96	27.83
AAAA	73	1.11	32.17
BBBB	26	1.77	51.30
CCCC	33	.94	27.25
DDDD	34	.74	21.45
EEEE	38	1.58	45.80
FFFF	64	.66	19.13
Total	4023	-	2842.36
Mean	47.89	1.18	33.84
Sigma	18.61	-	14.87

A total of 4759 productive enterprise projects was completed by the students enrolled in these eighty-four departments. These represent an average of 1.18 productive enterprise projects per student. The average number of projects per student in each of the schools ranged from four-tenths of a project in school VV to 2.76 projects per student in school DD.

Table VIII shows the data which were compiled when the measure, average number of improvement projects

TABLE VIII

COMPILATION OF DATA ON SCHOOL PROGRAMS OF SUPERVISED FARMING WHEN MEASURE OF EFFECTIVENESS NO. IV IS APPLIED TO EIGHTY-FOUR DEPARTMENTS OF VOCATIONAL AGRICULTURE*

School	Enrollment 1947-48	Average Number Improvement Projects Per Student	Points Measure IV (Possible Points 60)
A	35	1.40	19.49
B	33	0.00	0.00
C	91	3.79	52.76
D	77	.56	7.80
E	46	3.39	47.19
F	72	.04	.56
G	47	1.72	23.94
H	48	1.35	18.79
I	63	2.49	34.66
J	37	0.00	0.00
K	36	0.00	0.00
L	63	1.05	14.62
M	16	1.19	16.57
N	26	.27	3.76
O	50	3.72	51.79
P	26	.62	8.63
Q	45	1.73	24.08
R	65	1.95	27.15
S	38	.63	8.77
T	36	.33	4.59
U	36	3.72	51.79
V	41	.98	13.64
W	34	.68	9.47
X	91	.90	12.53
Y	48	.29	4.04
Z	43	.60	8.35
AA	78	0.00	0.00
BB	56	1.70	23.67
CC	52	.15	2.09
DD	38	.32	4.45
EE	26	.27	3.76
FF	49	1.76	24.50
GG	87	2.64	36.75

*MEASURE OF EFFECTIVENESS NO. IV: Average number of improvement projects completed by students enrolled in supervised farming.

TABLE VIII (CONTINUED)

School	Enrollment 1947-48	Average Number Improvement Projects Per Student	Points Measure IV (Possible Points 60)
HH	93	.26	3.62
II	41	1.56	21.72
JJ	49	.04	.56
KK	36	.14	1.95
LL	53	.43	5.99
MM	81	4.12	57.35
NN	77	2.01	27.98
OO	44	.11	1.53
PP	43	.37	5.15
QQ	58	1.67	23.25
RR	64	.55	7.66
SS	55	0.00	0.00
TT	26	.46	6.40
UU	42	.46	6.40
VV	35	.11	1.53
WW	35	1.74	24.22
XX	36	.25	3.48
YY	46	.04	.56
ZZ	24	.58	8.07
AAA	47	.81	11.28
BBB	41	.05	.70
CCC	42	1.21	16.84
DDD	31	.94	13.09
EEE	43	.74	10.30
FFF	38	.08	1.11
GGG	47	0.00	0.00
HHH	53	.68	9.47
III	39	.82	11.42
JJJ	56	.75	10.44
KKK	30	2.27	31.60
LLL	55	1.55	21.58
MMM	77	.86	11.97
NNN	111	.19	2.65
OOO	29	.97	13.50
PPP	37	.38	5.29
QQQ	46	3.02	42.04
RRR	49	1.41	19.63
SSS	43	.95	13.23
TTT	36	1.28	17.82
UUU	48	4.31	60.00
VVV	33	0.00	0.00
WWW	46	.20	2.78

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School	Enrollment 1947-48	Average Number Improvement Projects Per Student	Points Measure IV (Possible Points 60)
XXX	54	.46	6.40
YYY	30	1.20	16.71
ZZZ	27	1.19	16.57
AAAA	73	.27	3.76
BBBB	26	1.50	20.88
CCCC	33	1.21	16.84
DDDD	34	.18	2.51
EEEE	38	3.03	42.18
FFFF	64	.59	8.21
Total	4023	-	1228.41
Mean	47.89	1.11	14.62
Sigma	18.61	-	14.76

completed by students enrolled in supervised farming, was applied to final reports of supervised farming which had been filed by the eighty-four teachers. A total of 4481 improvement projects had been completed by the students enrolled in these departments. This figure represents an average of 1.11 for each of the students. In seven of the schools, no improvement projects were completed. The highest average number of improvement projects, 4.31, was completed by the students in school UUU.

Only sixty points could be earned by a school on the measure, average number of improvement projects

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completed by students enrolled in supervised farming. This number was assigned to school UUU for having the highest average number of improvement projects per student. The points received by other schools were reduced proportionally in the same ratio that their average number of improvement projects stood to the average number of improvement projects, 4.31, completed by the students in school UUU. Table VIII reveals that the point values earned on the measure did not tend to run very high. The mean number of points was only 14.62 out of the possible sixty.

Data presented in Table IX show the results of applying the measure, average number of supplementary farm practices completed by students enrolled in supervised farming to the reports submitted by the eighty-four teachers of vocational agriculture who had been in the positions which they held on September 1, 1948 three years or longer.

The students enrolled in these eighty-four departments completed a total of 22,329 supplementary farm practices. This figure represents an average of 5.55 per student. The average number of supplementary farm practices per student in each of the eighty-four schools varied considerably. In three of the schools, the students showed none of them. The school with the highest average number, N, had 29.15 supplementary farm practices

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TABLE IX

COMPILATION OF DATA ON SCHOOL PROGRAMS OF SUPERVISED FARMING WHEN MEASURE OF EFFECTIVENESS NO. V IS APPLIED TO EIGHTY-FOUR DEPARTMENTS OF VOCATIONAL AGRICULTURE*

School	Enrollment 1947-48	Average Number Supplementary Farm Practices Per Student	Points Measure V (Possible Points 60)
A	35	4.83	9.94
B	33	6.94	14.28
C	91	13.02	26.80
D	77	.82	1.69
E	46	3.43	7.06
F	72	2.07	4.26
G	47	2.77	5.70
H	48	5.73	11.79
I	63	10.65	21.92
J	37	5.11	10.52
K	36	.83	1.71
L	63	5.71	11.75
M	16	0.00	0.00
N	26	29.15	60.00
O	50	21.94	45.16
P	26	1.77	3.64
Q	45	2.76	5.68
R	65	18.14	37.34
S	38	6.16	12.68
T	36	1.64	3.38
U	36	4.33	8.91
V	41	2.98	6.13
W	34	7.85	16.16
X	91	1.59	3.27
Y	48	3.33	6.85
Z	43	3.21	6.61
AA	78	0.00	0.00
BB	56	8.18	16.84
CC	52	3.98	8.19
DD	38	3.05	6.28
EE	26	4.35	8.95
FF	49	3.41	7.02

*MEASURE OF EFFECTIVENESS NO. V: Average number of supplementary farm practices completed by students enrolled in supervised farming.

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TABLE IX (CONTINUED)

School	Enrollment 1947-48	Average Number Supplementary Farm Practices Per Student	Points Measure V (Possible Points 60)
GG	87	8.86	18.24
HH	93	7.02	14.45
II	41	2.17	4.47
JJ	49	1.00	2.06
KK	36	1.94	3.99
LL	53	1.23	2.53
MM	81	8.53	17.56
NN	77	4.42	9.10
OO	44	2.52	5.19
PP	43	1.37	2.82
QQ	58	5.33	10.97
RR	64	2.44	5.02
SS	55	1.75	3.60
TT	26	4.42	9.10
UU	42	9.29	19.12
VV	35	1.31	2.70
WW	35	1.91	3.93
XX	36	1.78	3.66
YY	46	9.98	20.54
ZZ	24	4.88	10.04
AAA	47	3.45	7.10
BBB	41	1.68	3.46
CCC	42	4.86	10.00
DDD	31	19.90	40.96
EEE	43	1.70	3.50
FFF	38	3.58	7.37
GGG	47	1.64	3.38
HHH	53	8.32	17.13
III	39	12.28	25.28
JJJ	56	2.89	5.95
KKK	30	7.03	14.47
LLL	55	6.82	14.04
MMM	77	6.30	12.97
NNN	111	2.66	5.48
OOO	29	8.66	17.83
PPP	37	1.19	2.45
QQQ	46	5.13	10.56
RRR	49	2.33	4.80
SSS	43	4.81	9.90
TTT	36	10.69	22.00
UUU	48	21.81	44.89
VVV	33	3.64	7.49

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School	Enrollment 1947-48	Average Number Supplementary Farm Practices Per Student	Points Measure V (Possible Points 60)
WWW	46	11.59	23.86
XXX	54	2.06	4.24
YYY	30	1.23	2.53
ZZZ	27	0.00	0.00
AAAA	73	6.74	13.87
BBBB	26	6.96	14.33
CCCC	33	7.39	15.21
DDDD	34	4.97	10.23
EEEE	38	8.95	18.42
FFFF	64	2.20	4.53
Total	4023	-	957.80
Mean	47.89	5.55	11.40
Sigma	18.61	-	10.80

per student. This school was allowed the maximum number of points, sixty, which could be earned on this measure. The points received by other schools were reduced proportionally according to the ratio that the average number of supplementary farm practices completed per student stood to the average number of such practices carried by the students in school N. Examination of the points earned by the eighty-four schools reveals that they tended to run low. The mean number of points received by the eighty-four schools was only 11.40.

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As indicated previously, the enrollments in 1945-46 were used while applying the measure, percentage of students enrolled in supervised farming who, having completed two or more years of supervised farming, show at least one continuous productive enterprise project; and the measure, percentage of students enrolled in supervised farming who show increasing scope in productive enterprise projects repeated in two or more successive years.

By referring to records in the Office of Vocational Education, it was possible to secure the names of students who were enrolled in vocational agriculture in the eighty-four departments during the school year 1945-46. With the use of these names, it was then possible to examine the three successive sets of Form 241 beginning with January 1, 1947 to determine the number of students who had completed: (1) productive enterprise projects which were continuous and (2) productive enterprise projects which showed increasing scope.

Table X shows that there were only 852 students of the 3615 enrolled in the eighty-four departments in 1945-46 who had at least one continuous productive enterprise project. They represented 23.57 per cent of the total. The percentage of students in each department with at least one continuous productive enterprise project

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TABLE X

COMPILATION OF DATA ON SCHOOL PROGRAMS OF SUPERVISED FARMING WHEN MEASURE OF EFFECTIVENESS NO. VI IS APPLIED TO EIGHTY-FOUR DEPARTMENTS OF VOCATIONAL AGRICULTURE*

School	Enrollment 1945-46	Students with at Least One Continuous Productive Project	Per Cent with at Least One Continuous Productive Project	Points Measure VI (Possible Points 80)
A	45	16	35.56	28.45
B	34	4	11.76	9.41
C	72	20	27.78	22.22
D	31	8	25.81	20.65
E	53	4	7.55	6.04
F	28	2	7.14	5.71
G	39	16	41.03	32.82
H	39	19	48.72	38.98
I	44	19	43.18	34.54
J	28	3	10.71	8.57
K	30	1	3.33	2.66
L	52	15	28.85	23.08
M	44	13	29.55	23.64
N	24	6	25.00	20.00
O	38	2	5.26	4.21
P	29	4	13.79	11.03
Q	33	3	9.09	7.27
R	56	20	35.71	28.57
S	36	10	27.78	22.22
T	34	6	17.65	14.12
U	37	6	16.22	12.98
V	43	6	13.95	11.16
W	34	4	11.76	9.41
X	64	3	4.69	3.75
Y	33	6	18.18	14.54
Z	20	12	60.00	48.00
AA	65	12	18.46	14.77
BB	62	20	32.26	25.81
CC	59	14	23.73	18.98

*MEASURE OF EFFECTIVENESS NO. VI: Percentage of students enrolled in supervised farming who, having completed two or more years of supervised farming, show at least one continuous productive enterprise project.

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TABLE X (CONTINUED)

School	Enrollment 1945-46	Students with at Least One Continuous Productive Project	Per Cent with at Least One Continuous Productive Project	Points Measure VI (Possible Points 80)
DD	40	12	30.00	24.00
EE	28	7	25.00	20.00
FF	53	4	7.55	6.04
GG	63	15	23.81	19.05
HH	72	11	15.28	12.22
II	44	12	27.27	21.82
JJ	46	13	28.26	22.61
KK	34	10	29.41	23.53
LL	55	12	21.82	17.46
MM	66	27	40.91	32.73
NN	58	14	24.14	19.31
OO	32	13	40.63	32.50
PP	45	13	28.89	23.11
QQ	56	19	33.93	27.14
RR	74	20	27.03	21.62
SS	56	12	21.43	17.14
TT	28	9	32.14	25.71
UU	57	8	14.04	11.23
VV	34	4	11.76	9.41
WW	33	12	36.36	29.09
XX	44	4	9.09	7.27
YY	44	17	38.64	30.91
ZZ	26	0	0.00	0.00
AAA	34	1	2.94	2.35
BBB	39	8	20.51	16.41
CCC	31	7	22.58	18.06
DDD	26	4	15.38	12.30
EEE	47	6	12.77	10.22
FFF	26	2	7.69	6.15
GGG	45	7	15.56	12.45
HHH	52	13	25.00	20.00
III	36	11	30.56	24.45
JJJ	39	5	12.82	10.26
KKK	30	13	43.33	34.66
LLL	41	14	34.15	27.32
MMM	63	16	25.40	20.32
NNN	65	33	50.77	40.62
OOO	42	3	7.14	5.71
PPP	39	7	17.95	14.36

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School	Enrollment 1945-46	Students with at Least One Continuous Productive Project	Per Cent with at Least One Continuous Productive Project	Points Measure VI (Possible Points 80)
QQQ	29	12	41.38	33.10
RRR	54	13	24.07	19.26
SSS	40	18	45.00	36.00
TTT	35	17	48.57	38.86
UUU	57	12	21.05	16.84
VVV	31	3	9.68	7.74
WWW	50	3	6.00	4.80
XXX	46	13	28.26	22.61
YYY	41	13	31.71	25.37
ZZZ	32	6	18.75	15.00
AAAA	44	8	18.18	14.54
BBBB	33	8	24.24	19.39
CCCC	30	4	13.33	10.66
DDDD	34	4	11.76	9.41
EEEE	24	5	20.83	16.66
FFFF	86	11	12.79	10.23
Total	3615	852	-	1553.60
Mean	43.04	10.14	23.57	18.50
Sigma	13.70	6.05	-	10.11

varied considerably. One department showed no students with this type of program while the school with the best record on this measure had sixty per cent of its students with at least one continuous productive enterprise project. On the average most of the schools did not receive a very large proportion of the eighty points which each

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was eligible to earn on Measure VI. The mean of the number of points received by the eighty-four departments was 18.50.

The poorest showing of all was made on Measure VII, percentage of students enrolled in supervised farming who show increasing scope in productive enterprise projects repeated in two or more successive years. Only 352 of the 3615 students, or 9.74 per cent, completed productive enterprise projects which showed increasing scope. In five of the departments, none of the students showed increasing scope in their completed projects. In general, the percentage of students with productive enterprise projects showing increasing scope, was not very high. This is further brought out in a consideration of the points earned by each school in relation to the eighty points which each school was eligible to earn. Table XI reveals that the mean number of points received by the eighty-four schools was only 7.85 out of the possible eighty.

The eighty-four schools made the best showing of all on the measure, percentage of students enrolled completing supervised farming programs. It seems well to point out, however, that completion of a program may represent varying levels of achievement. For instance, a completed program of supervised farming might involve

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TABLE XI

COMPILATION OF DATA ON SCHOOL PROGRAMS OF SUPERVISED FARMING WHEN MEASURE OF EFFECTIVENESS NO. VII IS APPLIED TO EIGHTY-FOUR DEPARTMENTS OF VOCATIONAL AGRICULTURE*

School	Enrollment 1945-46	Students with Productive Projects Showing Increasing Scope	Per Cent with Productive Projects Showing Increasing Scope	Points Measure VII (Possible Points 80)
A	45	4	8.89	7.11
B	34	2	5.88	4.70
C	72	6	8.33	6.66
D	31	5	16.13	12.90
E	53	2	3.77	3.02
F	28	1	3.57	2.86
G	39	5	12.82	10.26
H	39	3	7.69	6.15
I	44	10	22.73	18.18
J	28	1	3.57	2.86
K	30	1	3.33	2.66
L	52	5	9.62	7.70
M	44	2	4.55	3.64
N	24	4	16.67	13.34
O	38	2	5.26	4.21
P	29	2	6.90	5.52
Q	33	0	0.00	0.00
R	56	12	21.43	17.14
S	36	4	11.11	8.89
T	34	2	5.88	4.70
U	37	2	5.41	4.33
V	43	2	4.65	3.72
W	34	3	8.82	7.06
X	64	1	1.56	1.25
Y	33	4	12.12	9.70
Z	20	8	40.00	32.00
AA	65	6	9.23	7.38
BB	62	11	17.74	14.19

*MEASURE OF EFFECTIVENESS NO. VII: Percentage of students enrolled in supervised farming who show increasing scope in productive projects repeated in two or more successive years.

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TABLE XI (CONTINUED)

School	Enrollment 1945-46	Students with Productive Projects Showing Increasing Scope	Per Cent with Productive Projects Showing Increasing Scope	Points Measure VII (Possible Points 80)
CC	59	3	5.08	4.06
DD	40	4	10.00	8.00
EE	28	3	10.71	8.57
FF	53	2	3.77	3.02
GG	63	8	12.70	10.16
HH	72	8	11.11	8.89
II	44	8	18.18	14.54
JJ	46	3	6.52	5.22
KK	34	4	11.76	9.41
LL	55	5	9.09	7.27
MM	66	9	13.64	10.91
NN	58	10	17.24	13.79
OO	32	5	15.63	12.50
PP	45	5	11.11	8.89
QQ	56	8	14.29	11.43
RR	74	12	16.22	12.98
SS	56	3	5.36	4.29
TT	28	1	3.57	2.86
UU	57	4	7.02	5.62
VV	34	3	8.82	7.06
WW	33	3	9.09	7.27
XX	44	1	2.27	1.82
YY	44	5	11.36	9.09
ZZ	26	0	0.00	0.00
AAA	34	0	0.00	0.00
BBB	39	3	7.69	6.15
CCC	31	4	12.90	10.32
DDD	26	1	3.85	3.08
EEE	47	4	8.51	6.81
FFF	26	0	0.00	0.00
GGG	45	3	6.67	5.34
HHH	52	4	7.69	6.15
III	36	4	11.11	8.89
JJJ	39	2	5.13	4.10
KKK	30	8	26.67	21.34
LLL	41	11	26.83	21.46
MMM	63	1	1.59	1.27
NNN	65	10	15.38	12.30

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TABLE XI (CONTINUED)

School	Enrollment 1945-46	Students with Productive Projects Showing Increasing Scope	Per Cent with Productive Projects Showing Increasing Scope	Points Measure VII (Possible Points 80)
OOO	42	0	0.00	0.00
PPP	39	2	5.13	4.10
QQQ	29	5	17.24	13.79
RRR	54	4	7.41	5.93
SSS	40	9	22.50	18.00
TTT	35	10	28.57	22.86
UUU	57	4	7.02	5.62
VVV	31	2	6.45	5.16
WWW	50	2	4.00	3.20
XXX	46	9	19.57	15.66
YYY	41	6	14.63	11.70
ZZZ	32	2	6.25	5.00
AAAA	44	2	4.55	3.64
BBBB	33	4	12.12	9.70
CCCC	30	1	3.33	2.66
DDDD	34	2	5.88	4.70
EEEE	24	2	8.33	6.66
FFFF	86	4	4.65	3.72
Total	3615	352	-	659.09
Mean	43.04	4.19	9.74	7.85
Sigma	13.70	3.08	-	5.83

no more than a student carrying and reporting a single productive enterprise project, a single improvement project, a single supplementary farm practice or placement for farm experience. On the other hand the program

carried and reported could be quite comprehensive and might include, for instance, several productive enterprise projects, improvement projects, and supplementary farm practices. Conceivably, the extremes in the kinds of programs completed might be represented by a town boy pruning a few raspberry plants as a supplementary farm practice to a farm boy taking over the complete operation and management of his father's farm.

It is revealed in Table XII that there were 3461 of the 4023 students in the eighty-four schools, or 86.03 per cent, who completed a supervised farming program. Several of the schools had 100 per cent completions while many of the schools showed records with ninety per cent or better of the students who had completed a supervised farming program. However, one might conjecture that, with the comparative ease with which a student can meet the requirement of completing a supervised farming program, there seems little reason why all departments of vocational agriculture should not have 100 per cent completion, or very close to 100 per cent completion of supervised farming programs by the students enrolled.

The tendency for most of the departments to have a high percentage of their students enrolled completing individual programs of supervised farming, is reflected in the high point scores received on Measure VIII. The mean score is 69.23 out of a possible eighty points.

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TABLE XII

COMPILATION OF DATA ON SCHOOL PROGRAMS OF SUPERVISED FARMING WHEN MEASURE OF EFFECTIVENESS NO. VIII IS APPLIED TO EIGHTY-FOUR DEPARTMENTS OF VOCATIONAL AGRICULTURE*

School	Enrollment 1947-48	Students Completing Supervised Farming	Per Cent Completing Supervised Farming	Points Measure VIII (Possible Points 80)
A	35	35	100.00	80.00
B	33	33	100.00	80.00
C	91	56	61.54	49.23
D	77	53	68.83	55.06
E	46	44	95.65	76.52
F	72	43	59.72	47.78
G	47	41	87.23	69.78
H	48	43	89.58	71.66
I	63	61	96.83	77.46
J	37	37	100.00	80.00
K	36	33	91.67	73.34
L	63	59	93.65	74.92
M	16	16	100.00	80.00
N	26	26	100.00	80.00
O	50	44	88.00	70.40
P	26	25	96.15	76.92
Q	45	39	86.67	69.34
R	65	59	90.77	72.62
S	38	27	71.05	56.84
T	36	26	72.22	57.78
U	36	36	100.00	80.00
V	41	30	73.17	58.54
W	34	19	55.88	44.70
X	91	72	79.12	63.30
Y	48	42	87.50	70.00
Z	43	37	86.05	68.84
AA	78	46	58.97	47.18
BB	56	54	96.43	77.14
CC	52	51	98.08	78.46
DD	38	32	84.21	67.37
EE	26	26	100.00	80.00
FF	49	46	93.88	75.10

*MEASURE OF EFFECTIVENESS NO. VIII: Percentage of students enrolled in supervised farming completing supervised farming programs.

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TABLE XII (CONTINUED)

School	Enrollment 1947-48	Students Completing Supervised Farming	Per Cent Completing Supervised Farming	Points Measure VIII (Possible Points 80)
GG	87	80	91.95	73.56
HH	93	85	91.40	73.12
II	41	31	75.61	60.49
JJ	49	31	63.27	50.62
KK	36	25	69.44	55.55
LL	53	52	98.11	78.49
MM	81	81	100.00	80.00
NN	77	77	100.00	80.00
OO	44	44	100.00	80.00
PP	43	38	88.37	70.70
QQ	58	46	79.31	63.45
RR	64	58	90.63	72.50
SS	55	41	74.55	59.64
TT	26	17	65.38	52.30
UU	42	36	85.71	68.57
VV	35	25	71.43	57.14
WW	35	32	91.43	73.14
XX	36	25	69.44	55.55
YY	46	42	91.30	73.04
ZZ	24	24	100.00	80.00
AAA	47	36	76.60	61.28
BBB	41	41	100.00	80.00
CCC	42	33	78.57	62.86
DDD	31	31	100.00	80.00
EEE	43	36	83.72	66.98
FFF	38	38	100.00	80.00
GGG	47	42	89.36	71.49
HHH	53	53	100.00	80.00
III	39	36	92.31	73.85
JJJ	56	45	80.36	64.29
KKK	30	30	100.00	80.00
LLL	55	53	96.36	77.09
MMM	77	59	76.62	61.30
NNN	111	107	96.40	77.12
OOO	29	27	93.10	74.48
PPP	37	21	56.76	45.41
QQQ	46	37	80.43	64.34
RRR	49	49	100.00	80.00
SSS	43	40	93.02	74.42
TTT	36	21	58.33	46.66
UUU	48	43	89.58	71.66

TABLE XII (CONTINUED)

School	Enrollment 1947-48	Students Completing Supervised Farming	Per Cent Completing Supervised Farming	Points Measure VIII (Possible Points 80)
VVV	33	28	84.85	67.88
WWW	46	45	97.83	78.26
XXX	54	44	81.48	65.18
YYY	30	30	100.00	80.00
ZZZ	27	24	88.89	71.11
AAAA	73	72	98.63	78.90
BBBB	26	25	96.15	76.92
CCCC	33	28	84.85	67.88
DDDD	34	33	97.06	77.65
EEEE	38	21	55.26	44.21
FFFF	64	52	81.25	65.00
Total	4023	3461	-	5814.36
Mean	47.89	41.20	86.03	69.23
Sigma	18.61	16.59	-	10.33

Finally, the results of applying Measure XI, percentage of students enrolled in supervised farming with productive enterprise projects which are important in the county where the department is located, are shown in Table XIII. There were 2266 of the 4023 students who completed productive projects in enterprises which were judged important. This represented an average of 56.33 per cent. The percentages of the various departments showed a considerable range, all the way from 97.14 per

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TABLE XIII

COMPILATION OF DATA ON SCHOOL PROGRAMS OF SUPERVISED FARMING WHEN MEASURE OF EFFECTIVENESS NO. XI IS APPLIED TO EIGHTY-FOUR DEPARTMENTS OF VOCATIONAL AGRICULTURE*

School	Enrollment 1947-48	Students with Important Productive Projects	Per Cent with Important Productive Projects	Points Measure XI (Possible Points 80)
A	35	34	97.14	77.71
B	33	20	60.61	48.49
C	91	53	58.24	46.59
D	77	27	35.06	28.05
E	46	17	36.96	29.57
F	72	32	44.44	35.55
G	47	38	80.85	64.68
H	48	42	87.50	70.00
I	63	61	96.83	77.46
J	37	16	43.24	34.59
K	36	21	58.33	46.66
L	63	44	69.84	55.87
M	16	6	37.50	30.00
N	26	9	34.62	27.70
O	50	19	38.00	30.40
P	26	12	46.15	36.92
Q	45	21	46.67	37.34
R	65	52	80.00	64.00
S	38	19	50.00	40.00
T	36	9	25.00	20.00
U	36	20	55.56	44.45
V	41	21	51.22	40.98
W	34	17	50.00	40.00
X	91	40	43.96	35.17
Y	48	10	20.83	16.66
Z	43	35	81.40	65.12
AA	78	41	52.56	42.05
BB	56	30	53.57	42.86
CC	52	15	28.85	23.08
DD	38	29	76.32	61.06

*MEASURE OF EFFECTIVENESS NO. XI: Percentage of students enrolled in supervised farming with productive enterprise projects which are important in the county where the department is located.

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TABLE XIII (CONTINUED)

School	Enrollment 1947-48	Students with Important Productive Projects	Per Cent with Important Productive Projects	Points Measure XI (Possible Points 80)
EE	26	18	69.23	55.38
FF	49	19	38.78	31.02
GG	87	63	72.41	57.93
HH	93	41	44.09	35.27
II	41	29	70.73	56.58
JJ	49	15	30.61	24.49
KK	36	17	47.22	37.78
LL	53	22	41.51	33.21
MM	81	75	92.59	74.07
NN	77	48	62.34	49.87
OO	44	29	65.91	52.73
PP	43	33	76.74	61.39
QQ	58	40	68.97	55.18
RR	64	41	64.06	51.25
SS	55	27	49.09	39.27
TT	26	14	53.85	43.08
UU	42	22	52.38	41.90
VV	35	9	25.71	20.57
WW	35	20	57.14	45.71
XX	36	7	19.44	15.55
YY	46	31	67.39	53.91
ZZ	24	12	50.00	40.00
AAA	47	20	42.55	34.04
BBB	41	14	34.15	27.32
CCC	42	16	38.10	30.48
DDD	31	23	74.19	59.35
EEE	43	25	58.14	46.51
FFF	38	21	55.26	44.21
GGG	47	28	59.57	47.66
HHH	53	19	35.85	28.68
III	39	15	38.46	30.77
JJJ	56	21	37.50	30.00
KKK	30	24	80.00	64.00
LLL	55	31	56.36	45.09
MMM	77	42	54.55	43.64
NNN	111	97	87.39	69.91
OOO	29	21	72.41	57.93
PPP	37	17	45.95	36.76
QQQ	46	33	71.74	57.39
RRR	49	31	63.27	50.62

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TABLE XIII (CONTINUED)

School	Enrollment 1947-48	Students with Important Productive Projects	Per Cent with Important Productive Projects	Points Measure XI (Possible Points 80)
SSS	43	33	76.74	61.39
TTT	36	20	55.56	44.45
UUU	48	36	75.00	60.00
VVV	33	10	30.30	24.24
WWW	46	24	52.17	41.74
XXX	54	33	61.11	48.89
YYY	30	21	70.00	56.00
ZZZ	27	5	18.52	14.82
AAAA	73	44	60.29	48.23
BBBB	26	22	84.62	67.70
CCCC	33	21	63.64	50.91
DDDD	34	19	55.88	44.70
EEEE	38	15	39.47	31.58
FFFF	64	23	35.94	28.75
Total	4023	2266	-	3716.91
Mean	47.89	26.98	56.33	44.25
Sigma	18.61	15.37	-	14.69

cent for School A, down to 18.52 per cent for School ZZZ. This variation was also reflected in the points earned on the measure. From a possible maximum of eighty points, the mean number of points earned by the eighty-four schools was 44.25.

A summarization of the points earned by each of the schools on the nine measures of effectiveness together

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with a total of all the points received, is shown in Table XIV.

The maximum total points possible, had any school earned a perfect score on every measure, would have been 680. School MM with a total of 451.82 points came closest to realizing this maximum. At the other extreme was School VV with a total of only 132.86 points. The mean total points was 266.20. The standard deviation of 72.75 reveals that the scores were quite widely dispersed.

Summary. On the basis of an analysis of the data compiled when nine measures of effectiveness were applied to eighty-four departments of vocational agriculture in Michigan in which the teachers had been employed three years or longer, the following conclusions seem warranted:

1. There were substantially more students enrolled in these departments during the school year 1945-46 than in 1947-48. In both years there were wide variations in the school enrollments.

2. Approximately two-thirds of the students enrolled in 1947-48 completed one or more productive enterprise projects and other forms of supervised practice.

3. About one-fifth of the students enrolled in 1947-48 completed individual programs of supervised farming which included both livestock and crop productive enterprise projects.

TABLE XIV

POINTS RECEIVED BY EIGHTY-FOUR MICHIGAN DEPARTMENTS OF VOCATIONAL AGRICULTURE ON NINE MEASURES OF EFFECTIVENESS

TABLE XIV

POINTS RECEIVED BY EIGHTY-FOUR MICHIGAN DEPARTMENTS OF VOCATIONAL AGRICULTURE ON NINE MEASURES OF EFFECTIVENESS

School	Measures									Total
	I	II	III	IV	V	VI	VII	VIII	XI	
A	77.71	41.14	62.03	19.49	9.94	28.45	7.11	80.00	77.71	403.58
B	48.49	2.42	19.42	0.00	14.28	9.41	4.70	80.00	48.49	227.21
C	35.17	22.86	36.81	52.76	26.80	22.22	6.66	49.23	46.59	299.10
D	41.56	18.70	45.80	7.80	1.69	20.65	12.90	55.06	28.05	232.21
E	34.78	0.00	12.46	47.19	7.06	6.04	3.02	76.52	29.57	216.64
F	28.89	6.66	16.52	.56	4.26	5.71	2.86	47.78	35.55	148.79
G	69.78	5.10	29.57	23.94	5.70	32.82	10.26	69.78	64.68	311.63
H	70.00	15.00	37.39	18.79	11.79	38.98	6.15	71.66	70.00	339.76
I	77.46	45.71	62.61	34.66	21.92	34.54	18.18	77.46	77.46	450.00
J	47.57	8.65	20.29	0.00	10.52	8.57	2.86	80.00	34.59	213.05
K	0.00	11.11	28.12	0.00	1.71	2.66	2.66	73.34	46.66	186.26
L	71.11	0.00	26.67	14.62	11.75	23.08	7.70	74.92	55.87	285.72
M	40.00	25.00	43.48	16.57	0.00	23.64	3.64	80.00	30.00	262.33
N	33.85	6.15	16.81	3.76	60.00	20.00	13.34	80.00	27.70	261.61
O	36.80	0.00	13.33	51.79	45.16	4.21	4.21	70.40	30.40	256.30
P	70.77	21.54	37.97	8.63	3.64	11.03	5.52	76.92	36.92	272.94
Q	48.00	14.22	30.14	24.08	5.68	7.27	0.00	69.34	37.34	236.07
R	71.38	23.38	53.04	27.15	37.34	28.57	17.14	72.62	64.00	394.62
S	44.21	12.63	35.07	8.77	12.68	22.22	8.89	56.84	40.00	241.31
T	26.66	15.55	16.23	4.59	3.38	14.12	4.70	57.78	20.00	163.01
U	68.89	28.89	43.48	51.79	8.91	12.98	4.33	80.00	44.45	343.72
V	44.88	3.90	23.19	13.64	6.13	11.16	3.72	58.54	40.98	206.06
W	44.70	2.35	22.03	9.47	16.16	9.41	7.06	44.70	40.00	195.88
X	63.30	5.27	20.29	12.53	3.27	3.75	1.25	63.30	35.17	208.13

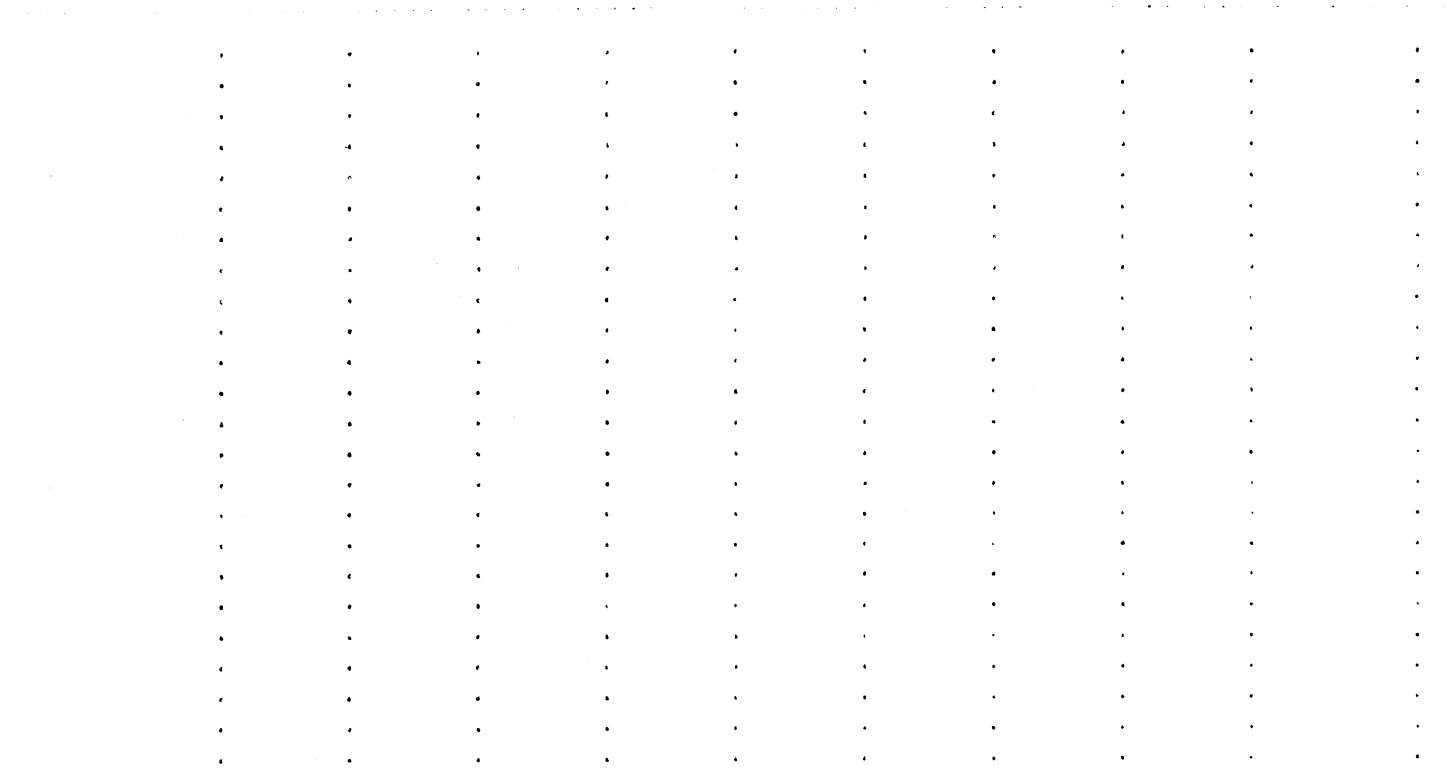


TABLE XIV (CONTINUED)

School	Measures	Total

TABLE XIV (CONTINUED)

School	Measures									Total
	I	II	III	IV	V	VI	VII	VIII	XI	
Y	23.34	6.66	16.23	4.04	6.85	14.54	9.70	70.00	16.66	168.12
Z	52.10	35.35	47.25	8.35	6.61	48.00	32.00	68.84	65.12	363.62
AA	0.00	27.70	47.83	0.00	0.00	14.77	7.38	47.18	42.05	186.91
BB	77.14	17.14	44.06	23.67	16.84	25.81	14.19	77.14	42.86	338.85
CC	76.92	30.77	47.25	2.09	8.19	18.98	4.06	78.46	23.08	289.80
DD	61.06	54.74	80.00	4.45	6.28	24.00	8.00	67.37	61.06	366.96
EE	61.54	0.00	27.83	3.76	8.95	20.00	8.57	80.00	55.38	266.03
FF	53.88	4.90	22.61	24.50	7.02	6.04	3.02	75.10	31.02	228.09
GG	63.45	31.26	42.90	36.75	18.24	19.05	10.16	73.56	57.93	353.30
HH	35.27	13.76	20.00	3.62	14.45	12.22	8.89	73.12	35.27	216.60
II	60.49	23.42	46.67	21.72	4.47	21.82	14.54	60.49	56.58	310.20
JJ	26.12	1.63	19.42	.56	2.06	22.61	5.22	50.62	24.49	152.73
KK	55.55	6.66	22.61	1.95	3.99	23.53	9.41	55.55	37.78	217.03
LL	43.78	9.06	27.83	5.99	2.53	17.46	7.27	78.49	33.21	225.62
MM	76.05	33.58	69.57	57.35	17.56	32.73	10.91	80.00	74.07	451.82
NN	57.14	20.78	36.52	27.98	9.10	19.31	13.79	80.00	49.87	314.49
OO	63.64	10.91	37.68	1.53	5.19	32.50	12.50	80.00	52.73	296.68
PP	65.12	27.90	44.35	5.15	2.82	23.11	8.89	70.70	61.39	309.43
QQ	59.31	19.31	46.38	23.25	10.97	27.14	11.43	63.45	55.18	316.42
RR	63.75	22.50	53.33	7.66	5.02	21.62	12.98	72.50	51.25	310.61
SS	36.36	8.73	32.17	0.00	3.60	17.14	4.29	59.64	39.27	201.20
TT	40.00	27.70	33.33	6.40	9.10	25.71	2.86	52.30	43.08	240.48
UU	43.81	32.38	44.93	6.40	19.12	11.23	5.62	68.57	41.90	273.96
VV	22.86	0.00	11.59	1.53	2.70	9.41	7.06	57.14	20.57	132.86
WW	57.14	6.86	29.86	24.22	3.93	29.09	7.27	73.14	45.71	277.22
XX	48.89	8.89	23.48	3.48	3.66	7.27	1.82	55.55	15.55	168.59
YY	59.13	6.96	25.22	.56	20.54	30.91	9.09	73.04	53.91	279.36

TABLE XIV (CONTINUED)

School	Measures	Total

TABLE XIV (CONTINUED)

School	Measures									Total
	I	II	III	IV	V	VI	VII	VIII	XI	
ZZ	43.34	0.00	15.65	8.07	10.04	0.00	0.00	80.00	40.00	197.10
AAA	47.66	22.13	31.59	11.28	7.10	2.35	0.00	61.28	34.04	217.43
BBB	40.98	11.70	31.01	.70	3.46	16.41	6.15	80.00	27.32	217.73
CCC	32.38	3.81	14.49	16.84	10.00	18.06	10.32	62.86	30.48	199.24
DDD	64.52	0.00	22.32	13.09	40.96	12.30	3.08	80.00	59.35	295.62
EEE	53.95	14.88	34.49	10.30	3.50	10.22	6.81	66.98	46.51	247.64
FFF	42.10	8.42	29.86	1.11	7.37	6.15	0.00	80.00	44.21	219.22
GGG	49.36	11.91	28.41	0.00	3.38	12.45	5.34	71.49	47.66	230.00
HHH	48.30	7.54	22.32	9.47	17.13	20.00	6.15	80.00	28.68	239.59
III	36.92	20.51	26.67	11.42	25.28	24.45	8.89	73.85	30.77	258.76
JJJ	35.71	17.14	21.74	10.44	5.95	10.26	4.10	64.29	30.00	199.63
KKK	69.34	53.34	64.64	31.60	14.47	34.66	21.34	80.00	64.00	433.39
LLL	58.18	37.82	61.74	21.58	14.04	27.32	21.46	77.09	45.09	364.32
MMM	58.18	4.15	24.35	11.97	12.97	20.32	1.27	61.30	43.64	238.14
NNN	72.07	3.60	29.28	2.65	5.48	40.62	12.30	77.12	69.91	313.03
OOO	63.45	5.52	26.09	13.50	17.83	5.71	0.00	74.48	57.93	264.51
PPP	36.76	12.98	20.29	5.29	2.45	14.36	4.10	45.41	36.76	178.40
QQQ	62.61	40.00	44.06	42.04	10.56	33.10	13.79	64.34	57.39	367.89
RRR	55.51	4.90	22.61	19.63	4.80	19.26	5.93	80.00	50.62	263.26
SSS	61.39	16.74	47.83	13.23	9.90	36.00	18.00	74.42	61.39	338.90
TTT	46.66	20.00	31.30	17.82	22.00	38.86	22.86	46.66	44.45	290.61
UUU	71.66	21.66	46.38	60.00	44.89	16.84	5.62	71.66	60.00	398.71
VVV	33.94	0.00	13.91	0.00	7.49	7.74	5.16	67.88	24.24	160.36
WWW	53.91	8.70	32.17	2.78	23.86	4.80	3.20	78.26	41.74	249.42
XXX	41.48	26.66	46.09	6.40	4.24	22.61	15.66	65.18	48.89	277.21
YYY	61.34	53.34	74.49	16.71	2.53	25.37	11.70	80.00	56.00	381.48
ZZZ	23.70	0.00	27.83	16.57	0.00	15.00	5.00	71.11	14.82	174.03

TABLE XIV (CONTINUED)

School	Measures

TABLE XIV (CONTINUED)

School	Measures									Total
	I	II	III	IV	V	VI	VII	VIII	XI	
AAAA	59.18	3.29	32.17	3.76	13.87	14.54	3.64	78.90	48.23	257.58
BBBB	73.85	30.77	51.30	20.88	14.33	19.39	9.70	76.92	67.70	364.84
CCCC	36.36	2.42	27.25	16.84	15.21	10.66	2.66	67.88	50.91	230.19
DDDD	58.82	0.00	21.45	2.51	10.23	9.41	4.70	77.65	44.70	229.47
EEEE	42.10	25.26	45.80	42.18	18.42	16.66	6.66	44.21	31.58	272.87
FFFF	35.00	2.50	19.13	8.21	4.53	10.23	3.72	65.00	28.75	177.07
Mean	50.60	15.68	33.84	14.62	11.40	18.50	7.85	69.23	44.25	266.20
Sigma	16.56	14.18	14.87	14.76	10.80	10.11	5.83	10.33	14.69	72.75

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4. On an average, the students enrolled in 1947-48 completed slightly over one productive enterprise project, one improvement project, and five and one half supplementary farm practices.

5. About one out of four of the students enrolled in 1945-46 showed at least one continuous productive enterprise project; only one out of ten showed increasing scope in productive enterprise projects repeated for two or more years.

6. About eighty-five per cent of the students enrolled in 1947-48 completed a farming program.

7. Somewhat over half of the students completed productive enterprise projects in enterprises judged important in the county where their departments of vocational agriculture were located.

8. Extreme variations were apparent among the eighty-four schools when nine measures of effectiveness were applied to their final reports of supervised farm practice programs.

COMPLETING THE SELECTION OF SCHOOLS

After the total points on the nine measures of effectiveness had been determined, the schools were placed in rank order with the school accumulating the highest total of points put in the first position. Table XLIX in Appendix H shows these ranks.

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As explained in Chapter I, it had been planned to study the thirteen top-ranking and the thirteen bottom-ranking departments. However, before it was possible to complete these studies, there had been a change of teachers in the departments ranking seventh (School YYY) and twelfth (School Z) from the top and seventh (School XX) from the bottom. It was possible to substitute departments ranking next in line which meant that those ranking fourteenth (School U) and fifteenth (School H) from the top were included with the upper group while the department ranking fourteenth (School ZZ) from the bottom became a part of the lower group. For purposes of convenience, teachers in the higher ranking schools will be referred to as Group I while those in the lower ranking schools will be designated as Group II.

Table XV shows the distribution of these two groups of teachers by types of farming areas in Michigan. The locations of the 201 departments of vocational agriculture and the eighty-four teachers who had taught in the positions which they held on September 1, 1948, are also broken down by areas. A map prepared by the Agricultural Economics Department of Michigan State College is placed in Appendix I to show the location and kind of agriculture practiced in each of these type-of-farming areas.

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TABLE XV

LOCATION IN TYPE OF FARMING AREA OF MICHIGAN TEACHERS OF VOCATIONAL AGRICULTURE ON SEPTEMBER 1, 1948

Type of Farming Area	Total Teachers	Teachers in Position Three or More Years	Teachers in Group I	Teachers in Group II
1	21	9	2	3
2	19	8	1	1
3	13	3	1	0
4	6	0	0	0
5	47	21	2	2
6	13	7	2	1
7	11	6	1	2
8	19	11	1	0
9-10-11 12-13-14 15-16-17	52	19	3	4
Total	201	84	13	13

The schools located in areas nine, ten, eleven, twelve, thirteen, fourteen, fifteen, sixteen, and seventeen were grouped together. In general these areas are represented by that territory in Michigan above a line from Bay City to Muskegon. Much of the soil in this part of the state has limited or no agricultural

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value.[4] Since the departments in this section of Michigan are quite scattered no particular purpose seemed to be served by listing the areas separately. Further breakdown, it was felt, might lead to a positive identification of a school.

Table XV is presented primarily to show that the teachers included in either Group I or in Group II are not confined to any single area of Michigan. Schools in both groups seem to be quite generally distributed.

The point-scores on each of the measures of effectiveness and the total score on the nine measures are shown for the schools in Group I and in Group II in Table XVI and in Table XVII respectively. The median score for each measure and for the total score were determined for both groups. As one would expect, the point-scores earned by schools in Group I tended to run consistently higher on all measures than those received by the schools in Group II. These differences are graphically portrayed in Figure 1. Here it is possible to compare the median point-scores on each measure for schools in Group I and Group II as well as all of the eighty-four schools in

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[4] J. O. Veatch, Agricultural Land Classification and Land Types of Michigan, Michigan State College, Special Bulletin 231, First Revision (East Lansing, Michigan: Agricultural Experiment Station, October, 1941), 67 pp.

TABLE XVI

POINTS RECEIVED ON NINE MEASURES OF EFFECTIVENESS
BY THIRTEEN SCHOOLS IN GROUP I

TABLE XVI

POINTS RECEIVED ON NINE MEASURES OF EFFECTIVENESS BY THIRTEEN SCHOOLS IN GROUP I

School	Measures									Total	Enrollments 1947-48
	I	II	III	IV	V	VI	VII	VIII	XI		
MM	76.05	33.58	69.57	57.35	17.56	32.73	10.91	80.00	74.07	451.82	81
I	77.46	45.71	62.61	34.66	21.92	34.54	18.18	77.46	77.46	450.00	63
KKK	69.34	53.34	64.64	31.60	14.47	34.66	21.34	80.00	64.00	433.39	30
A	77.71	41.14	62.03	19.49	9.94	28.45	7.11	80.00	77.41	403.58	35
UUU	71.66	21.66	46.38	60.00	44.89	16.84	5.62	71.66	60.00	398.71	48
R	71.38	23.38	53.04	27.15	37.34	28.57	17.14	72.62	64.00	394.62	65
QQQ	62.61	40.00	44.06	42.04	10.56	33.10	13.79	64.34	57.39	367.89	46
DD	61.06	54.74	80.00	4.45	6.28	24.00	8.00	67.37	61.06	366.96	38
BBBB	73.85	30.77	51.30	20.88	14.33	19.39	9.70	76.92	67.70	364.84	26
LLL	58.18	37.82	61.74	21.58	14.04	27.32	21.46	77.09	45.09	364.32	55
GG	63.45	31.26	42.90	36.75	18.24	19.05	10.16	73.56	57.93	353.30	87
U	68.89	28.89	43.48	51.79	8.91	12.98	4.33	80.00	44.45	343.72	36
H	70.00	15.00	37.39	18.79	11.79	38.98	6.15	71.66	70.00	339.76	48
Median	70.00	33.38	53.04	31.60	14.33	28.45	10.16	76.92	64.00	367.89	48

TABLE XVII

POINTS RECEIVED ON NINE MEASURES OF EFFECTIVENESS
BY THIRTEEN SCHOOLS IN GROUP II

TABLE XVII

POINTS RECEIVED ON NINE MEASURES OF EFFECTIVENESS
BY THIRTEEN SCHOOLS IN GROUP II

School	Measures									Total	Enrollments 1947-48
	I	II	III	IV	V	VI	VII	VIII	XI		
VV	22.86	0.00	11.59	1.53	2.70	9.41	7.06	57.14	20.57	132.86	35
F	28.89	6.66	16.52	.56	4.26	5.71	2.86	47.78	35.55	148.79	72
JJ	26.12	1.63	19.42	.56	2.06	22.61	5.22	50.62	24.49	152.73	49
VVV	33.94	0.00	13.91	0.00	7.49	7.74	5.16	67.88	24.24	160.36	33
T	26.66	15.55	16.23	4.59	3.38	14.12	4.70	57.78	20.00	163.01	36
Y	23.34	6.66	16.23	4.04	6.85	14.54	9.70	70.00	16.66	168.12	48
ZZZ	23.70	0.00	27.83	16.57	0.00	15.00	5.00	71.11	14.82	174.03	27
FFFF	35.00	2.50	19.13	8.21	4.53	10.23	3.72	65.00	28.75	177.07	64
PPP	36.76	12.98	20.29	5.29	2.45	14.36	4.10	45.41	36.76	178.40	37
K	0.00	11.11	28.12	0.00	1.71	2.66	2.66	73.34	46.66	186.26	36
AA	0.00	27.70	47.83	0.00	0.00	14.77	7.38	47.18	42.05	186.91	78
W	44.70	2.35	22.03	9.47	16.16	9.41	7.06	44.70	40.00	195.88	34
ZZ	43.34	0.00	15.65	8.07	10.04	0.00	0.00	80.00	40.00	197.10	24
Median	28.89	2.50	19.13	4.04	3.38	10.23	5.00	57.78	28.75	174.03	36

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which the teacher had taught three years or longer. As explained previously, eighty points were the maximum number possible on all measures excepting IV and V. On these two measures sixty points were the most a school could earn.

Further examination of Tables XVI and XVII shows that the enrollments in the two groups of schools, using data from the school year 1947-48, do not appear to be much different, although they tend to run higher in Group I. In Group I the highest enrollment was eighty-one and the lowest twenty-six. Corresponding enrollments in Group II were seventy-eight and twenty-four. The median enrollments among the schools were forty-eight in Group I and thirty-six in Group II.

Certain facts seem to stand out from the data presented in Figure 1.

1. Schools in Group I have a higher median point-score on all measures than the schools in Group II.

2. The median score for all of the eighty-four schools on all measures is less than the median score for schools in Group I but more than the median score for schools in Group II.

3. Using the median score as a basis for comparison, there is a noticeable difference in the relative

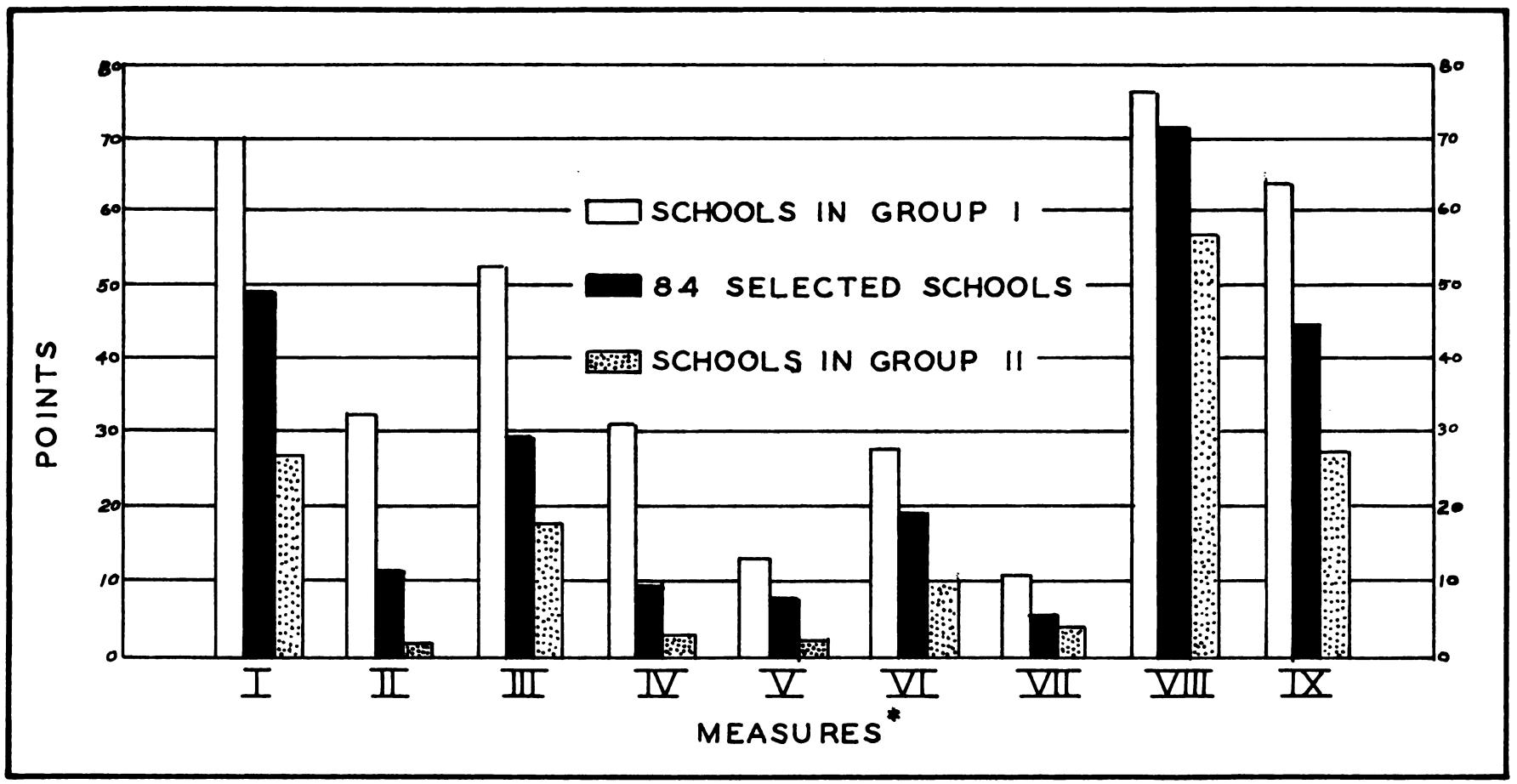
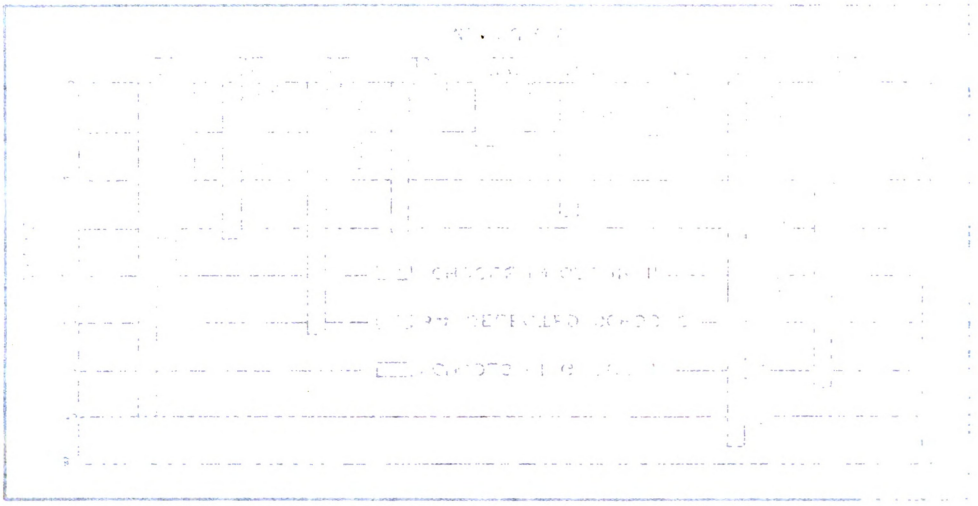


FIGURE 1

* See Table IV, p-38 for list of measures

MEDIAN POINT SCORES ON NINE MEASURES OF EFFECTIVENESS OF SCHOOL PROGRAMS OF SUPERVISED FARMING



proportion of the total possible score that each group of schools received on the respective measures.

4. In general, it appears that the median point-scores for the schools in both Group I and Group II tended to increase or decrease in about the same ratio from one measure to another.

CONDUCTING THE INTERVIEW

As pointed out at the beginning of this report, the major effort in this study was directed toward finding answers to two principal questions: (1) Do two selected groups of teachers of vocational agriculture in Michigan use practices in conducting programs of supervised farming that are recommended by teacher trainers and supervisors in agricultural education? (2) If the two groups of teachers do not use recommended practices in conducting programs of supervised farming, what are the reasons?

Obviously, the primary source of this information was the teachers themselves. The personal interview seemed to be the most feasible technique for gathering the data needed for this study. The necessity of using the interview became apparent for a number of reasons. First of all, since the study was concentrated on two groups of teachers, namely, those with the more successful

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and those with the less successful programs of supervised farming, it was essential that specific information be obtained from them and not from the total group of teachers who had taught in a given situation for three years or longer. Consequently, this study did not permit the use of a sampling technique to study the group at large.

In order to assure that data would be obtained from all members of these two extreme groups of teachers, it seemed necessary to rely upon the personal interview technique. It appeared unlikely, for instance, that all of the men who cooperated in this study by supplying information during a personal interview would have been willing to provide the same information by filling out a rather lengthy questionnaire.

Secondly, it seemed necessary to use the interview in order to obtain the numerous personal reactions demanded in this study. Parten[5] has pointed out that most respondents would rather talk than write, so the interview technique relieved the informants from this responsibility.

In the third place, it was desired to give the respondent an opportunity to reveal certain unstructured

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[5] Mildred Parten, Surveys, Polls, and Samples (New York: Harper & Brothers, Publishers, 1950), p. 96.

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opinions, feelings, and attitudes through the use of the "open-ended" or "focused" interview approach. Merton and Kendall point out that such a nondirective approach ". . . gives the subject an opportunity to express himself about matters of central significance to him rather than those presumed to be important by the interviewer."[6] Along the same line Lazarsfeld recognized the need to provide an opportunity for the informant to give more nearly complete information on his responses. He says: "We need more detailed knowledge as to what the answers of our respondents mean, on what specific points their opinions are based, in what larger motivational contexts they belong, etc."[7]

Good, Barr, and Scates seem to state the case for the interview rather concisely when they declare:

> By means of the interview it is possible to secure many data that cannot be obtained through the less personal procedures of distributing a reply blank. People generally do not care to put confidential information in writing; they may want to see who is getting the information and receive guarantees as to how it will be used; they need the stimulation of personal contacts in order to be "drawn out" . . . the interview enables the worker to follow up leads and take advantage of small clues;

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[6] Robert K. Merton and Patricia L. Kendall, "The Focused Interview," The American Journal of Sociology, 51:545, May, 1946.

[7] Paul F. Lazarsfeld, "The Controversy over Detailed Interviews," The Public Opinion Quarterly, 8:49, Spring, 1944.

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> in complex material where the development is likely to proceed in any direction, no prepared instrument can perform the task.[8]

Having decided to use the interview as the method for gathering data, a major problem was to determine what type of questions should be asked of the informants. The value of the "open-ended" or "focused" interview type of question in allowing a high degree of freedom of expression has been indicated. Still, the use of the "open question" approach, as pointed out by Parten,[9] Lazarsfeld[10] and Gallup[11] is not a method that is readily adapted to statistical treatment. On the other hand, the use of a standard list of questions, while easily adapted to tabulation of answers and a statistical analysis, obviously restricts the responses of the informants.

The questions used in this interview study represent an effort to combine the advantages of using a standard list of questions and the open variety of

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[8] Carter V. Good, A. S. Barr, and Douglas E. Scates, The Methodology of Educational Research (New York: D. Appleton-Century Company, Incorporated, 1941), p. 378.

[9] Parten, op. cit., p. 74.

[10] Lazarsfeld, op. cit., p. 49.

[11] George Gallup, "The Quintamensional Plan of Question Design," The Public Opinion Quarterly, 11:388, Fall, 1947.

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questions. Examination of the interviewing outline[12] reveals that there are, in general, two types of questions, namely: (1) those seeking factual information and (2) those asking for opinion--the "why" type of questions.

The factual questions are designed, particularly, to provide information which would help meet one of the purposes of this study, a determination of the extent that two groups of teachers of varying proficiency follow practices recommended by leaders in agricultural education in conducting programs of supervised farming.

Further examination of the interviewing form reveals that the factual questions are grouped under divisional areas. The divisional areas are numbered to correspond to the numbers of the working principles of supervised farming developed in Chapter IV. Ten divisional areas appear in the interviewing outline and there are ten corresponding working principles developed in Chapter IV that, presumably, embody the recommended practices in conducting programs of supervised farming in which there seems to be substantial agreement among the leadership in vocational agriculture. Consequently, when the outline was used in interviewing, it was assumed that

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[12] See Appendix A.

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each of the questions appearing in a given area, provided reliable information as to the extent that teachers employed practices in conducting programs of supervised farming that were consistent with the recommendations of expert opinion embodied in the corresponding working principle appearing in Chapter IV.

Most of these factual questions could be answered by the words "yes" or "no" or by supplying numerical data. For this reason the responses were readily adaptable to tabulation, analysis, and interpretation. Furthermore, they were adapted to limited statistical treatment even though the character of this study seemed to be of such a nature that the use of complex statistical procedures was not demanded.

Following the recommendations of Blankenship[13] and NORC[14] for conducting surveys and polls, the factual questions were asked uniformly of all respondents although there is not complete agreement that such a procedure is necessary. Cantril, for instance, contends that the

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[13] Albert B. Blankenship, Consumer and Opinion Research (New York: Harper & Brothers, Publishers, 1943), p. 25.

[14] Interviewing for NORC (Denver: National Opinion Research Center, University of Denver, 1945), p. 17.

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reliability of responses is largely determined by the mental stability of the respondents. He declares:

> The extent to which the wording of questions affects the answers obtained depends almost entirely on the degree to which the respondent's mental context is solidly structured. Where people have standards of judgment resulting in stable frames of reference, the same answer is likely to be obtained irrespective of the way questions are asked.[15]

On the matter of determining the degree of standardization that should operate in the presentation of questions used in interviewing for fact-finding, Bingham and Moore advise:

> Having determined that your problem is such that interviews are feasible aids in its solution, formulate it with the interview procedure in mind. Ask yourself just what information you want to obtain. This does not mean that you must shape definite questions to be asked in a certain way. It means that you should have the general questions clearly in mind in organized form so that when answers are given, or an opportunity comes to lead the conversation toward an answer, you will recognize it immediately and classify it under the proper heading on your outline.[16]

However, neither Cantril's nor Bingham and Moore's observations would seem to preclude the use of standardized questions during the interview. Apparently, they have only taken the position that a standard wording of

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[15] Hadley Cantril, Gauging Public Opinion (Princeton: Princeton University Press, 1944), p. 48.

[16] Walter V. Bingham and Bruce V. Moore, How to Interview (New York: Harper & Brothers, Publishers, Third Revised Edition, 1941), p. 35.

questions is unnecessary. All factors considered, then, the set-schedule type of questionnaire appeared best adapted for securing and using the data which would supply information regarding the practices employed by the two groups of teachers in conducting programs of supervised farming. Actually, if the study had had no further objective than to discover the practices used by these teachers, it is conceivable that there would have been no reason for the use of the interview technique except to insure that data would have been secured from all of the desired informants.

On the other hand, more nearly complete information was needed if the other major purpose of this study was to be realized, that of determining the reasons for failure to employ certain recommended practices in conducting supervised farming. The mere recording of objective facts obviously would not suffice if this purpose was to be realized. Rather, the more personal thoughts, feelings and attitudes of the respondent needed to be investigated.

Skott makes some pertinent observations in this connection when he describes experiences of workers in the Department of Agriculture in using the interview to study the reasons for certain states of mind of respondents. He declares:

> To know that a person approved or disapproved of an issue was not enough. It was even more important to know why he felt that way. Furthermore, there was a feeling confirmed by interviewing experience that people can rarely give an unqualified "yes" or "no" to a significant question.[17]

Skott reveals what he believes to be the special advantage of a full interview as he continued:

> Out of the richness of full interview reports has come the opportunity for obtaining more valid and more meaningful insights into the attitudes of individuals and groups than is possible with the information on a polling questionnaire.[18]

Following the same vein of thought Strang maintains:

> Thus, the interview is an essential technic for ascertaining the "why" of relationships and the subjective factors, possible causes, and meanings behind objective factors.[19]

The focused interview described by Merton and Kendall seemed particularly adaptable to this study for the purpose of discerning the special reasons for the teachers' failure to use certain recommended practices in conducting programs of supervised farming. They set forth the following characteristics of this type of interview:

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[17] Hans E. Skott, "Attitude Research in the Department of Agriculture," The Public Opinion Quarterly, 7:289, Summer, 1943.

[18] Ibid., p. 291.

[19] Ruth Strang, "The Interview," Review of Educational Research, 9:501, December, 1939.

> 1. Persons interviewed are known to have been involved in a particular concrete situation . . .
>
> 2. The hypothetically significant elements, patterns, and total structure of this situation have been previously analyzed by the investigator.
>
> 3. On the basis of this analysis, the investigator has fashioned an interview guide, setting forth the major areas of inquiry and the hypotheses which locate the pertinence of data to be obtained in the interview.
>
> 4. The interview itself is focused on the subjective experiences of persons exposed to the pre-analyzed situation.[20]

An attempt was made to incorporate these characteristics into the pattern of interviewing employed to determine the reasons for failure of teachers to use certain recommended practices in conducting supervised farming. The writer believes that a consideration of the character of the people interviewed, the structuring of the study preliminary to the interviewing, and the guide employed in this phase of the investigation will reveal many elements in common between the particular pattern of interviewing used in this study and the focused interview described by Merton and Kendall.

A type of focused interview was employed because it showed promise for probing more deeply into the respondent's mind. It seemed that the use of the focused

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[20] Merton and Kendall, op. cit., p. 541.

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interview as a method of investigation not only allowed the informant ample freedom to reveal his real thoughts and feelings, but also served as an aid to the interviewer to prevent the introduction of unnecessary and irrelevant digressions.

Some authorities point out the danger of a bias in the interview. Parten,[21] for instance, indicates the possibility of a distortion of the returns through what she refers to as the "human equation." She reveals that the interviewer may unconsciously ask the questions so as to secure confirmation of his views.

However, in passing, it seems well to reveal that the interview should not be singled out as the only method of research in which there might be a reason to question the reliability of the responses. Bain,[22] and later Stoke and Lehman,[23] reported research which indicated that the mail questionnaire is peculiarly vulnerable when employed for the collection of personal information.

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[21] Parten, op. cit., p. 81.

[22] Read Bain, "Stability in Questionnaire Responses," The American Journal of Sociology, 37:445, November, 1931.

[23] Stuart M. Stoke and Harvey C. Lehman, "Influence of Self-Interest upon Questionnaire Replies," School and Society, 32:436, September 27, 1930.

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The writer recognizes that the responses of the informants in this study could have been biased by the manner of interviewing. However, special precautions were taken to insure that the responses would be reliable. The writer tried especially to avoid the use of leading questions or questions which might give a particular slant or partisan position. In so far as possible, an effort was made to avoid a detailed explanation of the meaning of the questions. In the few instances when it seemed necessary to enlarge upon a question in order to have it understood, the writer tried to bring this about in such a manner that it could not favor a particular viewpoint. In this connection Crespi advised the interviewer to avoid statements which are used to inform the respondent. At the same time he recognized that:

> ". . . some questions seem to demand placement in a context in order to have meaning. In such cases one must frame the preamble so that it does not favor any of the competitive stands regarding the issue.[24]

Throughout the conduct of the interviews, the writer tried dilligently to conceal his own ideas and beliefs. In this regard the following advice seemed apropos:

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[24] Leo P. Crespi, "The Interview Effect in Polling," The Public Opinion Quarterly, 12:105, Spring, 1948.

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> Don't discuss issues with respondents. As an unbiased reporter of the opinions of others, you are not at liberty to disclose your own.[25]

As indicated in Chapter I the teachers of vocational agriculture were interviewed, as well as representative students and/or one or both of their parents in the twenty-six departments of vocational agriculture considered in this study. Most of the interviews were made during the month of August, 1949. The remaining interviews were completed on Saturdays in the autumn of 1949. A day was spent in each community. Approximately two hours were required to complete the interview of each teacher. These visits were followed by visits to homes to interview students and/or one or both of the students' parents. It was found that parents seemed to be able to supply the information needed just as well as the student. An effort was made to keep the number of interviews with parents approximately equal to the number with the students.

The families contacted were determined by placing the names of students in alphabetical order according to the grade in high school which they had completed. Interviews were conducted with the student and/or one or both of his parents in every fifth family beginning with

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[25] Interviewing for NORC, op. cit., p. 13.

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the third name from the top. In the few instances when neither the student nor his parents were available the family next in line was contacted.

The questions asked of students and parents centered largely in Areas VI and VII, the former area relating to progress of the son toward establishment in farming and the latter area to parent-son relationships in farming. Approximately a half hour was needed to complete each home-interview. With the time required to locate families and to drive from one home to another, the operation involved in completing the necessary interviews in a given community required a full day. Indeed, in a few instances unexpected delays made it necessary to work in the early evening in order to finish the assignment.

Altogether, the writer drove 4111 miles in order to complete the interviews. In addition, the teachers of vocational agriculture and representative members of selected families were interviewed in two other communities preliminary to the other interviews. This plan was followed on a trial basis in order to give the interviewer an opportunity to try out and standardize procedures before interviewing the respondents included in this study. These trial runs involved an additional 232 miles of travel.

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Excellent cooperation was received from the people who were asked to supply information for this study. At the outset of each interview the purposes of the study were pointed out. Each informant was assured that his responses would be kept in strictest confidence. The writer has exercised extreme precaution so as not to divulge the exact source of any of the data given him. While it is possible that an informant, conceivably, could attempt to identify himself with a particular segment of data in this report, any inference so drawn, it would seem, must be highly conjectural. Actually, the writer would find it necessary to decode most of the data collected before it is possible to be certain of its source. Consequently, the investigator believes, in all sincerity, that the interests of the respondents have been adequately protected.

While interviewing the teachers the request was made and granted that an opportunity be given to record data as they were presented. The interview with each teacher was obviously too long to be conducted and recorded from memory. It did not seem to be particularly difficult to write down the significant responses and at the same time maintain a very desirable continuity in the interviewing process. In this regard the following direction is provided by NORC:

> You don't need a knowledge of shorthand to record everything the respondent says in reply to a free-answer question. In the first place few of the answers you receive, even after probing, will be longer than one or two sentences. In the second place, only a few persons talk so fast that you have trouble keeping up with them.[26]

The teachers were assured that they would have an opportunity to examine the interviewing form at the conclusion of the interview to ascertain if the information given had been accurately written down. When the form was proffered to them, a few of the teachers examined it rather carefully, some looked it over in a cursory sort of fashion, while most of them quickly declined the opportunity to read the material that had been written down.

Interviewing forms were not in evidence during the home interviews. It was felt that their use might tend to arouse suspicion. Moreover, since the questions asked were relatively few, it seemed best to present them from memory and then take time to record the responses at the conclusion of the interviews.

LIMITATIONS OF THE STUDY

The writer readily acknowledges certain fairly obvious limitations of this study. Yet, while recognizing these limitations, he believes that the findings,

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[26] Ibid., p. 50.

if properly interpreted and applied, can make a significant contribution to research and practice in agricultural education.

First of all, this study has certain limitations inherent in the pattern under which it was structured. From the total of 201 departments of vocational agriculture in Michigan on September 1, 1948, there was made an intensive study of reports of supervised farming programs of eighty-four teachers who had been employed in their present positions for three years or longer. Finally, the investigation was further delimited by making a selection of twenty-six teachers from this group of eighty-four to be studied by personal interviews. Twenty-six was the number which it was feasible to contact by this method. Furthermore, these twenty-six schools represented two extreme groups of teachers: the thirteen determined to have the more outstanding and the thirteen found to have the less adequate programs of supervised farming among the teachers of vocational agriculture who had taught in the position which they held on September 1, 1948 for three years or longer. Findings must necessarily be interpreted in the light of the number of schools selected.

It seems well to emphasize that this study was set up to reveal significant differences in programs of

supervised farming between two selected groups of teachers, all of whom have taught three years or longer in one school. It does not necessarily reflect practices prevailing among other teachers of this category or the total population of teachers of vocational agriculture. Neither is it intended that it be assumed that the practices revealed in this study are necessarily characteristic of the teachers with the more outstanding or the less adequate programs of supervised farming among all the teachers of vocational agriculture in Michigan.

It seems well, also, to stress that the findings of this study are not adapted to extended statistical treatment due to the limited number of schools interviewed and the nature of the data collected. The writer holds that if this study had been conducted in such a manner as to yield only data which could have been readily quantified, one of the major purposes of this study could not have been realized.

Perhaps, this study may be criticized for a lack of exactness, particularly in the handling of the subjective responses which were offered by teachers for failure to use certain recommended practices of supervised farming. Indeed, it is entirely conceivable that another investigator might have arrived at a different categorization of the "open" responses gathered in this

phase of the study. That a bias could have influenced the reliability of the responses during the interviews is likewise recognized as a possible limiting factor in this investigation. Yet, in spite of these limitations, the writer believes that a pioneer study of the type outlined in this report is warranted; that it has yielded helpful information and uncovered promising leads for further investigation.

The data used in this study have been gathered largely in Michigan. Consequently, they should be interpreted and applied in the light of this limitation. However, one of the most important divisions of this investigation, that of developing a method for measuring the effectiveness of the local program of supervised farming, conceivably could have application throughout the United States. It should be apparent that much effort has been expended on this phase of the study. While the measures which have been developed, without a doubt, need further refinement, it is possible that they could be used in a practical way in other states, even in their present form.

Finally, in passing, it seems well to point out that this investigation is limited to a study of programs of supervised farming conducted by students enrolled in the day-school program of vocational agriculture.

ASSUMPTIONS

Certain assumptions believed fundamental to the realization of the purposes of this study are stated below. Others are presented at appropriate points in the context.

1. It is assumed that data relating to the kinds of farming programs carried and completed by students, which were submitted by teachers of vocational agriculture on Form 241, are reliably reported. These reports supplied the data which served as the basis for the selection of the two groups of teachers who cooperated in this study.

2. It is assumed that the state supervisors and teacher trainers who cooperated in this study are qualified to select and to weight items from Form 241 which are valid measures of effectiveness of school programs of supervised farming.

3. In the determination of the maximum number of points that a school could receive on a given measure of effectiveness, it is assumed that the median is a valid base point from which to operate. It is further assumed that the arbitrary assignment of point values on the basis of this median and the subsequent mathematical calculations, allowed a school to receive a total point score

which was a valid measure of that school's relative standing on effectiveness of its program of supervised farming.

4. It is further assumed that teachers, pupils, and parents gave reliable and valid responses to the questions asked them during the interviews.

5. Likewise, it is assumed that the quality of the supervised farming programs in effect in a particular school during the three years preceding the time that the teachers were selected for this study was due to a great degree to the influence of the teacher of vocational agriculture employed in that school during those three years.

6. Finally, it is assumed that the ten statements of working principles in conducting programs of supervised farming which were prepared, accurately reflect the thinking of expert opinion on the subject. It is further assumed that the questions asked during the interviews were valid measures of the extent that the teachers were using practices recommended by expert opinion.

CHAPTER III

REVIEW OF LITERATURE

The purpose of this chapter is to review research studies which bear a relationship to this investigation. Most of the studies cited were completed by graduate students as a part of the requirement for a Master's degree. Four doctoral dissertations are included as well as a few nonthesis studies completed by staff members assigned to research in departments of teacher education.

Investigations which seem closely related to this study are reviewed at some length while less consideration is given to those which are only partially related. In any case, only those parts of a study are reported which show a connection to this investigation.

The annotated bibliographies of studies in agricultural education have been particularly helpful to the writer in making known to him what studies have been completed. These are reported in four separate publications under the title Summaries of Studies in Agricultural Education.[1] It has been the intention of the authors of

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[1] Summaries of Studies in Agricultural Education, U. S. Office of Education, Vocational Education Bulletin

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these summaries to list all known research studies in agricultural education. With few exceptions, all the studies relating to supervised farming have been secured and reviewed. In certain instances no copies of studies were available.

In preparing this review, the studies have been classified under four major divisions. In the first section there are reported those investigations in which an effort was made to study groups of teachers or groups of departments of vocational agriculture. Some of these groups were determined before the collection of data while others were set up afterward.

A second section includes those studies on supervised farming which might be classified as being general in character. The investigations grouped under this heading involved a broad treatment of supervised farming or at least considered more than one aspect of the subject. Section three of this review includes those studies

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No. 180, Agricultural Series No. 18 (Washington: Government Printing Office, 1935), 196 pp.; Supplement No. 1 (Danville, Illinois: Interstate Printers and Publishers, 1943), 199 pp.; Supplement No. 2, U. S. Office of Education, Vocational Division Bulletin No. 237, Agricultural Series No. 57 (Washington: Government Printing Office, 1948), 120 pp.; Supplement No. 3, U. S. Office of Education, Vocational Division Bulletin No. 242, Agricultural Series No. 59 (Washington: Government Printing Office, 1950), 61 pp.

which gave special consideration to the difficulties involved in conducting supervised farming. Finally, a fourth section considers those investigations which relate to some particular aspect or phase of supervised farming.

STUDIES IN WHICH TEACHERS OR DEPARTMENTS ARE GROUPED

Campbell[2] made a study of activities used by teachers in Wisconsin, Illinois, Minnesota, Iowa, and Ohio in conducting programs of supervised farming. A questionnaire was prepared and submitted to 263 instructors of vocational agriculture. Teachers were selected by sending a questionnaire to every fourth name in an alphabetical list of teachers in each of the states indicated above. There were 155 instructors who returned the questionnaire.

The names of the men who returned the inquiry were then submitted to the head state supervisor in their respective states, with the request that they be divided into two groups. The first group included the names of those men who, the state supervisors felt, were doing

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[2] Clyde B. Campbell, "An Analysis of the Activities of Agriculture Teachers in Conducting Farm Practice," (unpublished research problem, University of Minnesota, Minneapolis, 1939), 139 pp.

superior work in conducting supervised farming. These men, totaling seventy in number, were designated as the select group. The balance of the names sent to the state supervisors were considered as the unselected group. They totaled eighty-five. Nineteen state supervisors and teacher trainers also checked the questionnaire.

The data reveal that the two groups of teachers tended to show the same responses in the use of the activities listed. When one group of teachers tended to indicate frequent or little use of an activity, the other group responded similarly. Actually, there was a much greater tendency for the two groups of instructors to show the same degree of use of an activity than there was for either group to indicate an actual use of an activity corresponding closely with ratings of the state supervisors and teacher trainers on the importance of the activity.

While the selected group showed a greater tendency to indicate more use of activities that were considered important by the state supervisors and teacher trainers, the difference was slight. The unselected group was found to be in agreement with the state supervisors and teacher trainers just about as often as the selected group.

A possible explanation for the failure of the two groups of teachers to show greater differences in their responses might be that the extremes of either group of teachers were balanced off by those members of each group who tended to be much alike in their responses. When one recognizes that the study was set up to include all teachers of agriculture in the states surveyed, such an explanation might be worthy of consideration. Campbell indicates that further differentiation of the two groups might have been in order when he stated that no attempt was ". . . made to differentiate between the superior, excellent, or good teachers in the selected group, nor among the unselected teachers to differentiate between fair, weak, or poor individuals."[3]

Campbell also recognized possible limitations to the method used in selecting the teachers studied. He acknowledges that it was not objective but was ". . . based upon opinion and general information of one man of a group of teachers in his state."[4] Finally, he suggested the ". . . desirability of establishing an objective method by which teachers of agriculture may be rated according to their abilities in farm practice work."[5]

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[3] Ibid., p. 133.
[4] Ibid., p. 133.
[5] Ibid., p. 133.

In spite of the shortcomings which Campbell points out in his study, this investigation seems to have made a definite contribution to research in agricultural education. While mathematical correlations among the groups which he compared might have been a logical step, possibly such a treatment of data would have been beyond the scope of the kind of study which he conducted. All factors considered, perhaps it could be said that this investigation was creditably, although not exhaustively, handled.

Rodeberg[6] devised a different pattern but employed a method similar to the one used by Campbell for dividing teachers into groups on the basis of the effectiveness of their programs of supervised farming. He prepared a list of Montana teachers of vocational agriculture, thirty-three in number, who had been teaching in a particular situation for three years or longer. This list was separated into three groups designated as superior, average, and poor on the basis of independent ratings of their programs of supervised farming which were made by the state supervisor, assistant state supervisor, and the teacher trainer in vocational agriculture in Montana.

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[6] Hubert E. Rodeberg, "The Supervised Practice Program in Vocational Agriculture in Montana," (unpublished Master's thesis, Montana State College, Bozeman, 1942), 97 pp.

Ten men were placed in each of the groups labeled superior and inferior, while thirteen were assigned to the group designated average.

Rodeberg placed the primary emphasis in his study on making comparisons among the three groups on such matters as characteristics of departments and personal and professional characteristics of the teachers. These included average enrollments, the proportion of farm and town boys in classes, the amount of time which the instructor spends teaching vocational agriculture, and the average number of years the instructors had spent in teaching.

The degree that a given characteristic prevailed in a group was usually expressed as an average or percentage. Consequently, any differences had to be determined by inspection of the data. The data showed that the departments rated superior had higher enrollments and the instructors spent a greater percentage of their time in teaching vocational agriculture than was the case in departments rated average or poor. There appeared to be no significant differences in the proportion of farm and town boys enrolled in classes nor in the average years of experience in teaching among the instructors in the three groups of departments rated superior, average, and poor.

Rodeberg gave less attention to practices used in conducting supervised farming. The practices considered, centered largely on those used in acquainting students with and initiating them into programs of supervised farming. Notably, the superior group of teachers made more early fall visits to homes of students.

A rather comprehensive study was conducted just before the Second World War which had as its purpose an evaluation of local programs of vocational education in agriculture. It was carried out through the cooperation of the vocational division of the U. S. Office of Education and the administrative and teacher training staffs in all states except two. The results of this study are reported in a Federal publication.[7] Twenty different aspects of the local programs were evaluated. In three of these, particular attention was given to supervised farming.

The report of this project appears to have been designed as a teaching aid more than as a detailed description of a research investigation. This may explain the failure to clearly indicate all the procedures used

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[7] An Evaluation of Local Programs of Vocational Education in Agriculture, U. S. Office of Education, Vocational Bulletin No. 240, Agricultural Series No. 58 (Washington: Government Printing Office, 1949), 75 pp.

in conducting the study. Four hundred local programs of vocational agriculture were examined but there was no description of the method used in selecting these programs except a statement that they were chosen ". . . in such a way as to obtain a representative sample of departments of vocational agriculture."[8] The report further indicates that an evaluating committee was appointed for each participating state but it does not indicate the qualifications of the personnel which made up the membership of these committees nor does it describe in detail the procedures under which they operated while making evaluations of local departments.

Through contact with members of the committee who did the actual evaluating, it has been determined that departments studied in Michigan were selected on the basis of the best judgments of the members of the state supervisory and the teacher-training staffs in vocational agriculture. An attempt was made to include some of the better, some about average, and some of the poorer programs. As nearly as can be determined about twenty programs were evaluated in Michigan. Most of the teacher trainers and state supervisors in Michigan participated in the evaluations although this responsibility was

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[8] Ibid., p. 2.

assigned primarily to two individuals, one a member of the supervisory staff and the other a member of the teacher-training staff.

The evaluations were made during visits to the schools in which the departments of vocational agriculture were located. On the basis of observations of the program and interviews with the instructor and selected students, the evaluating team, consisting of a teacher trainer and a state supervisor, placed a rating on each of the major aspects of the local program of vocational agriculture. As a guide in making these appraisals, the evaluating team had the use of the Evaluative Criteria for Vocational Education in Agriculture[9] prepared by a national committee of state supervisors and teacher trainers.

Each major phase of the local program was evaluated on the basis of a five-point scale, according to the pooled judgment of the members of the evaluating team. The evaluators were instructed to make a rating which reflected the status of a particular phase of a local program in respect to what would be found in other local programs. In passing, it seems well to point out

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[9] Evaluative Criteria for Vocational Education in Agriculture (Athens, Georgia: The University Press, 1940 Edition), 52 pp.

that they had no knowledge of the kind of local programs conducted in other schools, than those evaluated, except that which had come to them as a result of their experiences. Five designations were used in rating the different phases of the local program, namely: very superior, superior, average, inferior, and very inferior.

It seems fairly obvious that the report of this project[10] was never intended to be regarded as a complete presentation of a research study. Since the description of procedures used and the analysis and interpretation of data are so limited, it has been very difficult to review this study as a related research investigation. While recognizing the value of having a report of this project presented in a form so abbreviated that all or specific parts of it can be quickly and easily read, the research worker will probably regard it as unfortunate that this study could not have been more adequately reported.

In spite of the seeming lack of all the necessary information to adequately assess the findings of this study, certain observations regarding it appear to be in order.

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[10] An Evaluation of Vocational Education in Agriculture, op. cit.

First of all, it can be stressed that this was an evaluative study of 400 local programs of vocational agriculture in forty-six states. Thus, it would appear that the primary focus was on the program rather than the individuals associated with it even though, obviously, it would be difficult, if not impossible, to eliminate the influence of personalities on a program. While one can not be certain, for instance, that investigators had no intention of appraising teachers while evaluating local programs, it would seem that more effort would have had to be made to eliminate the influence of previous teachers on the program than appears to have been done in the conduct of this study, if such a purpose could have been realized.

Secondly, this investigation included not only an evaluation of the local program of supervised farming but many other recognized phases of a total program of vocational agriculture such as Future Farmers of America, young farmer and adult instruction, farm mechanics instruction and equipment and facilities.

In the third place, the evaluators rated each of the local programs of vocational agriculture after the collection of data from them. These ratings were made, apparently, without any clearly defined standards of classification to serve as a guide. From conversation

and correspondence with members of the committee who gathered the data, the local programs used in Michigan were not selected in a random manner.

Sweany[11] studied twenty-four departments from a total of 132 high schools in which vocational agriculture was offered in Iowa in 1937-38. These twenty-four departments were among the twenty-six in which programs of supervised farming were shown to be of relatively high quality on the basis of a study of preliminary reports of supervised farming submitted by teachers of vocational agriculture to the Department of Public Instruction in Iowa. Two factors were used to determine the departments selected: (1) the percentage of students enrolled in production projects, improvement projects, and supplementary practices, and (2) the number of projects per boy.

In so far as can be determined, Sweany is the first investigator to make a study of departments of vocational agriculture, selected on the basis of an analysis of the reports of supervised farming programs which had been

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[11] H. P. Sweany, "Factors Contributing Toward Superior Programs of Farm Practice for Boys Studying Vocational Agriculture in Iowa High Schools," (unpublished Master's thesis, Iowa State College, Ames, 1938), 100 pp.

completed by teachers in these departments. However, he did not clearly indicate the exact procedures that were used in applying the two selective factors to determine which schools would be included in his study nor did he attempt to validate these factors.

Sweany gathered most of his data by means of a questionnaire which he sent to the teachers in the twenty-four departments. In addition, he made personal visits to four schools to obtain supplementary data by use of interviews with boys who were currently enrolled in the departments, with parents of students and with the superintendent and the principal of these schools. In two of the four schools he interviewed former students of vocational agriculture, while in one community he interviewed the banker, and in another, the elevator manager.

Limited use was made of the findings from interviews. In describing the procedures employed to report this phase of his investigation, Sweany wrote:

> No effort was made to tabulate the answers of the different people interviewed. The different communities suggested different patterns as did the different classes of individuals interviewed. Each community will be written up as a unit.[12]

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[12] Ibid., p. 61.

Among other findings it was brought out in this study that (1) the majority of the production projects of students are financed from family resources; (2) considerable variation existed among the schools in the degree that students were permitted to determine the complete management practices used in their production projects; (3) half of the instructors held meetings with parents to consider problems involved in conducting supervised farming; and (4) half or more of the twenty-four instructors had their students prepare and later revise project plans, make budget estimates, and analyze completed projects.

Jeppson[13] conducted a study which had as one of its purposes a determination of the importance of selected activities in supervised farming based on the judgments of state supervisors, teacher trainers, and teachers of vocational agriculture. He prepared a list of fifty-eight activities in supervised farming. The list was submitted to all state supervisors, head teacher trainers, and ninety teachers of vocational agriculture reported by their state supervisors as having been successful in

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[13] Robert B. Jeppson, "A Program of Farm Practice Supervision for Vocational Agriculture Teachers in Nevada," (Special Report, Colorado State College of Agriculture and Mechanic Arts, Fort Collins, 1940), 77 pp.

helping boys develop outstanding programs of supervised farming. Thirty-eight state supervisors, thirty-three teacher trainers, and sixty-one teachers responded. These men were asked to evaluate each of fifty-eight activities on the basis of its importance.

The following activities were judged "very important" by at least three-fourths of the raters: (1) seeing there is a satisfactory parent-son relationship; (2) securing parent cooperation and support; (3) seeing that boy keeps records of all expenses and income in projects; (4) helping boy with work at critical periods. Two-thirds of the evaluators felt that assisting the boy to keep records of all items was "very important."

Approximately six out of ten of the men indicated that (1) assisting boy's study and analysis of the home farm situation and (2) seeing that boy keeps records of all labor involved in his farm practice program were "very important." Substantially fewer of the raters (forty-two per cent) felt that conducting project tours with boys and others to evaluate work being done was "very important." Only one-third of them rated the keeping of a written supervision record of the boy's farm practice work as "very important." Helping the boy secure a definite written agreement between him and his

parents was considered "very important" by only twenty per cent of the evaluators.

Perhaps, Jeppson's study would have been more revealing if he had separated the responses received from the state supervisors, the teacher trainers and the sixty-one teachers who completed his questionnaire. The reader of his report may be inclined to wonder whether these three groups are sufficiently homogeneous to have treated their responses together.

One of the earlier attempts to study a selected group of teachers in reference to supervised farming activities was made by Swanson.[14] He sent questionnaires to the state supervisors in ten states with a request that they be mailed to the ten men considered most successful in teaching vocational agriculture and conducting supervised farming. Fifty-eight men in nine states returned questionnaires.

Since this study was made during the early stages of the development of the program of vocational agriculture, it is understandable that a rather restricted concept of the on-farm instructional activities of the

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[14] Herbert B. Swanson, "The Home Project as a Basis for Supervised Practice in Secondary Vocational Agriculture under the Smith-Hughes Act of 1917," (unpublished Master's thesis, Iowa State College, Ames, 1925), 148 pp.

teacher of vocational agriculture is indicated in the title of Swanson's investigation, "The Home Project as a Basis for Supervised Practice in Secondary Vocational Agriculture under the Smith-Hughes Act of 1917." The purpose which he stated for his study, that of "Building an effective program of supervised practice for secondary schools in vocational agriculture based upon the home project," obviously, was not clearly defined. This seeming failure to adequately point up the major purposes of his investigation may explain the rather loosely presented report which appears to have resulted.

Among other findings, Swanson revealed that a majority of the instructors who responded to his questionnaire (1) required a student to have a home project before enrolling in vocational agriculture; (2) used either a verbal or written project agreement; (3) reported that the boy owned the animals in livestock projects; (4) reported the boy as having full management of his project.

Swanson's study showed considerable variation in the number of visits which teachers reported they had made to a pupil's farming program. The visits ranged from none to thirty during the year and from one to twelve during the summer. Nine was the modal number of visits reported for the school year and six in the summer. Eighteen reported no specific number of visits during the

school year but indicated they were made "as needed." Similarly, twelve out of the fifty-eight teachers made visits "as needed" in the summer.

Deyoe and Masters[15] studied a selected group of thirty departments in Illinois but they confined their investigation to a special phase of supervised farming, that of isolating and enumerating some of the practices used by teachers of vocational agriculture in selecting and initiating good programs of supervised farming. These selected departments were believed to have above average programs of supervised farming on the basis of an examination of annual reports and the advice of teacher trainers and supervisors in Illinois. There was no description of the manner in which the annual reports of supervised farming were examined but only a statement that they were examined.

The teacher was visited and interviewed in each of the thirty schools. In addition, two first-year students considered average or above average in their programs of supervised farming were interviewed and a

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[15] George P. Deyoe with William D. Masters, Practices and Special Factors in Selecting and Initiating Programs of Supervised Farming in Vocational Agriculture (Urbana, Illinois: Division of Agricultural Education, University of Illinois, 1950), 20 pp.

visit was made to the farm home of each to interview the parents.

The study revealed that ten practices were used by teachers in half or more of the thirty departments in selecting and starting programs of supervised farming.[16]

1. Provide class instruction, early in the school year on selecting and starting programs of supervised farming
2. Utilize activities, sponsored by the F. F. A. [Future Farmers of America] Chapter, which aid or motivate students in starting programs of supervised farming
3. Use conference periods in school to discuss supervised farming with individual students
4. Make pre-enrollment contacts, with prospective students, which aid in determining enrollments in vocational agriculture
5. Make visits to farms, prior to enrollment and/or early in the school year, to discuss supervised farming with boys and parents
6. Assist students to make estimates of receipts and expenses of ownership projects under consideration
7. Guide students to make surveys of home farms to determine important enterprises, facilities, and needs as a basis for selecting activities of supervised farming
8. Provide a separate class for first-year students
9. Develop definite business agreements, between boys and parents, for programs of supervised farming
10. Hold group meetings with parents early in the school year to discuss supervised farming

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[16] Ibid., p. 5.

While stating their views on the purposes of supervised farming during interviews, parents tended to emphasize educational values, while their sons placed greatest stress on material outcomes. Fifty of the sixty boys who were interviewed revealed that they had definite business agreements with their parents.

STUDIES INCLUDING MORE THAN ONE PHASE OF SUPERVISED FARMING

Peterson[17] studied the supervised farming programs of five schools in New York, all of which were used as practice teaching centers for prospective teachers of vocational agriculture. The data were obtained by means of questionnaires to the 198 boys enrolled in vocational agriculture in these departments, their parents, and the seven teachers of vocational agriculture employed in the five schools. Personal interviews were had with school officials in the schools where the departments were located.

Findings related to this study included: (1) Slightly more than one-fifth of the students were town boys;

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[17] Milo J. Peterson, "Factors Influencing the Success or Failure of a Selected Number of Supervised Farming Programs," (unpublished doctoral dissertation, Cornell University, Ithaca, New York, 1940), 133 pp.

(2) nearly three-fourths of the students had made no plans for their eventual establishment as farm operators; (3) only three per cent of the students had any kind of written agreement; (4) approximately one-fourth of the students had no assets in farming, either before or after enrolling in vocational agriculture; (5) almost three-fourths of the parents reported that the teacher had not explained the purpose of supervised farming work; (6) nearly all of the parents (ninety-eight per cent) agreed that a high school boy should have the responsibility for crops and livestock of his own as a part of his learning; (7) about six out of every ten boys reported that they had made no plans whatsoever concerning their supervised farming nor had a conference with the teacher in regard to planning and selection of their programs of supervised farming; (8) one-third of the boys reported that the teacher had not visited them while about two-thirds indicated that they had kept records of their supervised farming.

When one considers that the programs of supervised farming included in Peterson's study represented only a very small segment of the total number of programs, and that the programs studied could be expected to be somewhat exceptional since they were a part of schools used as practice-teaching centers, it is possible that

he may have tended to generalize beyond the point that the limitations of his study would permit. His practice of expressing data relating to the responses of the seven teachers as a per cent of the group could give a distorted picture of this phase of the investigation to the uncritical reader.

Howard Allen[18] made visits to nineteen schools in New York and to twenty-one in West Virginia for the purpose of studying programs of supervised farming. Thirty-nine teachers of vocational agriculture and 125 parents were interviewed. He visited 180 homes.

The programs of twelve teachers were selected and discussed in some detail. His critical evaluation of the activities used by teachers in planning seems pertinent to this study. In the matter of planning he reported: "Teacher activities aimed specifically toward planning long-time programs cooperatively were conspicuous by their absence."[19] His observations regarding agreements seem relevant:

> Efforts to secure agreements with parents were confined for the most part to whatever the

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[18] Howard B. Allen, "A Study of the Activities of Vocational Agriculture in Utilizing the Pupils' Home-Farm Resources for Farm Practice," (unpublished doctoral dissertation, Cornell University, Ithaca, New York, 1932), 215 pp.

[19] Ibid., p. 152.

pupils arranged at home under pressure of a requirement.[20]

Allen reported his study in a smooth, polished style. His presentation reflected the ability of an unusually capable writer. Yet many research workers who review his study may find themselves coming to the end of the report asking the question, "What did the investigator find out?" Perhaps, this study might have been substantially strengthened had Allen worked up a detailed analysis and interpretation of the data from all of the cases studied instead of concentrating his attention largely on only twelve of them.

Robinson[21] used a questionnaire check-list to investigate the efficiency of the supervised farming programs conducted by boys enrolled in twenty-two departments in vocational agriculture near Reynolds, Illinois. Among other results, his findings revealed that (1) ten teachers of the twenty-two studied, rarely or not at all, made a survey of enterprises on the home farm with students; (2) twenty out of twenty-two teachers, rarely or

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[20] Ibid., p. 154.

[21] Ross O. Robinson, "Efficiency of Supervised Farm-Practice Work in Twenty-Two Departments of Vocational Agriculture Near Reynolds, Illinois," (unpublished Master's thesis, Colorado State College of Agriculture and Mechanic Arts, Fort Collins, 1940), 104 pp.

not at all, had signed a written project agreement; (3) nine out of the twenty-two teachers rarely had students make a budget for each project; (4) thirteen out of the twenty-two teachers, rarely or not at all, examined project records during home visits.

Robinson's study is unique among all of the investigations reviewed in this chapter in that his is the only one in which there was employed a statistical test of significance to the data collected.

Kirkland[22] used a form from the U. S. Office of Education to study programs of supervised farming conducted in eighteen departments of vocational agriculture in Tennessee. This form was carried by the investigator to each of the eighteen departments and filled out during an interview with each student enrolled in vocational agriculture.

Some of the findings brought out by this survey were: (1) a large majority of the students had some degree of financial interest in their projects, either as owners, part owners, or renters. Thirty per cent of the boys had complete ownership while only six per cent

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[22] James B. Kirkland, "A Study of Supervised Farm Practice Programs in Certain Schools of Tennessee," (unpublished Master's thesis, University of Tennessee, Knoxville, 1936), 66 pp.

had no financial interest in their programs of supervised farming; (2) somewhat more than half of the students (57.4 per cent) formulated a long-time program of supervised farming at the beginning of the course in vocational agriculture; (3) the per cent of students engaging in supplementary farm practices as a part of their programs of supervised farming, ranged from about fifteen per cent to 100 per cent.

Kirkland's findings are not very closely associated with the stated purpose of his study, namely, "To determine how the departments of vocational agriculture in certain schools of Tennessee are planning and conducting supervised farm-practice programs." As is evidenced above, the results of his study are stated more in terms of the existing status of programs rather than how the programs are planned and conducted.

Eldridge[23] listed the following objectives for his study: (1) to show that there is a need for a more comprehensive conception of the scope, importance and efficiency of supervised practice in vocational agriculture in Colorado; (2) to show that supervised practice

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[23] Hubert D. Eldridge, "Determining Methods of Improving the Supervised Practice Program in Vocational Agriculture in the High Schools of Colorado," (unpublished Master's thesis, Colorado State College of Agriculture and Mechanic Arts, Fort Collins, 1929), 97 pp.

in vocational education in agriculture in Colorado could be improved; and (3) to develop methods of improving supervised practice in vocational agriculture in Colorado. By way of a general criticism of this investigation, Eldridge seemed to lose sight of these stated objectives as his study unfolded.

Knight[24] also used a questionnaire to study the procedures and practices followed by teachers of vocational agriculture in Tennessee in conducting programs of supervised farming. The questionnaires were submitted during sectional conferences of teachers held in June, 1942. A total of 171 teachers furnished usable data, or approximately eighty per cent of the total number of white teachers.

This study revealed that approximately two-thirds of the teachers informed new students concerning supervised farming during the first week of school. The most commonly used techniques to stimulate student interest in supervised farming and the number of times reported by the teachers were: opportunity to make money, 57; comparison of various programs, 42; visits to projects,

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[24] E. B. Knight, "Procedures and Practices of Tennessee Teachers of Vocational Agriculture in Supervising Farming Programs of All-Day Students," (Nonthesis Study, University of Tennessee, Knoxville, 1942), 50 pp.

38; fairs, contests, exhibits, prizes, 35; stressing personal benefits, 24; publicity, pictures, 22; advanced F. F. A. degrees, 19. A majority of the teachers (159) relied on personal interviews, largely while visiting the pupils' homes, to acquaint parents with supervised farming.

Eight out of ten of the teachers indicated that their new students had programs of supervised farming in operation by the end of the first semester. Two-thirds of the teachers used a written project agreement only. Eighty-nine teachers used the form which appears in the supervised farm program record book officially adopted in Tennessee.

Help from parents or other relatives was mentioned most frequently as the method used to finance the students' programs of supervised farming. Considerable variation existed in the percentage of students having ownership in projects. Two-thirds of the teachers estimated that fifty per cent or more of their students had ownership in their programs of supervised farming. The average number of visits per student, which the teacher reported having made during the year, ranged from one to twenty-four with a median of five and three tenths.

Abrams[25] was another investigator to use the questionnaire to study programs of supervised farming. One hundred twenty-two of the 191 teachers in Louisiana responded to his inquiry which was designed to determine practices used in the development and supervision of students' farming programs.

Responses of these teachers indicated that nearly three-fourths of them worked individually with parents in building the students' programs of supervised farming. However, less than half of them (forty-three per cent) attempted to familiarize parents with the purposes of supervised farming before the student entered high school. Most of the teachers (ninety-five per cent) reported that they used a special program of instruction to launch students into supervised farming. The time spent in this activity was reported to range from one week to sixteen weeks while six weeks was the modal time indicated by the teachers. Only forty-six per cent of the teachers reported the use of a general farm survey. "After school" was the time when most of the teachers said they made home visits.

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[25] Morris N. Abrams, "The Practices Used in the Development and Supervision of Supervised Farming by Teachers of Vocational Agriculture in Louisiana," (unpublished Master's thesis, Louisiana State University, Baton Rouge, 1947), 98 pp.

Kiltz[26] studied twelve departments of vocational agriculture in Western Indiana. One of the purposes of the study was to discover to what extent certain specified methods are being used to determine the farm training needs of the pupil enrolled in vocational agriculture and to set up and relate his program of supervised farm study to these training needs. Kiltz' data were gathered by questionnaires to the 240 boys enrolled in the twelve departments, by an examination of records in the office of the State Supervisor of Vocational Agriculture, and by personal contacts of the investigator.

He found that approximately forty-five per cent of the students had not planned for more than one year of study in supervised farming. He discovered what seemed to be a common deficiency in that boys did not broaden their programs of supervised farming to include a number of crop and livestock enterprises, and they were not continuing production in the same enterprise for more than one year. Approximately, three-fourths of the boys had some degree of ownership in their programs of supervised farming. Over half of the teachers studied

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[26] Kenneth W. Kiltz, "The Relation Between the Supervised Farm Practice Programs and the Farm Resources of the Boys of Twelve Vocational Agriculture Departments in Western Indiana," (unpublished Master's thesis, Cornell University, Ithaca, New York, 1930), 144 pp.

(fifty-five per cent) made organized surveys to discover training needs of their students. Practices of the teachers in determining the students' programs of supervised farming in order of frequency were: (1) conversation with the boy; (2) analysis of the farm with the boy at school; (3) study of the boy's interest; (4) conversation with the boy and his parents. There was considerable variation in the number of home visits made by the teacher. The average number of visits per student per year varied from one to seven and a half.

Owen Allen[27] submitted a questionnaire to ten teachers and 205 boys enrolled in their departments for the purpose of determining the factors which influenced the type of supervised farming programs which were carried by the students.

From the phrasing which he used to state his factors, it is a bit difficult to assess the findings of his study. While they were not clearly pointed up, the factors which Allen listed suggest some important considerations in the development of programs of supervised farming.

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[27] Owen W. Allen, "A Study of the Factors Affecting the Supervised Farm Training Programs of Vocational Agriculture Students of the Salt River Valley of Arizona," (unpublished Master's thesis, Colorado State College of Agriculture and Mechanic Arts, Fort Collins, 1937), 77 pp.

Bible[28] also used the questionnaire to study factors affecting the development of programs of supervised farming. He asked 432 pupils in fifteen schools in North Central West Virginia and fifty-two of the eighty-eight teachers of vocational agriculture in West Virginia to indicate the relative importance of nineteen selected factors as they affected programs of supervised farming.

Bible listed the following factors as those which were considered of "great importance" by seventy per cent or more of the students: (1) student's interest in vocational agriculture; (2) cooperation given by parents; (3) ownership of farm by father; (4) opportunity for student to make some money; and (5) the teacher's influence. The same factors, and in addition the factors "kind of crops and livestock on home farm" and "our home farm conditions" were judged "very important" by seventy per cent or more of the teachers.

In an attempt to determine characteristics of the supervised farming program in Nebraska, Deems[29]

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[28] Bond L. Bible, "Significant Factors in the Development of a Long-Time Supervised Farm Practice Program," (unpublished Master's thesis, The Pennsylvania State College, State College, 1940), 69 pp.

[29] Howard W. Deems, "A Study of Selected Aspects of the Vocational Agriculture Supervised Farming Program in Nebraska," (unpublished Master's thesis, University of Nebraska, Lincoln, 1950), 97 pp.

submitted questionnaires to twenty-three teachers of vocational agriculture in that state who had been in the department where they were teaching for five years or more. All of the questionnaires, except two, were filled out by the teachers during a visit by the investigator to their schools. Deems supplemented the data from these questionnaires by securing additional information from records and reports in the State Department of Vocational Agriculture in Nebraska.

Deems arbitrarily assigned a standard point-value for each production project, for each improvement project, and for each supplementary farm practice completed by a student. By totaling these points, he was able to calculate a numerical measure of the size of each student's farming program. From these data, he made several interesting comparisons.

Among other findings, Deems' study revealed that an enrollment in a department, which included a large percentage of town boys, was definitely associated with smaller programs of supervised farming. In contrast he found that a greater number of hours devoted to a study of specific problems on supervised farming in the classroom resulted in a larger average size of each student's program of supervised farming. The number and the length of farm visits made by the teacher appeared

to influence the size of the supervised farming programs to only a limited extent, if at all.

From a list of fifteen factors presented by the investigator, the following three were judged more important by the twenty-three instructors in motivating students in the development of a good farming program: (1) parents take interest and cooperate very well; (2) boy wants to start farming; (3) boy has a large amount of money or credit.

Evans[30] had questionnaires presented to selected students in fifty departments of vocational agriculture in Pennsylvania to determine pupil reactions to the kind of supervision and visitation which they wished to have from their teachers. The departments were sampled at random and six questionnaires were mailed to each teacher with instructions to have them filled out by two students whom the teacher rated high in scholarship, two students judged medium, and two rated low in scholarship.

There appeared to be no significant differences in the responses made by the students in the three scholarship groups. Of the 235 students who submitted

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[30] Robert E. Evans, "Pupil Reactions to Project Visitation and Supervision in Vocational Agriculture," (unpublished Master's thesis, The Pennsylvania State College, State College, 1946), 43 pp.

questionnaires, at least nine out of every ten of them preferred that the teacher: (1) completely inform them concerning the supervised farming program before they enrolled in vocational agriculture; (2) assist them in determining projects that best fit their farming situations; (3) insist that their project records be kept up to date; (4) check their project records for completeness during each visit; (5) encourage students to have full ownership of their programs of supervised farming; (6) offer criticism that will lead to the improvement of the quality of their livestock and crops.

In general, this study seemed to reveal that students were ready to cooperate with the teacher and that they desire his help in carrying out their individual programs of supervised farming. There was a notable exception. Only thirty per cent of the students preferred to have the teacher notify them a few days before he planned to make a visit.

Shontz[31] studied the reactions of former students to determine some of the strengths and weaknesses of programs of supervised farming. A list of 574 young men

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[31] David F. Shontz, "Improvement of the Supervised Farming Program in Vocational Agriculture Based on Opinions of Former Students Who Are Now Established in Farming," (unpublished Master's thesis, The Pennsylvania State College, State College, 1945), 78 pp.

considered established in farming was secured with the help of thirty-three of the thirty-five district supervisors in vocational agriculture in Pennsylvania. This list was judged to constitute a representative sample of the young men engaged in farming in Pennsylvania who had one or more years of vocational agriculture in high school. Questionnaires were sent to these young men on which they were asked to react to certain activities as they related to the programs of supervised farming which they carried while in high school.

In general these young men reflected a favorable attitude toward the work. Eighty per cent or more of them indicated that (1) their projects were in enterprises in which they expected to engage as farmers; (2) the farming enterprises in their project programs included those commonly found in their community; (3) the teacher gave them assistance during the difficult periods in carrying out their projects; (4) approved practices suggested by the teacher were followed; (5) definite agreements were made with parents concerning management of projects; (6) students did the majority of the work on their projects; (7) students had definite managerial experiences in connection with their projects; (8) their project program helped them to get started in farming.

STUDIES GIVING SPECIAL CONSIDERATION TO DIFFICULTIES IN CONDUCTING SUPERVISED FARMING

A few studies have been completed which have had as one of their primary purposes a discovery of the difficulties experienced by teachers of vocational agriculture in conducting programs of supervised farming. Field[32] asked thirty-five state supervisors to list the more common causes of failure among teachers of vocational agriculture. "Weak in supervised farm practice" was reported most frequently of all causes, or by twenty-nine of the supervisors. Similarly, when the supervisors were asked to indicate the type of improvement most needed by teachers of vocational agriculture as a group, "supervision of farm practice" was reported thirty-one times or most frequently of all.[33]

In an attempt to gain some knowledge of the relative difficulty of the activities of teachers of vocational agriculture, Thommasson[34] prepared a check-list of

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[32] Albert M. Field, "An Evaluation of Certain Phases of Theory and Practice in the Supervision of Instruction in Vocational Agriculture with a Suggestive Program for Improvement," (unpublished doctoral dissertation, Cornell University, Ithaca, New York, 1929), 354 pp.

[33] Ibid., p. 55.

[34] M. E. Thomasson, "Difficulties of Teachers," (unpublished Master's thesis, University of Minnesota, Minneapolis, 1930), 151 pp.

professional activities that were thought to involve difficulty. This list was submitted to 126 Negro teachers of vocational agriculture in the states of Virginia, North Carolina, Georgia, Florida, and Arkansas. One hundred six teachers returned usable data.

The area of supervised farming, although including but nine activities in the total of fifty-eight, had six ranking among the first fifteen considered of greatest difficulty. The first four ranks were given to the following activities: (1) getting parents of each boy to permit him to keep the net income from his project; (2) getting the parents of the pupil to allow him to conduct his project according to improved farm practice; (3) getting each pupil to develop a project program that is large and varied enough to provide sufficient training in all important local farm jobs; (4) getting the pupils to keep satisfactory records of their projects. The activity "getting the pupils to work out their own project plans and study outlines" ranked nine, while "securing freedom for each boy to manage his project himself" ranked ten.

As one phase of his study to discover the amount, kinds, and nature of pre-employment training necessary to conduct supervised farm practice with all-day pupils,

Spanton[35] asked 267 teachers of vocational agriculture to indicate on a check-list the degree of importance and the difficulty in learning to perform each of seventy-nine activities in supervised farming.

While the findings of his study are too extensive to be reported in detail in this review, one of his concluding statements on parent-son-teacher relationships seemed particularly significant. He asserted:

> One of the greatest difficulties confronted by teachers (especially new or inexperienced teachers) in conducting supervised practice activities consists in their inability to deal effectively with human relationship problems which is so essential in dealing individually and collectively with farm boys and their parents particularly at the time arrangements are being made for the pupils' supervised farm practice programs.[36]

Wilhoit[37] sent a questionnaire to 114 Iowa teachers of vocational agriculture for the purpose of discovering difficulties which they experienced in conducting supervised farming. Seventy teachers returned this

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[35] W. T. Spanton, "The Pre-Employment Training of Teachers of Vocational Agriculture to Conduct Supervised Farm Practice in All-Day Schools," (unpublished doctoral dissertation, American University, Washington, D. C., 1932), 245 pp.

[36] Ibid., p. 206.

[37] Samuel F. Wilhoit, "An Analysis of the Difficulties Involved in the Supervision of Projects in Vocational Agriculture," (unpublished Master's thesis, Iowa State College, Ames, 1927), 113 pp.

survey. The difficulties listed most frequently were: (1) fathers see no value or lack interest in new ideas or practices; (2) lack of cooperation between boy and father; (3) lack of interest on the part of boy; (4) lack of money to provide and carry out good projects; (5) pupils keep poor records.

Perhaps Wilhoit's study could have been improved not only in its organization and execution but also in its quality of reporting.

Buck[38] also used a questionnaire to discover difficulties of teachers of vocational agriculture. The questionnaire was sent to 268 teachers in New York, Tennessee, Texas, and West Virginia. He received 180 returns from this survey. Responses from these teachers, according to Buck, showed the following to represent the items of greatest difficulty: (1) to have boy visit his project with you during school hours on account of conflicts with studies; (2) to get "man-size" projects; (3) to get pupils to use data after they are summarized; (4) to get work done in a way that the pupil will learn most from it; (5) to get project selected on a business basis.

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[38] John P. Buck, "An Analysis of Felt Difficulties of Teachers of Vocational Agriculture in Home Project Work," (unpublished Master's thesis, Cornell University, Ithaca, New York, 1925), 100 pp.

Blackburn[39] was another investigator to use a questionnaire to discover difficulties met by teachers of vocational agriculture in conducting supervised farming. This study had been so inadequately reported that it was difficult to comprehend clearly all of the findings. According to data presented, three-fourths of the teachers reported that their students did not keep records. They also indicated that sixty per cent of their students never kept project accounts up to date.

Adams[40] set up the discovery of difficulties encountered by teachers of vocational agriculture as a major purpose of his study. He sent a questionnaire to 117 teachers in New York. Ninety-seven instructors returned his survey. His study indicated that it is more difficult to maintain high standards in projects than to carry out any other phase of supervised farming. The data also revealed that athletics was the school activity which interfered most in conducting programs of supervised farming. Developing satisfactory farming

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[39] James W. Blackburn, "A Study of the Difficulties Encountered in Supervised Farm Practice in All Agricultural Departments of Massachusetts," (unpublished problem, University of Massachusetts, Amherst, 1941), 44 pp.

[40] Wayne W. Adams, "The Launching of Vocational Agriculture Boys into Supervised Farm Practice Work," (unpublished Master's thesis, Cornell University, Ithaca, New York, 1931), 71 pp.

programs for town boys was recognized as another major problem.

STUDIES RELATING TO A PARTICULAR ASPECT OR PHASE OF SUPERVISED FARMING

The research studies reviewed in the remaining pages of this chapter relate largely to some single phase of supervised farming.

Phipps[41] made a study which had as one of its major purposes the discovery of procedures and methods used by teachers of vocational agriculture in promoting and motivating programs of supervised farming. As one phase of the investigation, a questionnaire was prepared and submitted to 337 teachers of vocational agriculture in Illinois. Two hundred eighty-five, or 84.5 per cent of the questionnaires, were returned. The teachers were not only asked to check the activities they used but also to indicate the value they placed on them.

Of the thirty-seven promotional and motivating activities listed, ten were used by at least three-fourths of the 285 teachers: (1) discussion of opportunities for

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[41] Lloyd J. Phipps, Supervised Farming Programs in Illinois, University of Illinois Bulletin, No. 83, College of Education, Bureau of Research and Service (Urbana, Illinois: University of Illinois, 1949), 39 pp.

profit from farming programs; (2) discussion of opportunities for learning in connection with farming programs; (3) showing at fairs; (4) field trips and tours; (5) discussions of how farming programs help one become a farmer; (6) participation in judging contests; (7) discussions of accomplishments of other boys; (8) discussion of state requirements for supervised farming programs; (9) newspaper publicity; (10) grading of record books.

In terms of value placed on the activity, the ten rating highest were: (1) discussion of opportunities for profit from farming programs; (2) discussion of opportunities for learning in connection with farming programs; (3) field trips and tours; (4) discussion of how farming programs help one become a farmer; (5) local community or Future Farmers of America fair; (6) discussion of accomplishments of other boys; (7) farm shop activities; (8) use of point systems, awards, and activity charts; (9) use of older boys to discuss their farming programs with beginners; (10) showing at fairs.

It can be seen that some activities, even though used by most of the teachers, did not show a high value rating by the instructors. Showing at fairs, for instance, ranked third in terms of use by teachers but was assigned a value rank of ten; participation in judging

contests ranked sixth in use but nineteenth in value; discussion of state requirements for supervised farming programs was eighth in use but ranked twenty-second in value; and newspaper publicity was ninth in use but was given a rank of only thirtieth in value.

In another part of his study, Phipps visited eleven schools to conduct interviews with the teachers and an average of four boys in each department of vocational agriculture. He reported that no attempt was made to select departments with the best programs. The factors considered in selection of the eleven schools were listed but it was not clearly reported how these factors were used. The boys interviewed in each department were judged by their instructors to have good farming programs.

From the boys, Phipps tried to find out what motivated them to develop their farming programs. On the basis of frequency of mention and intensity of feelings, the following seemed to be the most important: (1) cooperation of parents; (2) experience with supervised farming program by older brother or relative; (3) opportunity to farm; (4) Future Farmer of America Program; (5) tradition in department or community; (6) classroom discussion of farming program.

Burger[42] made a study of plan and record books used in conducting supervised farming. He designed a questionnaire on the subject which was submitted to fifty professors of agricultural education in the forty-eight states, Hawaii, and Puerto Rico. Twenty-nine of these men responded. He also requested copies of plan and record books used and received materials from thirty-seven states.

Eleven states used two books, six states used three or more books while two states had no book at all. Some of the more prominent features of these books and the number of states providing space for them were: map of home farm, 22; long-time plans, 26; and written agreement, 23. Only three states indicated that oral agreements were sufficient.

Brakensiek[43] attempted to develop some practical principles for the improvement of planning and record books. He analyzed twenty-seven record and plan books and used a questionnaire to solicit the opinion of fifty

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[42] Warren W. Burger, "An Analysis of Plan and Record Books used in Conducting Supervised Farming Programs," (unpublished Master's thesis, Cornell University, Ithaca, New York, 1947), 84 pp.

[43] Irwin L. Brakensiek, "An Analysis of Farm Practice Books Now in Use and Opinions of Teachers Concerning Them as a Basis for Their Improvement," (unpublished Master's thesis, University of Illinois, Urbana, 1940), 74 pp.

teachers of vocational agriculture in Illinois. Among other findings, he concluded that there is little agreement as to what should be included in a record and planning book and how it should be organized. In general, books were criticized for failure to give a picture of the farming program as a whole, for neglecting educational outcomes as measured by changes in the boy, and for not providing space for the student to set up definite goals or objectives.

In a study of parental cooperation in relation to improving programs of supervised farming, Shaw[44] interviewed eighteen teachers and presented a questionnaire to other instructors of vocational agriculture in North Carolina. He secured a total of seventy-six completed questionnaires including those received during the personal interviews.

He found that only five of the seventy-six teachers were making regular use of meetings to familiarize parents with the program of vocational agriculture. Eighteen teachers reported that they used this method

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[44] William C. Shaw, "Improving Supervised Farming Programs in North Carolina by Means of Parental Cooperation," (unpublished Master's thesis, State College of Agriculture and Engineering of the University of North Carolina, Raleigh, 1947), 90 pp.

somewhat while fifty-three revealed that they did not hold this kind of meeting at all.

Shaw used a substantial portion of his report to present a plan for a series of meetings to acquaint parents with the program of vocational agriculture, including supervised farming. While purportedly based on the experiences and recommendations of leaders in the field of vocational agriculture, it does not stand too careful examination. One develops the feeling that his plan is based largely on personal opinion rather than the ideas of the leaders. Many of his citations are pointed toward approved techniques for conducting adult meetings in general. It is questionable whether he can apply these techniques specifically to his proposal for conducting a series of parent-meetings to develop an understanding of vocational agriculture. He fails to justify the number and content of the eight meetings which he suggests. His plan gives the impression of an attempt to superimpose a program on parents relating to matters which the investigator feels they should know about.

Considered on the whole, it is very doubtful whether Shaw effectively realized the several purposes which he drew up in his study.

Kirkpatrick[45] presented a questionnaire to ninety teachers of vocational agriculture in Oklahoma and examined seventy-five completed record books from fifteen schools in an attempt to determine some of the methods used and difficulties encountered in getting boys to keep accurate and complete records. The findings reveal that a majority of the students were not interested in keeping records and did not keep accurate records. Only thirty per cent of the teachers made it a practice to inspect records each time they visited the student's farming program. Kirkpatrick concludes: "The findings of this study indicate clearly that teachers of vocational agriculture are not using effective methods in teaching project record keeping, accounting, and analysis."[46]

Wiswall[47] made a special study of records in the supervisory office in Idaho to determine the extent of project visitation by teachers in that state. He found the average number of visits per boy in a year was six

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[45] Allan G. Kirkpatrick, "A Study of Supervised Practice Records and Accounts," (unpublished Master's thesis, Oklahoma Agricultural and Mechanical College, Stillwater, 1934), 50 pp.

[46] Ibid., p. 42.

[47] Clinton H. Wiswall, "A Study of Project Supervision in Idaho for the Years 1932-1933 and 1933-1934," (unpublished Master's thesis, University of Idaho, Moscow, 1936), 45 pp.

and one tenth, with a range in average visits from eleven and four tenths down to two.

Lemon[48] seems to have done a rather effective job of studying thirty-two Ohio teachers for the purpose of isolating the most effective practices used by teachers of vocational agriculture while supervising farming programs of students. Each of four state supervisors was asked to select eight teachers who were conducting successful programs. These men were visited and interviewed with the aid of a questionnaire.

Most of the teachers made both announced and unannounced visits. The preferred time of the day for summer visits was in the morning from seven to ten. During the school year, most teachers preferred to make home visits after school. The largest number of teachers desired to make two visits during an evening, each lasting approximately an hour. The only items included in the record of farm visits by a majority of the teachers were name of boy, date of visit, and recommendations.

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[48] Ralph D. Lemon, "Farming Program Supervision of All-Day Students as Conducted by Selected Teachers of Vocational Agriculture in Ohio," (unpublished Master's thesis, Ohio State University, Columbus, 1946), 63 pp.

In another of the better studies reviewed, Hull[49] evaluated father-son agreements and partnerships existing among all-day students in vocational agriculture in North Carolina. One hundred teachers were selected by random sampling. In addition to asking them to fill out a questionnaire, he requested them to give the names of any of their all-day students who had partnership agreements. The first 106 names received were asked to participate in his study. Nineteen of these young men were interviewed while fifty-six returned a questionnaire.

Eighty-six per cent of the teachers were in favor of written agreements but only sixty-nine per cent indicated that their students had written agreements. Fifty-six per cent of the fifty-five teachers responding to the questionnaire indicated that the project agreement was signed by the student, the father, and the teacher. The students received all of the income from fifty per cent of their projects, and one fourth the income from twelve per cent of their projects. Fifty-six per cent of the students favored written project agreements while

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[49] Billy W. Hull, "A Study of Father-Son Agreements Among Students of Vocational Agriculture in North Carolina," (unpublished Master's thesis, State College of Agriculture and Engineering of the University of North Carolina, Raleigh, 1949), 105 pp.

twenty-one per cent favored oral agreements. Sixty-one per cent of the students had written agreements while thirty-nine had oral agreements. The fathers of forty-seven per cent of the students had signed an agreement. Teachers had signed project agreements for forty-two per cent of the seventy-four boys surveyed. Fifty-one per cent of the boys planned to farm, twenty-nine per cent were undecided while twenty per cent did not plan to farm.

SUMMARY

Before bringing this review to a close, it seems well to pause briefly to examine the studies reported in this chapter for the purpose of pointing out, in a general way, how those investigations differ from the one completed by the writer and how the present study makes a special contribution to research in supervised farming.

In the method of collecting data, a majority of the investigators relied primarily upon some type of mail questionnaire. In the main these were designed in such a way that the respondent could not exercise a great deal of choice when filling out the questionnaire. A few of the investigators, such as Rodeberg, Kirkland, Deems, Lemon, and Shaw, collected data by means of a personal interview but, as in the case of those who gathered data by mail, they used a prepared questionnaire while

conducting these interviews, which largely limited the responses of the informants. Seemingly, about the only apparent advantage of the interview over the mail questionnaire in these instances, was to insure that the data would be made available.

Phipps and Sweany employed a type of interview which seemed to allow the informant considerably more freedom in making his responses but the interview was used only in a very limited way in their studies. Deyoe and Masters, Howard Allen, and workers in the National Evaluative Study of Local Programs of vocational agriculture, made extensive use of the interview. The study by Deyoe and Masters was confined to one phase of supervised farming, that of selecting and initiating programs. The National Evaluative Study, however, was not even limited to supervised farming but considered all aspects of vocational agriculture. Furthermore, the primary emphasis was on programs rather than on teachers associated with the programs. Allen's study, while confined to supervised farming, was so unstructured and so general in character that his interviews did not seem to yield very much in the way of specific findings.

A few investigators examined recorded data, usually in state reports, primarily to round out and to supplement data secured from other sources. Rodeberg, Sweany,

Deyoe and Masters, and Deems are examples of such cases. Wiswall's study, however, was confined almost entirely to an analysis of data from state reports. Rodeberg, Sweany, and Deems made considerable use of information from state sources but for different purposes. Deyoe and Masters merely indicated that they had examined state reports but they did not show how they had used them.

In the present study several approaches were used to collect data. Special attention was given to the interview as a means of collecting information. It is possible that Howard Allen may have conducted as many or more interviews on supervised farming as the writer but, outside of Allen, it appears that no other independent investigator has made such an extensive use of the interview technique while confining his research to supervised farming. In so far as investigations in supervised farming are concerned, the present study is apparently unique in that the interview was conducted in such a way that it allowed a high degree of freedom in the responses given by the informant but at the same time provided a considerable amount of data which could be readily quantified.

The writer also made extensive use of recorded data in the present study. It appears that no other

independent investigation in supervised farming has involved quite as detailed and comprehensive analysis of data from summaries of school programs of supervised farming as has been included in the present study when the nine measures of effectiveness were applied to the final reports of eighty-four schools.

The writer made a limited but seemingly important use of the mail questionnaire when this device was employed to gather and evaluate measures of effectiveness in supervised farming.

Another important source of data was the literature. It is believed that the critical examination of expert opinion which is reported in Chapter IV as a part of the procedure involved in developing the ten working principles on conducting supervised farming, represents the most nearly complete compilation of thinking on the subject which has been written.

This study is also unique in that it focuses special attention on two groups of teachers, those in a selected stratum of eighty-four teachers who were determined to have the more effective and those found to have the less effective programs of supervised farming. The literature does not record any other study in supervised farming in which two extreme groups of teachers were segregated on the basis of their programs of supervised

farming as revealed in an examination of recorded data.

Sweany used such data in a limited way to determine thirty teachers in Iowa who had superior programs. Deyoe and Masters indicated that they examined state reports in Illinois as one source of information to reveal teachers with superior programs of supervised farming.

Rodeberg's efforts to have thirty-three teachers of vocational agriculture rated superior, average, and poor on the basis of independent judgments of their supervised farming programs by two state supervisors and a teacher trainer, seem to represent the only other attempt to divide teachers into groups prior to collecting data from them. He, of course, studied all three groups but with different objectives than were set up in the present study. In addition, he had a much higher proportion of the teachers included in his study who were classified in his extreme groups than was the case in the present investigation. Rodeberg included thirty per cent of the thirty-three teachers in his study in each extreme group while the present study had only fifteen per cent of the eighty-four teachers who had been in their present jobs three years or longer, classified in either of the extreme groups which were studied. Thus,

in summary, it can be stated that Rodeberg's study differed from the present one in (1) the method of selecting teachers to be studied; (2) the objectives of the study; and (3) the character of the groupings of teachers.

Campbell was another investigator to separate teachers into groups. He divided teachers into two groups on the basis of the quality of their programs of supervised farming as judged by a state supervisor. His two groups were established from teachers who had responded to a questionnaire which had been submitted in a random manner to instructors in four states. It can be seen that his study differed from the present one, among other ways, because: (1) his groups did not represent extremes; (2) his groups were established after data were collected from teachers; and (3) the teachers were classified on the basis of the judgment of quality of programs of supervised farming by a state supervisor.

While no other attempts were made to group teachers on the basis of the quality of programs of supervised farming, as one phase of the National Evaluative Study, the programs of supervised farming in 400 departments of vocational agriculture were divided into five groups on the basis of the pooled judgment of the evaluators who assisted with the study. In Michigan, at least, the departments examined were not randomly

selected but were chosen on the basis of the combined opinions of state supervisors and teacher trainers. It becomes apparent that this study also differs from the present one in many ways, among which are: (1) it considered all phases of a program of vocational agriculture; (2) it concentrated attention on programs rather than on teachers; and (3) it grouped departments which had not been randomly selected on the basis of judgment after data had been collected from them.

In addition to the unique character of the groups studied and the method of selecting them, special attention should be called to the instrument which was developed in the present investigation for measuring effectiveness of local programs of supervised farming. While further study and refinement of this device are needed, it conceivably could develop into a highly useful aid.

Finally, attention should be called to the effort which has been made in this study to discover reasons for the failure of teachers in the two groups to use certain recommended practices in supervised farming. It is believed that this is the first attempt made by any investigator to develop an explanation for the behavior patterns which exist among teachers while conducting programs of supervised farming.

CHAPTER IV

RECOMMENDED PRACTICES IN SUPERVISED FARMING

The major effort in this chapter has been centered on the development of working principles which embody recommended practices in conducting supervised farming in which there seems to be substantial agreement among the leadership in vocational agriculture. This purpose has been accomplished, primarily, by an examination of the literature.

Supervised farming in vocational agriculture is a comparatively new development in education. In so far as the writer is able to determine, education in vocational agriculture represents one of the first organized efforts on the part of the public school to utilize the student's home environment as a medium for teaching.

The job of launching into such a relatively uncharted area in education has been a task commanding the time and attention of numerous individuals, agencies, and groups. Writers have devoted entire volumes to a consideration of the subject.[1, 2, 3] A monthly publication

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[1] George P. Deyoe, Supervised Farming in Vocational Agriculture (Danville, Illinois: Interstate Printers & Publishers, 1945), 502 pp.

[2] Carsie Hammonds and W. R. Tabb, Your Farming Program (Lexington, Kentucky: Trafton Publishing Company, 1945), 174 pp.

for workers in the profession of teaching vocational agriculture, The Agricultural Education Magazine,[4] scarcely puts out an issue which does not have at least one article on supervised farming. Administrative agencies, both Federal and state, have published bulletins dealing entirely with the work.[5, 6, 7, 8, 9] Departments of teacher education provide both pre-service and in-service training in supervised farming, and in some

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[3] G. A. Schmidt, Projects and the Project Method in Agricultural Education (New York: The Century Co., 1926), xxvii + 360 pp.

[4] The Agricultural Education Magazine (Danville, Illinois: Interstate Printers & Publishers).

[5] Supervised Farm Practice Planning, Federal Board for Vocational Education, Bulletin No. 165, Agricultural Series No. 42 (Washington: Government Printing Office, 1932), 125 pp.

[6] Training Teachers in Supervised Farm Practice, Federal Board for Vocational Education, Bulletin No. 165, Agricultural Series No. 42 (Washington: Government Printing Office, 1932), 125 pp.

[7] W. A. Ross, D. M. Clements, and E. J. Johnson, Directing Vocational Agriculture Day-School Students in Developing Their Farming Programs, U. S. Office of Education, Vocational Division Bulletin No. 225, Agricultural Series No. 56 (Washington: Government Printing Office, 1944), 72 pp.

[8] Supervised Farm Practice, Bulletin No. 250, Revised (Lansing, Michigan: The State Board of Control for Vocational Education, 1942), 61 pp.

[9] Supervised Farming Programs in Vocational Agriculture, Bulletin No. 250, Revised (Lansing, Michigan: Department of Public Instruction, 1950), 61 pp.

instances go so far as to teach a special course in the subject. From personal observation, the writer has found that supervised farming is considered regularly at local, state, and regional conferences. This mass of writing and discussion, while seemingly unrelated and lacking in central purpose at times, has tended to assume rather definite patterns. Numerous ideas and suggestions have been presented, but the writer has found that these fall rather naturally into the ten statements of recommended practices which are listed below. Each statement is offered and then expert opinion is cited and frequently quoted for the purpose of substantiation. In the few instances when differences of opinion are expressed, they are listed also.

1. The teacher visits the home of each prospective student in vocational agriculture preceding enrollment for purposes of guidance and counseling. Students who have inadequate facilities for carrying on effective programs of supervised farming are discouraged from enrolling in vocational agriculture. Guidance and counseling, it seems, are now quite generally recognized as desirable responsibilities of any teacher, and the instructor of vocational agriculture is no exception. In many respects he is in a most favorable position to discharge this function for rural boys. The alert and active

teacher of agriculture is constantly in contact with rural people. It seems only natural, therefore, that his counsel would be welcomed by farm boys when they are making their educational and vocational decisions.

Humpherys recognized the strategic position of the teacher of vocational agriculture in this respect when he averred:

> The teacher of vocational agriculture holds a key position in a rural, high-school area. He, more than any other school official has his finger on the pulse of the community. He will come to realize that not all people on farms are farmers. He becomes intimately acquainted with the boys and the parents. If the teacher is a student of human nature and has a proper concept of the principles of guidance, he will influence materially the lives of the boys in the local community. He will be the means of discouraging some boys from following agriculture as a vocation. Others through his influence will follow agriculture as a vocation.[10]

In the last part of his statement, Humpherys emphasized guidance as an important responsibility of the teacher of agriculture. However, there is always a danger that the teacher may look upon his contacts with prospective students as a responsibility of recruitment of class membership instead of guidance and counseling. Such an approach, whether motivated by the necessity of maintaining minimum class enrollments to meet legal

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[10] L. R. Humpherys, "Whither Agricultural Education--in Supervised Farm Practice?" The Agricultural Education Magazine, 9:68, November, 1936.

requirements for reimbursement or any other reason, seems indefensible.

It is Martin's belief that the student should have complete freedom in deciding whether to enroll in or remain in a course in vocational agriculture. He declared:

> In American society the individual has a high degree of freedom in choosing a vocation. Society or its institutions do not select stalwart lads and make them into farmers regardless of individual preferences. A prevocational guidance program is planned to aid youth in arriving at an intelligent choice. The choice once made may be revised . . . Recruitment programs, on the other hand, may be primarily a means of filling the ranks to meet a false administrative standard of economy or efficiency. The prevocational guidance program should be designed to assure individual freedom of choice without coercion . . .[11]

Anderson indicated the need for some sort of selection when he declared, "Boys who are definitely not interested in farming should be directed away from vocational agriculture."[12] He went ahead to state a case for careful screening of students who enroll in vocational agriculture:

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[11] W. Howard Martin, "Guidance Function in Pre-Enrollment of All-Day Students," The Agricultural Education Magazine, 20:104, December, 1947.

[12] C. S. Anderson, "Occupational Interests of Farm Boys and Their Significance in Guidance," The Agricultural Education Magazine, 20:109, December, 1947.

> Generally speaking, we have been too concerned about numbers, about securing larger enrollments. A more careful screening of the boys we already have would carry us further on the way to accomplishing our objective: Namely, that those who study the subject of agriculture will enter the occupation of farming. And it may also be a favor to the boy who is screened, for he, too, does not want to lose valuable time and educational effort by preparing for a work that he does not expect to perform . . . But we must remember that the school is designed for the pupil, and that a program of vocational guidance within the school has not really begun to function effectively until it is directing pupils into and away from occupational pursuits in keeping with their real vocational interests.[13]

As has been stated, a student enrolling in vocational agriculture is required to carry on work in supervised farming under the direction of his teacher of agriculture. This, in turn, implies that the student has facilities for this training. Should adequacy of facilities be a determining factor in deciding whether a boy is to be permitted to enroll in vocational agriculture? Peterson agreed that it should and recommended: "Entrance into the course of study in vocational agriculture should be limited to boys with adequate facilities for conducting supervised farming programs."[14]

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[13] Anderson, loc. cit.

[14] Milo J. Peterson, "Some Observations on Supervised Farming Programs," The Agricultural Education Magazine, 20:134, January, 1948.

No attempt was made, however, in the National Vocational Act to determine adequacy of facilities "for directed or supervised practice in agriculture."[15] It seems to have been left largely to the discretion of the teacher whether the requirement has been satisfied by the student. As it will be revealed later in this report, there are those who would devise some means for the student to satisfy the legal requirement of supervised farming provided he desired to enroll in vocational agriculture. Other teachers take the position that only those students should be admitted to classes in vocational agriculture who can demonstrate to the teacher's satisfaction that they have available adequate facilities in farming. Mondart would probably lend his support to the latter group judging from his statement that:

> Not all boys entering or enrolled in schools offering vocational agriculture in Louisiana, or any other state, can meet the specific provisions of the National Vocational Education acts. Many of these boys have no interest in agriculture as a vocation and do not plan to farm at any time; few are actually engaged in the business of farming while in day classes; while some, regardless of their interests, do not have, and can not obtain necessary facilities for supervised farming. Administrators of vocational agriculture, according to law, are legally and morally

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[15] Section 10, Public No. 347, 64th Congress, S. 703. Approved February 23, 1917. United States Statutes at Large of the United States of America, 64th Congress, Volume XXXIX, Part 1, Public Laws (Washington: Government Printing Office, 1917), p. 934.

> obligated to exclude these boys from classes organized and taught by full-time teachers of vocational agriculture. This necessarily implies selection for training only those boys who desire, need, and have facilities for profiting by the instruction.[16]

What appears to be a less arbitrary approach to this problem of selection is proposed by other writers. Such an approach, avowedly would maintain highly selected enrollments by relying heavily upon a program of guidance and counseling. Under this plan the teacher visits the home of the prospective student previous to the time for enrollment. He learns all he can about the student and his background. He then informs the student and his parents about the opportunities and requirements of a course in vocational agriculture as well as other courses in high school. With this information the boy is in a better position to decide for himself whether he should enroll in vocational agriculture. If a student realizes, for instance, that he does not have the use of adequate farm facilities to allow him to gain satisfactory experience in farming, he will probably decide that he would do well to elect some other course. Under this arrangement the student would eliminate himself voluntarily from the work rather than be excluded by the teacher. Perhaps

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[16] C. L. Mondart, "Research in the Selection of Students of Vocational Agriculture in Louisiana," The Agricultural Education Magazine, 14:14, July, 1941.

Olney had such a procedure in mind when he recommended visits to prospective students and indicated that they should prove mutually beneficial to the student and teacher:

> Many visits to this prospective pupil must be made during the summer, previous to the opening of the next school year, not only to make family acquaintances, but also to "size-up" the home conditions as to what the pupil might be able to include in a supervised farming program and to discuss these possibilities informally with the boy and the parents, so that both have some forewarning of what will be expected when the boy enters the class. Some parts of the program might even be started at once. On the other hand, such visits may help a boy decide that the agricultural program is not the one he prefers to follow.[17]

In a similar manner Kiltz stressed the value of pre-enrollment guidance for prospective students:

> Some of the individual contacts with the parents of a boy should be made before he enters the program of vocational agriculture. Visits at this time should have a guidance motive. The teacher, the parents, and the boy should consider the latter's interests in and his aptitudes for farm life as well as his opportunity, if he should enroll in vocational agriculture, to gain directed experience in farming and the opportunity that he may have eventually to become established in farming. Interests and opportunities in other vocations and professions may also be considered at this time. During these contacts the parents should

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[17] Roy A. Olney, "Two Essential Activities in Directing the Planning of Pupils' Supervised Farming Programs," The Agricultural Education Magazine, 16:88, November, 1943.

> be fully informed about supervised farming and should be made aware of their relation to it.[18]

Other leaders subscribe to the vital importance of a program of guidance and counseling for prospective students by the teacher of agriculture. Byram listed "Interviewing prospective pupils for enrollment in vocational agriculture" as one of the recommended "Activities of a teacher of agriculture in the area of vocational guidance."[19] Shoptaw declared that:

> One of the most vital and perhaps most slighted summer activities of an agriculture teacher is that associated with guiding incoming ninth grade boys into the organization of farming programs which it is hoped they are to follow through and beyond high school.[20]

Cook gave a priority to visits to prospective students and concluded that "Every prospective student of vocational agriculture should be visited once and preferably twice during the summer.[21] As one of his

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[18] Kenneth O. Kiltz, "Relating Instruction in Vocational Agriculture to Farming Programs," The Agricultural Education Magazine, 17:188, April, 1945.

[19] H. M. Byram, "Increasing the Effectiveness of Agricultural Education Thru Guidance of Rural Youth," The Agricultural Education Magazine, 20:109, December, 1947.

[20] LaVan Shoptaw, "The Long-Time Farming Program," The Agricultural Education Magazine, 20:227, June, 1948.

[21] Glen C. Cook, "Suggestions on the Time and Frequency of Farm Visits to All-Day Students of Vocational Agriculture," The Agricultural Education Magazine, 21:86, October, 1948.

tentative statements of concepts and emerging practices in supervised farming, Deyoe wrote:

> Guidance is provided for prospective students so that enrollments in vocational agriculture consist of persons who are interested in farming and have facilities available for developing satisfactory programs of supervised farming.[22]

A state educational agency outlined four considerations in providing occupational information and guidance before enrollment in classes in vocational agriculture:

> 1. To be vocational, classes in vocational agriculture should consist of students who have chosen this field because of interests, aptitudes, abilities, and opportunities for entering farming or other agricultural occupations.
>
> 2. Effective pre-enrollment guidance should result in individuals who have the foregoing characteristics, in so far as they can be determined.
>
> 3. In pre-enrollment guidance it is assumed that teachers of agriculture will be particularly concerned with serving those boys most likely to be benefitted by training in vocational agriculture.
>
> 4. An effective period for this guidance is during the time of pre-enrollment in high school and during the year preceding enrollment in vocational courses.[23]

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[22] George P. Deyoe, "Concepts and Emerging Practices in Supervised Farming," The Agricultural Education Magazine, 20:223, June, 1948.

[23] The Vocational Teachers' Handbook, Circular No. 21, (Lansing, Michigan: State Board of Control for Vocational Education, August, 1940), p. 4.

Summary. Visitation to the homes of prospective students for the purpose of guidance and counseling is recognized as an important responsibility to be discharged by teachers in vocational agriculture. While there may not be complete agreement among authorities relative to what constitutes "adequacy," there appears to be general agreement among leaders in vocational agriculture that students who lack adequate facilities for carrying on effective programs in supervised farming should be discouraged from enrolling in classes in vocational agriculture.

2. Organized class instruction relating to supervised farming is introduced early in the first year of vocational agriculture and repeated at appropriate times throughout the school experience of the student. Individual plans for supervised farming are developed by each student under the guidance of the instructor.

Fundamental to the philosophy indicated in the above statements is an acceptance of the premise that supervised farming is a part and parcel of the teaching and learning processes in vocational education in agriculture and not an adjunct to them. Unless one subscribes to such beliefs, classroom activities in supervised farming could neither represent learning on the part of the pupil nor teaching by the instructor.

As will be indicated later in this chapter, supervised farming is recognized by many as a necessary phase of the instruction in vocational agriculture. Field, for instance declared:

> In its broader sense farm practice is really an integral part of the total learning experiences of each student instead of an extra-curricular activity tacked on to satisfy a requirement. On the one hand the farm practice experiences serve as a feeder for problems to be studied in school, and on the other it serves as a means whereby school-learning activities may find expression in the life of the student.[24]

Probably it is difficult for the uninformed individual to acquire a thorough understanding of the educational possibilities of supervised farming. It is a new type of learning experience for most people. It is a relatively new development in education. It appears to represent a rather radical departure from the conventional patterns in education. As explained previously, it is an evolving phase of education and, likely, it has been difficult for even the workers who are trained in the field to fully grasp its scope and meaning. It is not strange, then, that Fitzgerald saw fit to comment:

> . . . many of our students in agriculture have only a slight conception of what the teacher expects the individual boy to accomplish by the

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[24] Albert M. Field, "The Long-Time Program of Farm Practice," The Agricultural Education Magazine, 4: 181, May, 1932.

> end of the four-year agricultural course in high school.[25]

If this statement is true, it would be natural to expect that many misconceptions and misunderstandings would arise concerning the work. Under such circumstances the students could not be condemned if they regarded supervised farming as an operation to be carried out in a perfunctory sort of manner in order to satisfy a legal requirement. Stewart recognized the lack of understanding by many boys of supervised farming and pointed to a lack of instruction on the subject as the cause. He observed:

> Many boys still think of the supervised practice work as added items to the school work instead of thinking of it as the basic part of the school work. Projects furnish opportunities for the boy to give full expression to his energies and to develop manipulative skills. The boy should look upon them as opportunities. Failure of the boy to consider the projects in this light is traceable to lack of instruction and study on plans of supervised practice.[26]

Stewart has support when he suggests the need for more instruction and planning in supervised farming.

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[25] N. E. Fitzgerald, "Suggestions for Orienting New Students in Classes in Vocational Agriculture," The Agricultural Education Magazine, 3:103, January, 1931.

[26] R. M. Stewart, "Project Programs--Launching Boys into Their Supervised Practice Work," The Agricultural Education Magazine, 6:154, April, 1934.

Kiltz would start an instructional program soon after school opened to develop an adequate understanding of supervised farming by beginning students in vocational agriculture. According to him the instruction might include:

> . . . the examination of type cases of suitable local programs of supervised farming, the study of programs of successful state and American farmers, discussions by older boys in the course who have had successful programs, and the co-operative planning in class of a suitable program for a selected situation.[27]

Similarly, Shoptaw recognized the need for early and continuing orientation and guidance for beginning students in supervised farming.[28] In this regard, Deyoe declared:

> . . . it is important to reemphasize that the activities and problems involved in orienting students to supervised farming, in selecting their programs and evaluating them, in setting up and keeping records, and in making the preliminary plans . . . should be considered a fundamental part of class room instruction.[29]

Cook stressed the importance of developing a proper understanding of supervised farming by beginning students when he recommended:

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[27] Kiltz, loc. cit.

[28] Shoptaw, loc. cit.

[29] Deyoe, Supervised Farming in Vocational Agriculture, op. cit., p. 324.

> Soon after school opens in the fall the instructor should have a series of discussions and field trips pertaining to supervised farming. This should be a definite part of the instruction for beginning students and a sufficient amount of time used to develop proper understandings, attitudes, appreciation and ideals for comprehensive programs of supervised farming.[30]

Similar techniques have been proposed by others for developing a clear concept of supervised farming with students. Fay[31] saw real value in project tours as a means for developing an improved understanding of supervised farming. Hammonds[32] also considered a study of local illustrations of students' farming programs useful to beginning students in developing a clearer concept of supervised farming. In addition he suggested the showing of films and photographs of supervised farming to beginning students.

Schmidt saw great possibilities in classroom instruction on an individual or small-group basis as a means of providing the student an opportunity to analyze, study and plan "his long-time supervised farm-training

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[30] Glen C. Cook, A Handbook on Teaching Vocational Agriculture (Danville, Illinois: Interstate Printers & Publishers, 1947, Fifth Edition), p. 320.

[31] Ivan G. Fay, "Selling Farming Programs," The Agricultural Education Magazine, 17:73, October, 1944.

[32] Carsie Hammonds, Teaching Agriculture (New York: McGraw-Hill Book Company, Inc., 1950), p. 195.

program." He further recommended "that each teacher devote from one to three class periods per week . . . to individual and group instruction. . . . Each individual or small group should be working on the immediate jobs and problems confronting him or them in their supervised farm-training programs."[33]

Kirkland also would allocate a substantial amount of time to a study of supervised farming. He recommended:

> The content of the course of study for the first-year students should be solely of an orienting nature until each student has selected his farming program . . . The orientation study may require from six to twelve weeks or more depending upon the teaching methods used and the diversity of the agriculture in the community.[34]

Along the same line, Deyoe declared that teachers who are the most successful in developing broad programs of supervised farming with their students, are using from six to eight weeks during the first part of the beginning course for problems and activities related to selecting and starting these programs.[35] It is

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[33] G. A. Schmidt, "Supervised Practice and Classroom Instruction in Vocational Agriculture," The Agricultural Education Magazine, 7:87, December, 1934.

[34] James B. Kirkland, "Suggested Jobs in Organizing and Teaching the First-Year Agriculture Course," The Agricultural Education Magazine, 11:126, January, 1939.

[35] Deyoe, Supervised Farming in Vocational Agriculture, op. cit., p. 180.

stated in another source that the first day a student enrolls in vocational agriculture is the time to start him on the planning of his long-time supervised farming program.[36]

Considerable dissatisfaction appears to exist with the quality of planning done by students. After examining many project plans Gibson[37] concluded that too frequently they were prepared in such general terms that the student would gain very little in the way of specific help from them in executing his farming program. Dickinson showed a rather low opinion of the kind of planning done by students when he stated:

> . . . many so-called "working plans" are altogether inadequate and otherwise unsatisfactory. They indicate very little thought on the part of the student who is to carry out the project, and fail to show sufficient preparation for the work to be done.[38]

Sutherland takes the position that planning places too heavy a demand on the immature abilities of high school boys. According to him pupils fail to make good plans because:

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[36] Ross et al., op. cit., p. 3.

[37] H. H. Gibson, "A Requirement for Effective Project Supervision--the Determination of What Proved and Up-to-date Practices Are to Be Followed," The Agricultural Education Magazine, 10:209, May, 1938.

[38] Sherman Dickinson, "Better Supervised Practice," The Agricultural Education Magazine, 3:18, August, 1930.

> We expect 14 and 15-year-old boys, who had neither the opportunity nor the training to do much thinking for themselves, to do one of the most difficult types of thinking of which the human mind is capable--original planning.[39]

Pollom, presumably, would go along with this viewpoint to a certain extent. He pointed out that it seems unreasonable to expect high-school boys to set up a comprehensive plan for a farm enterprise before any steps looking toward its execution are taken. However, he proposed that it is in order for the student to prepare a skeleton plan which could be rounded out later through study by the pupil. According to him, "The project plan is the foundation upon which effective teaching thru the project must be based." Pollom went ahead to declare: "By all means a plan should not be long. Short, definite statements as to what the boy proposes to do and why are sufficient."[40]

In spite of its shortcomings, planning is not condemned as an undesirable and unnecessary activity. Rather, criticisms appear to stem from the extent of planning that is often demanded and the quality of

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[39] S. S. Sutherland, "Good Project Planning," The Agricultural Education Magazine, 4:172, April, 1932.

[40] Lester B. Pollom, "Project Plans and Their Relation to Instruction," The Agricultural Education Magazine, 11:58, September, 1938.

planning that has been done. Howard[41] stressed the importance of the teacher leading the students to set up and plan good supervised farming programs. Dippold also emphasized the responsibility of the teacher in planning when he said:

> Students who develop plans for a supervised practice program require much help from the teacher. This is obvious because most students have had limited experiences on the home farms or within the community. They have established certain habits, attitudes, and emotional attachments which will tend to make adjustments difficult.[42]

Leaders in the field of agricultural education seem to agree that planning of programs of supervised farming is not an activity to be confined only to beginning students in vocational agriculture. Rather, it is a continuous process which ". . . must be started with individual students, preferably before the school year begins, continued with intensity after school opens, and gradually developed throughout the years which follow."[43]

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[41] Carl G. Howard, "Teacher Activities in Supervised Farming," The Agricultural Education Magazine, 13: 28, August, 1940.

[42] J. G. Dippold, "Planning Supervised Farming Activities," The Agricultural Education Magazine, 14:208, May, 1942.

[43] Ross et al., op. cit., p. 37.

Deyoe,[44] Ekstrom,[45] Glavin,[46] and Olney[47] gave support to the idea of continuity in the planning of programs of supervised farming. Olney urged ample time not only for planning new programs but also for consideration of adjustments in programs that are under way. He wrote:

> Ample teaching time should be alloted in the course of study for each year of agriculture for the directing of work on planning programs of supervised farming, and in starting new programs. Also, time will be needed to consider the programs under way because certain adjustments and changes will have to be made to meet unforeseen conditions and circumstances that are bound to arise in carrying out the programs. Classroom time used in solving such problems is purposeful teaching and is highly desirable.[48]

Summary. Judging from the consensus of opinion expressed in this section, there is a need for organized classroom instruction to develop an adequate understanding and to plan supervised farming. This instruction should be made available to beginning students and should

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[44] Deyoe, Supervised Farming in Vocational Agriculture, op. cit., p. 180.

[45] G. F. Ekstrom, "Some Principles for Consideration in Organizing Home Practice Work," The Agricultural Education Magazine, 10:8, July, 1937.

[46] John G. Glavin, "The Place of Continuing Projects in a Long-Time Program," The Agricultural Education Magazine, 11:89, November, 1938.

[47] Olney, loc. cit.

[48] Loc. cit.

continue throughout their experience in vocational agriculture.

3. Conferences, including students, parents, and the teacher, are held to present the aims of supervised farming.

The necessity for close cooperation and understanding between the school and home might be considered almost an educational maxim. This seems particularly true in the matter of conducting programs of supervised farming. The basic elements which constitute this program--the pupil, the parents, the teacher, and the learning environment on the farm--are such that it is inescapable that the home and school become closely associated in the proper conduct of this educational activity by the teacher of vocational agriculture. If the student is to realize the maximum benefit from this experience, it seems imperative that a wholesome understanding and working relationship exist between the home and the school.

According to Hamlin, a concerted effort must be made to establish and maintain desirable home and school relationships. He contended:

> . . . we must break down any barriers between the home and the school and between the community and the school, which thwart the normal application of our teachings. No amount of formal supervising can overcome a basic antagonism toward the school or

> the teacher. On the other hand with good home and community relationships, large amounts of our teachings get applied without any particular effort on the teacher's part to bring it about.[49]

Pollom believes that lack of co-operation on the part of parents has been a great obstacle to the development of comprehensive farming programs. He conjectures that in most cases failure to co-operate can be traced to a lack of understanding by the parents. He declared:

> The greatest obstacle, for the past 20 years to the development of comprehensive farming programs, has been the lack of parental co-operation and help. Perhaps it would be fairer to say lack of parental understanding of what we are trying to do. Probably in a majority of cases the parent is not to blame because he does not understand or co-operate. Unless there is a definite, well-planned, thoroughly thought-thru procedure for acquainting parents with the vocational agriculture program we will continue to work against much unnecessary resistance.[50]

A rather startling statement by Peterson may provide a partial explanation, at least, for failure of parents to fully understand and appreciate the meaning of supervised farming. He asserted that, "A safe and conservative estimate based on a review of research is that in at least half of the cases parents do not know the teacher of agriculture."[51]

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[49] H. M. Hamlin, "A Philosophy of Supervised Practice," The Agricultural Education Magazine, 6:104, January, 1934.

[50] Lester B. Pollom, "Parental Understanding Necessary," The Agricultural Education Magazine, 10:229, June, 1938.

[51] Peterson, loc. cit.

If what Peterson said is true, it is not surprising that a Federal bulletin would report: "Frequently instructors have depended too much upon the student to explain to his parents the purposes of and procedures followed in conducting the supervised farming program."[52]

The folly of relying upon such a practice is pointed out by Cook[53] and Hammonds. Hammonds said: "He [the instructor] should not depend on boys to inform their parents. Supervised farming is not a simple concept; it takes a teacher a long time to acquire the concept in his training. The beginning boy's understanding of it is usually very meager."[54]

A failure of some teachers to keep in close contact with the farm home may explain some of the academic planning done by students in supervised farming and observed by Dippold. He stated:

> Many plans for supervised farming programs are too academic. Students may read about various possibilities for succeeding with these projects and plan carefully on such a basis. They frequently forget, however, to analyze completely those home problems which may inhibit progress. The social and cultural home environment is always powerful in effecting changes or readjustments. For instance,

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[52] Ross et al., op. cit., p. 31.

[53] Cook, A Handbook on Teaching Vocational Agriculture, op. cit., p. 315.

[54] Hammonds, loc. cit.

> the attitude of the parents, their habits, and many physical factors of the home situation may disrupt ideal plans.[55]

Any neglect on the part of teachers to develop wholesome working relationships and a proper understanding of supervised farming with parents seems inexcusable. Cook,[56] Fay,[57] Wall,[58] and Sasman,[59] among others, emphasize that it is essential that parents have a good understanding of the work if significant programs of supervised farming are to be developed. Sasman maintained:

> In the development of a farming program or any other program affecting youth and parents, one of the essentials of success is a thoro understanding of it by all concerned . . . If there is going to be a farming program developed that is of real significance to a boy, a family, or a farm, such a program must be thoroly discussed before it is started.[60]

Among the methods recommended for developing desirable relationships and understanding of supervised

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[55] Dippold, op. cit., p. 209.

[56] Cook, A Handbook on Teaching Vocational Agriculture, op. cit., p. 314.

[57] Fay, loc. cit.

[58] Stanley Wall, "Developing Long-Time Farming Programs," The Agricultural Education Magazine, 21:18, July, 1948.

[59] Louis M. Sasman, "Farming Programs in Vocational Agriculture," The Agricultural Education Magazine, 17:88, November, 1944.

[60] Ibid., p. 89.

farming on the part of parents, the home-farm visit seems to rank first in importance. Hammonds[61] believes that nothing can take the place of personal visitation by the teacher of vocational agriculture in developing cooperative relationships with parents while Cook declared, "There is no substitute for such a conference."[62]

The advantages of a home-farm conference including the boy, both parents, and the teacher, seem fairly obvious. It affords an excellent opportunity for the instructor to become thoroughly acquainted with the parents and to gain their confidence. It permits the teacher to learn more about the student's home environment and the possibilities and limitations of the home farm as a learning situation. The informal atmosphere of the home should encourage the parents to talk freely and frankly. Questions about supervised farming and vocational agriculture, in general, should be adequately and satisfactorily answered for the parents. One can scarcely conceive of a situation more conducive to the development of mutual understanding and cooperation between the home and school than is provided by a conference

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[61] Hammonds, loc. cit.

[62] Cook, A Handbook on Teaching Vocational Agriculture, op. cit., p. 317.

when the boy, his parents, and his teacher consider together his future education and progress in farming. Deyoe[63] and Gibson commended the home-farm conference as an effective approach for developing parental cooperation in supervised farming. Gibson wrote:

> It is recognized, of course, that there is no substitute for individual home and farm visitation in bringing about effective parent, instructor, and pupil relationships. It is thru this medium that problems in selecting, financing, and supervising projects can best be discovered and worked out on the spot. One of the most inspiring pictures one can see in connection with the entire program of agricultural education is that of the instructor conferring with parents and boys in the field or around the "conference table" with pencils and paper in hand working out budgets and financial arrangements and discussing the many problems incident to selecting and organizing a thorogoing educational and business-like program of supervised practice.[64]

Those who are inexperienced at the work might wonder what type of reception to expect upon a first arrival at the farm home of a student. It is Pollom's observation that all degrees of cooperation can be looked for. He stated:

> Dads range in attitudes from those who are more than enthusiastic to co-operate with the teacher for the good of the boy, to those who are indifferent

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[63] Deyoe, Supervised Farming in Vocational Agriculture, op. cit., p. 194.

[64] H. H. Gibson, "Use of Group Meetings for Getting Cooperation of Parents in Supervised Farm Practice," The Agricultural Education Magazine, 10:148, February, 1938.

> and actually obstinate. The teacher must know these parents and their attitudes.[65]

In the matter of developing pleasant working relationships with the home it is recommended that the teacher not confine his attention strictly to the member or members of the family unit enrolled in his department. Olney stressed that it is important that the teacher ". . . know as intimately as possible all the members of the family."[66] Hamlin acknowledged the interdependent relationship existing among the members of the farm family and then voiced the criticism that vocational agriculture has too often failed to give proper recognition to this relationship. He asserted: "It is clear that the home practice of an individual boy involves relationships with all the other members of his family." Hamlin went ahead to declare:

> The facts are that we in vocational agriculture have too often overlooked the status of the boy as a minor member of a family in which the maintenance of wholesome, cooperative relationships is infinitely more important than anything we may teach the boy about agriculture through a home project.[67]

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[65] Lester B. Pollom, "Where Are We Now and Where Are We Going?" The Agricultural Education Magazine, 10: 105, December, 1937.

[66] Olney, loc. cit.

[67] Hamlin, op. cit., p. 105.

One or more group meetings with parents are recommended as a desirable supplement to the home-farm conference as a means to more adequately acquaint parents with the aims of supervised farming and their relation to it. An advantage claimed for this type of meeting is a saving of time in that the teacher can accomplish certain things working with a group of parents that would perhaps require many single visits to individual farms. This type of meeting is suggested by Cook,[68] Deyoe,[69] Hammonds,[70] and Kiltz.[71] It is also recommended in the most recent bulletins on supervised farming published by the Vocational Division of the U. S. Office of Education[72] and the Michigan Office of Vocational Education.[73]

A number of other methods and techniques are suggested for informing parents about supervised farming.

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[68] Cook, A Handbook on Teaching Vocational Agriculture, op. cit., p. 317.

[69] Deyoe, Supervised Farming in Vocational Agriculture, op. cit., p. 196.

[70] Hammonds, loc. cit.

[71] Kiltz, loc. cit.

[72] Ross et al., op. cit., p. 32.

[73] Supervised Farming Programs in Vocational Agriculture, op. cit., p. 37.

A modification of the group meeting of parents indicated above, is the parent-son banquet which gives special consideration to developing an understanding of supervised farming. Such an approach is suggested by Stewart[74] and Deyoe.[75] Among those seeing possibilities in a tour of programs of supervised farming by parents and sons are Cook[76] and Hammonds.[77] The showing of photographs and slides is suggested by Deyoe[78] and in a recent bulletin[79] as a means of developing a better understanding of supervised farming on the part of parents.

Summary. The review of expert opinion cited in this section has pointed up the need for securing parental cooperation by the teacher developing an understanding of supervised farming. The home conference including the boy, his parents, and his teacher, is recommended as the most effective means for promoting understanding of

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[74] Stewart, loc. cit.

[75] Deyoe, Supervised Farming in Vocational Agriculture, op. cit., p. 197.

[76] Cook, A Handbook on Teaching Vocational Agriculture, op. cit., p. 317.

[77] Hammonds, loc. cit.

[78] Deyoe, Supervised Farming in Vocational Agriculture, op. cit., p. 197.

[79] Supervised Farming Programs in Vocational Agriculture, loc. cit.

supervised farming. Group meetings are also considered helpful, particularly when they are used to supplement the home-farm conference. Other approaches for securing parental understanding of supervised farming include parent-son banquets, tours of programs of supervised farming, and showing of photographs and slides.

4. Home-farm surveys are made to reveal needs upon which the supervised farming programs can be based.

It seems apparent that it would be impossible for the teacher of agriculture to be in a position to intelligently guide students in the selection, planning, and execution of his program of supervised farming unless he has become thoroughly acquainted with the student and his home environment. An intimate knowledge of the pupil, his resources, problems and limitations, should prove of inestimable value to an instructor.

A teacher trainer gave recognition to the need for the teacher to know his pupils well when he wrote:

> The supervisor must know the trainee, his objectives, training conditions, and his limitations. If the trainee is to be treated as an individual, it is obvious that the instructor must know him as an individual. The first job of the supervisor should be to find out everything about the trainee which may condition or influence his progress in training. Only by so doing can he know and help the trainee sense present problems and anticipate

future problems. Only in this way will he be prepared to be of maximum assistance.[80]

Not only is it important for the teacher to become well acquainted with the student and his home-farm situation, but the student should develop a better comprehension and understanding of his own opportunities and resources. Deyoe contended:

> Before a boy can proceed intelligently in selecting activities for a program of supervised farming, he should analyze carefully (with his parents and teacher) the needs and facilities of his home farm. This involves securing certain information about his farm, analyzing it carefully, and selecting a program of supervised farming which is in keeping with the total situation.[81]

Most authorities recommend surveys of the individual home farms by each student as necessary for securing the basic data which are to be used in planning programs of supervised farming. Cook,[82] Deyoe,[83] Ekstrom,[84] and Howard[85] are among those who would have

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[80] S. S. Sutherland, "Supervision and Individual Instruction in Agricultural Education," The Agricultural Education Magazine, 19:228, June, 1947.

[81] Deyoe, Supervised Farming in Vocational Agriculture, op. cit., p. 187.

[82] Cook, A Handbook on Teaching Vocational Agriculture, op. cit., p. 337.

[83] Deyoe, Supervised Farming in Vocational Agriculture, op. cit., p. 182.

[84] Ekstrom, loc. cit.

[85] Howard, loc. cit.

students make surveys of home farms to secure basic information that would assist the pupil to set up more intelligently his program of supervised farming. The use of such surveys is also recommended in the most recent publications on supervised farming of the Michigan Office of Vocational Education[86] and the Vocational Division of the U. S. Office of Education.[87] According to the latter publication, "Making surveys of farming and farm practice has an important place in helping a student launch his supervised farming program."

Hammonds looks upon the making of a survey as a valuable learning experience. He declared that "Making a survey is, in itself, an educational process of great value to those participating in it."[88]

Olney, however, questioned the use of a formal survey. He indicated that the use of a formal survey may serve as a barrier. For this reason he recommended that the teacher collect information about the farm situation by means of visits. Olney wrote:

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[86] Supervised Farming Programs in Vocational Agriculture, op. cit., p. 20.

[87] Ross et al., op. cit., p. 43.

[88] Carsie Hammonds, "Use Local Surveys to Supplement the Data at Hand for Course Building, Teaching, Community Planning and Action," The Agricultural Education Magazine, 23:4, July, 1950.

> On the same visits when the teacher is becoming acquainted with and is establishing himself with the family, he can, by careful planning, easily acquire and obtain facts about the type of farm business on each farm. After several visits he will have collected enough farm facts that collectively will make a good survey of the farm business without having to inflict the formal type of survey blank upon the farmer. The use of the formal survey may often serve as a barrier in attaining the desired intimate personal relationships. . . .[89]

Deyoe acknowledges that certain needs can be determined by inspection but he maintains, ". . . if the analysis of needs is attempted through a more or less superficial appraisal of the situation, many needs may be overlooked."[90] On the other hand, Hammonds, apparently, would view with skepticism any device, other than a survey form for obtaining facts about the farm. He declared: "If the teacher makes a survey, he must use a survey form that will enable him to obtain the facts he wants. Talking casually with a few farmers is not making a survey."[91]

Seemingly, Hamlin would not share Olney's concern over the use of a formal survey. He says: "The persons who come into our classes must expect to provide

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[89] Olney, op. cit., p. 88.

[90] Deyoe, Supervised Farming in Vocational Agriculture, op. cit., p. 188.

[91] Hammonds, Teaching Agriculture, op. cit., p. 77.

us with whatever information we need to help them improve their abilities."[92] Hamlin advocated that the boys share in determining the data to be collected and in constructing the forms to be used in securing the data.[93]

Summary. Consideration of the opinion expressed in this section shows authorities are agreed that a survey of the home-farm situation of every boy enrolled in vocational agriculture is essential, not only to inform the teacher but also to help the student analyze his needs as he selects and plans his program of supervised farming. The use of a survey form is recommended by most authorities.

5. Students are encouraged to set up goals of achievement for their projects. The teacher assists the students in deriving standards of efficiency which can be used as guides in setting goals of attainment and in evaluating progress.

Probably, little actual teaching has ever taken place in which the learner did not recognize a purpose or aim in the learning. According to Hammonds, "Most

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[92] H. M. Hamlin, "Securing and Using Data for Diagnosis, Teaching, and Evaluation in Agricultural Education," The Agricultural Education Magazine, 16:206, May, 1944.

[93] Ibid., p. 207.

learning is for the sake of reaching a goal. So, usually, one of the first steps in securing economical learning is to establish a goal in the mind of the learner." He also observed that, "Generally speaking, people select and learn those things that lead toward the attainment of their goals and purposes, their wants."[94]

A review of the literature reveals that the place of production goals in developing programs of supervised farming, has received considerable attention in recent years. Deyoe claimed several values to be obtained when students recognize and set up appropriate goals of achievement. These are paraphrased below:

1. Students are challenged to achieve on progressively higher levels.

2. In formulating goals of production, each student is stimulated to make an intensive study of the criteria of productive efficiency and of acceptable levels of attainment under various conditions.

3. Specific objectives emerge which are of value to the student and to the teacher in planning an instructional program of a functional nature.

4. The student is motivated to keep accurate and useful records because he realizes their value in showing his actual accomplishments and determining his relative success in achieving his goals.

5. Goals serve a definite function in helping the student to evaluate his own progress or growth and determine places where emphasis is needed

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[94] Hammonds, Teaching Agriculture, op. cit., p. 18.

> in successive years if achievement on progressively higher levels is to be attained.[95]

Before a student can intelligently set up a goal of production for each of the projects in his program of supervised farming or can evaluate the progress he has made in previous projects, the necessity for some kind of "yardstick" or standard becomes obvious. Hammonds contended that students do not know what good production is but they can be taught.[96]

Deyoe indicated that students can work together cooperatively under the guidance of the teacher to develop standards. He suggested a number of sources of data such as the Federal census and data from projects sponsored by state colleges of agriculture. He stressed that ". . . records from projects in vocational agriculture, when available, constitute an important source of data which should not be overlooked."[97]

Deyoe warns, however, that a standard should not be considered as a single point of reference in the sense

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[95] George P. Deyoe, "The Place of Goals and Standards of Production in Developing Programs of Supervised Farming," The Agricultural Education Magazine, 15: 188, April, 1943.

[96] Hammonds, Teaching Agriculture, op. cit., p. 185.

[97] Deyoe, "The Place of Goals and Standards of Production in Developing Programs of Supervised Farming," op. cit., p. 189.

that we have a standard bushel or yard. He believes it would not be very helpful to set a standard uniformly applicable under all conditions, even though this might represent a community average. Such a standard, according to him, would be unreasonably high for some persons under some conditions, but much too low for other persons under other conditions, even within the same community. He feels it might be possible for a class to agree upon a minimum standard and to arrive at other points along a scaled standard which would serve: (1) as a guide in formulating goals of productive efficiency; and (2) as a measuring stick for evaluating actual progress toward goals and appraising the level of productive efficiency actually attained.[98]

Duck[99] believes that students learn the importance of efficiency when they analyze and compare projects conducted by classmates to develop standards for measuring performance. Bender stresses the need for boys to have attainable goals, but indicates that successively higher goals may be reached in later years as the

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[98] Deyoe, "The Place of Goals and Standards of Production in Developing Programs of Supervised Farming," loc. cit.

[99] Joe Duck, "Increased Learning Through the Use of Goals and Efficiency Standards in Farming Programs," The Agricultural Education Magazine, 20:198, April, 1948.

student develops in understanding and ability. He declared:

> In general, it can be said that efficient production is enhanced when boys strive for attainable goals and when they are assisted in working out ways and means to reach those goals.[100]

The desirability of the student establishing successively higher goals as he increases his learning in vocational agriculture and realizes his previous goals, is indicated in a recent bulletin published by the Michigan Office of Vocational Education.[101] Cook,[102] Stewart,[103] Tabb,[104] and Gibson looked favorably upon the practice of students setting up goals. Gibson wrote:

> Project interests and results, and the efficiency of project supervision depend largely upon the clearness of the pupil's project goals, and the character of the practices which he uses knowingly and purposefully to achieve his goals.[105]

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[100] Ralph E. Bender, "Securing Good Results in Producing Pork," The Agricultural Education Magazine, 16:47, September, 1943.

[101] Supervised Farming Programs in Vocational Agriculture, op. cit., p. 24.

[102] Cook, A Handbook on Teaching Vocational Agriculture, op. cit., p. 147.

[103] Stewart, loc. cit.

[104] W. R. Tabb, "Developing Supervised Farming Programs," The Agricultural Education Magazine, 19:56, September, 1946.

[105] Gibson, "A Requirement for Effective Project Supervision--the Determination of What Proved and Up-to-date Practices Are to Be Followed," op. cit., p. 208.

A recent bulletin[106] pointed out that the setting of individual production goals by the students is an essential part of the learning process. According to this publication, the use of efficiency factors and efficiency standards by the student as an aid to setting his individual production goals, serves: (1) to aid the student in planning his farming program; (2) to motivate the student to study and to use approved practices; and (3) to provide a means for the student to evaluate the results achieved in his farming program.

Sweany stressed the use of goals as a means to motivate the student and as a basis to help the pupil appraise his progress. He said:

> . . . goals serve to motivate the student to have more concern for the results obtained in his projects and these goals also furnish a basis for evaluation which students can easily use. Results obtained in projects are not only measures of efficiency in production but also indicators of student ability or lack of ability. If goals are set up for projects and segments of projects, a more thoro diagnosis may be made to determine where improvement is possible. These weaknesses should then become the basis for selection of problems or jobs to develop further abilities which the results indicate are not well developed. Students will be motivated to study more thoroly the problems in these areas because they can see that they have not secured as

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106 Norman K. Hoover and Henry S. Brunner, Production Goals for Livestock Enterprise Projects in Vocational Agriculture, The Pennsylvania State College, Bulletin 527 (State College, Pennsylvania: Agricultural Experiment Station, 1950), p. 14.

high a performance as they wish or will wish if the project is continued for another production cycle and higher goals set.[107]

Summary. According to a consensus of the opinion cited in this section, goals of achievement have a definite place in the development of programs of supervised farming. To help the student establish goals in keeping with his abilities and resources, and have some means of measuring previous progress in supervised farming, it is recommended that the teacher work with the students to derive standards of efficiency.

6. Students present indications of establishment in farming by having projects in enterprises common to the home farm. Through earnings and savings from projects, they show an accumulation of capital assets in farming.

When a student is enrolled in vocational education in agriculture, it is implied that he is preparing to enter or has entered a vocation--in this case, farming. From a legal standpoint there is no question at issue in so far as the vocational status of the student is concerned, since the National Vocational Education

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[107] H. P. Sweany, "Determining Educational Needs of Students Thru Analysis of Project Records," The Agricultural Education Magazine, 17:48, September, 1944.

Act[108] is very specific on this matter. It is clearly stated in this document:

> . . . that the controlling purpose of such education shall be to fit for useful employment; that such education shall be of less than college grade and be designated to meet the needs of persons over fourteen years of age who have entered upon or who are preparing to enter upon the work of the farm or of the farm home. . .

One of the major objectives of vocational education in agriculture is to develop effective ability to make a beginning and advance in farming.[109] There might be a question as to the extent that students enrolled in classes in vocational agriculture have achieved this objective. Nevertheless, according to Hamlin, the opportunity is present for such students to make material progress in the direction of establishment. He said:

> Boys who use to the full their opportunities for developing farming programs during the high-school period may be half-way to establishment when they are graduated. The period from high-school graduation to establishment as farm operators may be shortened for them by two to four years.[110]

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[108] Section 10, Public No. 347, loc. cit.

[109] Educational Objectives in Vocational Agriculture, U. S. Office of Education, Vocational Division Monograph No. 21 (Washington: Government Printing Office, 1940), p. 3.

[110] H. M. Hamlin, Agricultural Education in Community Schools, (Danville, Illinois: Interstate Printers & Publishers, 1949), p. 234.

Hammonds and Tabb offered support for the foregoing statement when they asserted:

> It is often possible through farming programs built up in high school and continued for a few years afterward, to be far along toward establishment in farming when one is still a very young man.[111]

Deyoe pointed out that teachers of vocational agriculture have a responsibility to assist young men to become progressively established in farming. He revealed that studies have shown that the students of vocational agriculture most likely to farm are those who develop better than average programs of supervised farming. He went ahead to state:

> Capital goods, such as money, equipment, seed, feed, and livestock, are needed by persons who strive to climb above the bottom rung of the so-called agricultural ladder, and supervised farming can assist in obtaining these assets.[112]

In a similar manner, Cook,[113] Parsons,[114] and Shoptaw[115] recognized the possibility of the student

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[111] Hammonds and Tabb, op. cit., p. 157.

[112] Deyoe, Supervised Farming in Vocational Agriculture, op. cit., p. 21.

[113] Cook, A Handbook on Teaching Vocational Agriculture, op. cit., p. 281.

[114] D. W. Parsons, "Developing the Boy into Partnership and Management through his Farming Program," The Agricultural Education Magazine, 20:224, June, 1948.

[115] Shoptaw, op. cit., p. 232.

moving in the direction of establishment in farming through the accumulation of capital assets from his program of supervised farming.

Accumulation of capital assets, such as livestock and machinery, would presume some previous efforts in making money by the students. Some might question the educational propriety of a teacher being associated with such an activity. Leaders in agricultural education, seemingly, do not frown on the practice but feel that some degree of ownership and an opportunity to earn money is a desirable feature of the program of supervised farming. For instance, Kiltz declared:

> There should be some ownership interest in one or more phases of the program. The activities in which the boy has ownership interest will be more interesting and vivid to him and more likely to stimulate a serious effort on his part. Ownership interest is also essential to eventual establishment in farming.[116]

Similarly, Ekstrom recognized definite advantages in permitting the student to make money from his projects:

> While there has been a tendency to place less emphasis on the matter of financial return from projects, the monetary feature is important and should not be overlooked. Some measure of financial independence is desired by all people. Students are not immune to this interest. Most of them appreciate an opportunity to pay for at least some of their personal expenses, as well as to make further investments in farming resulting from the increase in livestock

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[116] Kiltz, loc. cit.

inventories or the actual return from their products.[117]

Likewise Orr[118] and Sasman[119] point out the desirability of allowing the student to have ownership. Sasman said:

> It is desirable for every one to own something of his own. There is a pride in ownership and a sense of responsibility developed thru it which probably cannot be accomplished in any other way. Consequently, in working with youth in vocational agriculture, it is highly desirable that there be included in the program the development of productive enterprises owned entirely or in part by the pupil.[120]

It is recommended that the projects in a boy's program of supervised farming be in enterprises common to his home farm. Wall, for instance, expressed this viewpoint when he said: "The enterprises selected should be adapted to the farm and should be of the scope and character to challenge the boy."[121] Similarly, Hammonds and Tabb declared:

> A good farming program fits in well with the home-farm business. It does not contain enterprises

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[117] Ekstrom, loc. cit.

[118] Don M. Orr, "Projects and Supervised Practice on a Farm," The Agricultural Education Magazine, 16:208, May, 1944.

[119] Sasman, op. cit., p. 88.

[120] Loc. cit.

[121] Wall, op. cit., p. 19.

> that should not be on that farm or that will seriously interfere with the operation of the farm business.[122]

Deyoe presented arguments to show that the practice of a student having projects in enterprises common to the home farm is sound in preparing him for the type of farming in which he will be most likely to engage. He reasoned:

> As a rule, a person who engages in farming as a life work does so in the community in which he is reared. Furthermore, it is quite likely that he will make his start on the home farm or on a farm on which the type of farming is similar. Consequently, it seems valid to assume that he should prepare himself for the type of farming represented in the community in general, and on his home farm in particular.[123]

Summary. The writers and sources cited in this section agree that establishment in farming is a worthy objective in vocational education in agriculture. Teachers have a responsibility to aid students in moving toward establishment by helping them to accumulate capital assets in farming through earnings and savings from individual programs of supervised farming. Since students, who enter farming, are likely to start on the home farm or on a farm on which the type of farming is similar, the projects in the student's program of supervised

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[122] Hammonds and Tabb, op. cit., p. 28.

[123] Deyoe, Supervised Farming in Vocational Agriculture, op. cit., p. 181.

farming should be in an enterprise common to the home farm.

7. Students and parents have developed favorable relationships in farming.

This section is concerned with a determination of recommendations of leaders in agricultural education on problems of developing and maintaining favorable relationships in farming between a boy and his parents. Hammonds and Tabb pointed out the importance of good parent-son relationships when they wrote:

> More and more it is becoming clear that, in one way or another, parents have a great influence on establishment of their sons in farming. Not only do they have much to do with the kind of a farming program that the boy will have while in high school and the amount of capital he will acquire, but they are a big factor in assisting the boy financially. Most of the successful farmers would like to see their sons continue in farming. Often the parents are able and willing to work out with their sons some form of partnership, or they will assist their son financially in renting or buying another farm.[124]

One area where a problem may arise relates to proper procedures for setting up an agreement between a boy and his parents as he carries out his program of supervised farming. Obviously, in an undertaking of this type, there is a need to consider such items as use of

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[124] Hammonds and Tabb, op. cit., p. 166.

land, buildings, equipment and livestock, as well as responsibilities of labor and management.

According to Gibson much of the project financing is accomplished through the cooperation of parents. Frequently, he declares, no money changes hands between the boy and his parents. Gibson does not object to parents financing a boy's projects but he does feel that the transaction should be kept on a business-like basis and should be typical of the procedure which the boy would follow when negotiating a loan from a bank or some other source outside the family. He contended:

> Merely securing the money, credit, or other facilities necessary to finance a project is not the big consideration. From the educational standpoint, it is of more importance to provide the boy with every opportunity available for assuming typical financing responsibilities and to use project-financing as a means of developing those abilities he will need to possess later for successful financing of the farm business as a whole. Unless the boy's financial responsibilities can be specifically determined, and the conditions and methods of securing credit and repaying loans be clearly understood, the training the boy gets in project-financing thru parent co-operation will be negligible.[125]

Hamlin took a similar viewpoint when he maintained:

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[125] H. H. Gibson, "Developing Ability to Finance a Farm Business: a Major Objective in Vocational Programs in Agriculture," The Agricultural Education Magazine, 12:128, January, 1940.

> A productive project should stand on its own feet. Animals, feed, and equipment should not be given a boy as a gift or as pay for work done on the farm. Complete records should be kept which show all the expenses incurred which would have been incurred had he been farming separately for himself. . . . Parents should insist on being paid by their boys for the contributions they make to their boys' projects.[126]

Two principal values are held out for the making of project agreements between parents and son: (1) the educational training involved, and (2) the clear understanding developed between the student and parents. Hammonds stressed the importance of a clear understanding. He said:

> A clear understanding between the student and the parent (or other landlord) at the beginning of the program helps prevent misunderstandings later. With a clear understanding at the beginning, the student can go ahead with planning what he will do and how he will do it; he knows what he can do and what he cannot do.[127]

Both the advantages of a definite understanding between parents and the son and the educational value of the activity are indicated in the most recent publication on supervised farming by the Michigan Office of

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[126] Hamlin, Agricultural Education in Community Schools, op. cit., p. 237.

[127] Hammonds, Teaching Agriculture, op. cit., p. 197.

Vocational Education[128] as well as by Deyoe,[129] Kiltz,[130] and McCann.[131]

Foard offered some definite suggestions on the form which project agreements should take. According to him:

> Agreements should be brief, precise and definite. They should state very clearly the obligations of all involved individuals and should be written by the boy and corrected, amended and signed by a parent and the teacher. Some teachers have prepared very lengthy and complicated legal documents that tend to frighten both the boy and the parent.[132]

Apparently, most authorities are not prepared to take an unqualified position on the exact character that a project agreement should assume. Deyoe[133] stated that written agreements are preferable while Cook[134] said

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[128] Supervised Farming Programs in Vocational Agriculture, op. cit., p. 14.

[129] Deyoe, Supervised Farming in Vocational Agriculture, op. cit., p. 228.

[130] Kiltz, op. cit., p. 189.

[131] W. H. McCann, "Supervised Farming Agreements Between Father and Son," The Agricultural Education Magazine, 20:10, July, 1947.

[132] J. H. Foard, "Project Agreements Are Essential," The Agricultural Education Magazine, 18:31, September, 1945.

[133] Deyoe, Supervised Farming in Vocational Agriculture, op. cit., p. 228.

[134] Cook, A Handbook on Teaching Vocational Agriculture, op. cit., p. 344.

they seem desirable. Hammonds[135] pointed out several advantages for a written agreement but then indicated that his statements do not mean that the agreement has to be written.

Authorities, seemingly, do not care to take an unequivocal position regarding the matter of having the agreement signed by the student, parent, and teacher. Deyoe[136] pointed out that project record books, in most cases, provide forms for signatures to business agreements. He stated that it seems preferable to have an agreement which is signed by the parent, the boy, and the teacher.[137] Hammonds and Tabb stated: "A written understanding may or may not be signed by the student, parent, and teacher. Policies on this matter differ among departments."[138]

The degree of responsibility which a boy is to assume about the home farm in the management of his program of supervised farming may also pose a problem in parent-son relationships. For example, a student might

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[135] Hammonds, Teaching Agriculture, op. cit., p. 201.

[136] Deyoe, Supervised Farming in Vocational Agriculture, loc. cit.

[137] Deyoe, Ibid., p. 230.

[138] Hammonds and Tabb, op. cit., p. 77.

be expected, presumably, to introduce certain approved practices in production he had learned at the school. Is it in order for him to be given the responsibility to decide what new approved practices should be adopted as well as the opportunity to make other managerial decisions incident to carrying out his program of supervised farming? It appears that Hammonds would answer this question in the affirmative. He indicated that the student has managerial responsibilities when he said:

> If someone else is responsible for the farming program, it is not the student's program. The student should do the work himself or arrange with others for the necessary help. His parents should neither do the work nor have to remind him what needs to be done. It is the student's responsibility to see that the work is done when it should be done. The student should know how to do the work. He should decide what practices are to be used. (He may, of course, consult others.)[139]

Parsons also believes that the student should assume managerial responsibilities. He declared: "A good supervised farming program in which the boy has management and a financial interest is essential to complete and motivate his instruction in the vocational agriculture class."[140]

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[139] Hammonds, Teaching Agriculture, op. cit., p. 219.

[140] Parsons, loc. cit.

It is recommended in another source[141] that students be permitted to participate in the management of the farm by being able to introduce approved practices in a number of enterprises. There is the caution, however, that the practices should be carefully checked by the teacher and should be introduced only after careful consideration and counsel with the parents.

Ekstrom[142] regards the management of certain farm enterprises as a step toward farming. While he concedes that it may be desirable for the student to segregate such projects as a litter of hogs, the plan of managing an entire enterprise might be more practical even though only a small percentage of the returns might be available to the student.

Deyoe sees real merit in a partnership program between a boy and his father, in which the son would assume most of the responsibility and receive a definite portion of the profits. He said:

> More consideration should be given to possibilities for partnerships in important enterprises on the farm as a part of programs of supervised farming conducted during the day-school period. . . . Such undertakings often lead to increased confidence in the boy on the part of the father and

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[141] Supervised Farming Programs in Vocational Agriculture, op. cit., p. 14.

[142] Ekstrom, loc. cit.

> give the boy experience on a scope comparable to what he is likely to obtain when he farms for himself or when he enters into partnership on a more comprehensive scale.[143]

Along the same line, Tabb declared:

> It doesn't make sense to have two poultry flocks or two flocks of sheep on most farms. It is better for a boy to have one fifth ownership in a flock of 50 sheep than complete ownership of 10 not a part of a larger flock. Partnership in enterprises tends to evolve into a partnership in the farm business when the boy gets out of school.[144]

Hammonds also recommended enterprise partnerships.

> To form an enterprise partnership with the father when the son is ready and capable of doing so is often a good way to "grow into farming." It solves many of the financial problems of the son. It also makes for good father-and-son relationships.[145]

The importance of encouraging partnership projects between parents and son is indicated by Hamlin:

> Since about two boys out of five will start farming with relatives, cooperation with them in partnership projects and other common undertakings will help to prepare them for satisfactory adult partnerships.[146]

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[143] Deyoe, Supervised Farming in Vocational Agriculture, op. cit., p. 384.

[144] Tabb, loc. cit.

[145] Hammonds, Teaching Agriculture, op. cit., p. 202.

[146] Hamlin, Agricultural Education in Community Schools, op. cit., p. 237.

Summary. Authorities recognize the importance of developing and maintaining favorable parent-son relationships in farming. It is recommended that there be a business agreement between the parents and son, which clearly defines the privileges and responsibilities of each party. In addition to developing a clear understanding between the parent and the son, drawing up an agreement is considered a valuable educational experience. Leaders in agricultural education seem to prefer that the agreement be written. An opportunity for the student to exercise responsibilities of management, not only in enterprises in which he has ownership but other farm enterprises as well, is recommended. A father-son partnership in one or more farm enterprises is encouraged as a move in the direction of establishment in farming because of the prospect of it culminating in the formation of a partnership in the entire farm business.

8. Much or all of the classroom instruction is built around the problems and needs of students in developing their farming programs.

If there is any one characteristic of education in vocational agriculture which has stood out, it is probably the attempt which has been made to keep the instruction on a practical basis. Maltby emphasized this aspect when he wrote:

> In vocational agriculture the work begins in the field and, as the word implies, means training in the skills and operative jobs to be performed, training in managerial analysis, and an education in the use of agricultural data as they apply to the practical problems.[147]

In the minds of some people, presumably, the prevailing pattern of instruction in vocational agriculture represents a most favorable blending of theory in the form of classroom instruction, on the one hand, and practice in the form of supervised farming, on the other.

According to Spanton, there have been two distinct points of view toward the relationship that should exist between classroom instruction and supervised farming. He described them as follows:

> Early in the history of vocational education two rather distinct schools of thot developed with regard to supervised farm practice. One school believed that supervised farm practice should be the outgrowth of the classroom instruction, and that the home project was a device for putting into practice on the home farm the methods and practices decided upon in the classroom. Another school held to the idea that classroom instruction in vocational agriculture should be based upon the composite supervised farm practice activities of the pupils.[148]

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[147] R. D. Maltby, "Progress in Supervised Practice," The Agricultural Education Magazine, 3:155, April, 1931.

[148] W. T. Spanton, "Supervised Farm Practice and the Smith-Hughes Act," The Agricultural Education Magazine, 5:185, June, 1933.

It appears that Heald would not include himself among the former group recognized by Spanton. Heald said:

> The project is not required or advised for the purpose of illustrating or furnishing an application of the principles taught in the course, but the reverse is true. The successful development of the project and its improvement in all possible ways involves problems which can be solved only in terms of principles and facts which may be properly organized into courses.[149]

One is impressed by the unanimity of opinion on the question of what is considered to be the proper relationship between classroom instruction and supervised farming. All authorities point out the desirability for a close association between these two phases of education, if, indeed, it is proper to separate them one from the other.

Hamlin, for instance, indicated that ". . . supervised practice should, ideally, be as broad as the course of study."[150] Chesnutt declared that it is generally accepted as axiomatic that (1) "The core of vocational agriculture is the student's farming program (2) The instruction in vocational agriculture should be based

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[149] F. E. Heald, "Project Ideals and Difficulties," The Agricultural Education Magazine, 6:166, May, 1934.

[150] Hamlin, "A Philosophy of Supervised Practice," op. cit., p. 104.

upon the students' farming program."[151] Cook stated: "The supervised farming programs, related information and activities should be used as a basis for the instruction."[152] Hammonds emphasized: "Since practice is necessary to learning, there should be a close relation between the farming programs of students in vocational agriculture and the course of study."[153] Williams indicated the course of study in vocational agriculture as ". . . essentially a composite of the programs of the members of the class."[154] Smith spoke of the ". . . close alignment of the teaching with the actual problems growing out of the pupil's experience with his home project."[155] Peterson stated: "The supervised farming program should be the core of the

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[151] S. L. Chesnutt, "A Plan of Organizing Instruction," The Agricultural Education Magazine, 18:128, January, 1946.

[152] Cook, A Handbook on Teaching Vocational Agriculture, op. cit., p. 283.

[153] Hammonds, Teaching Agriculture, op. cit., p. 170.

[154] Arthur P. Williams, "What Constitutes Good Teaching?" The Agricultural Education Magazine, 7:19, August, 1934.

[155] Z. M. Smith, "Experiences with the Home Project," The Agricultural Education Magazine, 2:89, June, 1930.

entire program of work."[156] Similarly, Field asserted: ". . . farm practice is the beginning, the core, and the final application of instruction in agriculture."[157] Presenting this same point of view Maltby wrote, ". . . the course of study should be based on the supervised practice program of the pupil . . ."[158] while Wall maintained that the teacher's course of study should be ". . . based largely on those things that the students will be facing in developing their programs."[159] Along the same line, Floyd contended:

> The idea which should be kept constantly in mind is that the instruction of each boy in the class should be based on the activities in which he can engage in the type of farming for which he is receiving training. The training program of each student takes on a new meaning because it becomes the core of his course instead of a project tacked on.[160]

Again, Pollom maintained:

> If the project, properly used, is an effective teaching device it would seem that as much of

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[156] Peterson, loc. cit.

[157] Field, loc. cit.

[158] R. D. Maltby, "Standards in Supervised Practice," The Agricultural Education Magazine, 1:4, April, 1929.

[159] Wall, op. cit., p. 18.

[160] H. C. Floyd, "The Program in Vocational Agriculture for the High Schools in Louisiana," The Agricultural Education Magazine, 6:183, June, 1934.

> our teaching as possible should center around projects. This means that as much of our day-to-day class instruction as possible should grow out of the immediate and near future needs of boys in their project work.[161]

Further emphasis was given in a Federal bulletin to the close tie-up between classroom instruction and programs of supervised farming. The importance of giving attention to individual needs of the student is stressed.

> The content of any course of study in vocational agriculture should be derived largely from students' needs in terms of supervised farming programs and the type or types of farming prevailing in the locality, especially the types on their home farms.[162]

A similar instructional philosophy is echoed when it is recommended in a Michigan publication that:

> Instruction should be centered about the task on the part of the student to determine his own needs and those of the home farm, and based on them, develop his supervised farming program.[163]

Sanders has noted several desirable tendencies when the supervised farming program became the center of interest and the basis of classroom instruction. "Among them," declared Sanders, "were an enlarged scope of

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[161] Pollom, "Project Plans and Their Relation to Instruction, op. cit., p. 48.

[162] Ross et al., op. cit., p. 4.

[163] Supervised Farming Programs in Vocational Agriculture, op. cit., p. 29.

enterprises, an increase in the number and variety of enterprises, and a functioning body of subject matter that was reflected in increased pupil interest, larger returns, and better farming.[164]

There are also recommendations on proper procedures to follow in organizing the instruction in the classroom in such a way that emphasis is given to supervised farming. For instance, in an instructional bulletin it is pointed out that:

> If the instructor guides and teaches so that the boys develop broad and continuing programs of supervised farming, make progress toward establishment in farming, and engage in other meaningful activities, the setting is provided for selecting and organizing course materials for effective teaching.[165]

Deyoe believes it is necessary to change the pattern of teaching if course materials are to be organized around programs of supervised farming:

> If course materials are to be built around the programs of supervised farming, it is necessary to disregard the conventional pattern of teaching livestock and crop production in separate years. In other words, the so-called "cross-sectional" plan is needed because only by this means can the course

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[164] H. W. Sanders, "What Progress Has Been Made in Planning Supervised Farming?" The Agricultural Education Magazine, 10:88, November, 1937.

[165] Teaching Techniques and Instructional Planning for High-School Classes in Vocational Agriculture, Bulletin 290 (Lansing, Michigan: Department of Public Instruction, 1948), p. 13.

> of study be made sufficienty flexible to meet the needs of the students in developing their farming programs.[166]

Still, Deyoe sees little point in the teacher adopting the cross sectional organization of course materials unless students have developed broad programs of supervised farming. He makes his position clear on this matter as he continues:

> It should be emphasized that there is little point in adopting the cross-sectional or horizontal organization of course materials unless broad programs of supervised farming have been developed for most or all of the students in a class. This seems almost axiomatic when it is recalled that the main reason for using such an organization is that it permits flexibility so that the course content will have a functional relationship to the programs of supervised farm practice.[167]

Summary. Leaders in agricultural education appear to be unanimous in recommending that classroom instruction in vocational agriculture should be based on problems and needs of students arising from their programs of supervised farming.

9. The instructor makes supervisory visits to the home farms of students throughout the year. Most of these visits come when opportunities for instruction are likely to be present.

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[166] Deyoe, Supervised Farming in Vocational Agriculture, op. cit., p. 300.

[167] Loc. cit.

Probably, the primary justification for supervisory visits by the teacher to the home farm of the student is to instruct the pupil. Dickinson has indicated that the instructional situation inherent in supervisory visits affords splendid opportunities for learning. He wrote: "The setting is ideal--a job in progress under natural conditions, the boy responsible for the job and vitally interested in it, and the teacher who has helped in the planning of the job." Then he concluded by raising the question, "What better opportunity for teaching could be found?"[168]

Over and over writers stress the value of the supervisory visit as a means of teaching. Deyoe, for instance, stated: "In reality, the home-farm visit, if properly carried out, is a highly effective form of individualized instruction."[169]

Reflecting the same viewpoint, Hammonds said: "This [the supervisory visit] is the teacher's great opportunity to do individual teaching. Supervision is largely a teaching process. Teaching on the farm is a

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[168] Sherman Dickinson, "Supervising Practice in Vocational Agriculture," The Agricultural Education Magazine, 5:106, January, 1933.

[169] Deyoe, Supervised Farming in Vocational Agriculture, op. cit., p. 338.

major part of good supervision."[170] Similarly, Kiltz pointed out: "The purpose of the 'visit' of the teacher of vocational agriculture with the pupil is to teach."[171]

Cook offered the most specific recommendation for frequency of home visits of any of the writings reviewed. He declared: "During the summer months the student should be visited at least once a month and more frequently if possible. Six visits per year should be the very minimum, with ten to twelve being desirable for each student.[172]

Other authorities seem inclined to qualify any recommendations which they make. Olney felt that the amount of instruction which can be given and the need for assistance of the boys should be the basis for visits, rather than any specified number. He concluded by saying: "Probably each pupil should be visited at least two or three times each month during the summer, and a less number of times per month during the school

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[170] Hammonds, Teaching Agriculture, op. cit., p. 220.

[171] Kenneth W. Kiltz, "The Teaching Visit to the Farm Boy," The Agricultural Education Magazine, 9:40, September, 1936.

[172] Cook, A Handbook on Teaching Vocational Agriculture, op. cit., p. 390.

year."[173] Deyoe indicated that it is unwise to be too specific with respect to frequency of visitation. "Perhaps, a fair approximation," he wrote "is an average of one visit every one or two months, varying in accordance with the needs arising from the program of supervised farming and with the ability of the individual student to cope satisfactorily with situations as they arise in developing the program."[174]

Although the writer was unable to find support for his position, Hamlin seems to question the feasibility of a teacher spending extensive time in home visitation. He wrote:

> In the early days of vocational agriculture, the prevailing idea seemed to be that the teacher who traveled the most miles and spent the most time with his boys on their farms was the best supervisor of practice. We do not now believe that this standard is right; we are sure too that it is financially prohibitive. Individual instruction in itself is so costly that we have almost none of it in our schools, relying on group instruction instead . . . The new type supervisor of practice will have to be, first of all, an organizer. He must be able to get things done largely through working with groups. He will not have much time to spend with individuals.[175]

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[173] Roy A. Olney, "Visiting Farming Programs an Opportunity for the Teacher," The Agricultural Education Magazine, 19:117, December, 1946.

[174] Deyoe, Supervised Farming in Vocational Agriculture, op. cit., p. 341.

[175] Hamlin, "A Philosophy of Supervised Practice," op. cit., p. 107.

Whether to announce visits in advance appears to be a moot question. Kiltz believes that it is comparatively easy to arrange visits with the boy during the winter because the teacher has almost daily contact with the student. In the summer, according to him, visits can be arranged by the telephone or a visit can be scheduled during a previous visit. Kiltz objected to a definite schedule. He maintained:

> The use of a definite schedule is not very satisfactory because unforeseen development may conflict. The teacher should never bind the boy's time with such a schedule in a busy season.[176]

Dickinson granted that there are occasions when it seems advisable to notify the boy before a visit. In general, however, he advised the best practice seems to be to make supervisory visits unannounced. He declared:

> It is usually difficult to know just when one will reach the boy's farm, because of weather conditions, variation in length of visits at other projects, and unexpected demands on one's time.[177]

Most authorities, however, lean toward the practice of having the visit announced. Ross, Clements and Johnson recommended: "Generally speaking, students should be notified in advance with regard to the approximate time

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[176] Kiltz, "The Teaching Visit to the Farm Boy," loc. cit.

[177] Dickinson, "Supervising Practice in Vocational Agriculture," loc. cit.

of an instructor's call."[178] It is stated in a bulletin from the Michigan Office of Vocational Education that, "In order to make these types of farm visits most successful, farm visits should be planned and scheduled ahead of time."[179] Cook wrote: "The trend, however, is toward notifying the student."[180]

Making notes of each farm visit seems to be a practice that is generally recommended. Deyoe believes that memoranda of visits (1) help in planning future visits; (2) serve as a means of evaluating the progress of students and the effectiveness of supervision; (3) provide suggestions for guiding students in replanning programs and making additions; and (4) serve as a basis for showing use of instructor's time.[181]

The use of a memorandum on supervisory visits is recommended in a Michigan bulletin[182] as well as

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[178] Ross et al., op. cit., p. 68.

[179] Supervised Farming Programs in Vocational Agriculture, op. cit., p. 33.

[180] Cook, A Handbook on Teaching Vocational Agriculture, op. cit., p. 393.

[181] Deyoe, Supervised Farming in Vocational Agriculture, op. cit., p. 350.

[182] Supervised Farming Programs in Vocational Agriculture, op. cit., p. 35.

by Dickinson,[183] Kiltz,[184] and Olney. According to Olney:

> . . . it is essential that the teacher keep for himself a brief but concise record of progress and accomplishments on each part of the pupil's farming program if he is to carry on a continuous constructive program with the boy . . . Notes should be made for the teacher's use. The main purpose of such notes is for the teacher's use in planning further assistance or help to the pupil in advancing his program on an efficient basis.[185]

Summary. According to authorities cited in this section, the primary purpose of the supervisory home visit is to carry on individual instruction with the pupil. In general, leaders in agricultural education do not care to specify a set number of visits that should be made to a student, although they indicate that these visits should be made regularly from month to month. Most authorities recommend that farm visits be announced. The use of a memorandum of each visit is recommended.

10. Students are led to recognize the value of complete and accurate records. Training is provided in keeping and using records.

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[183] Dickinson, "Supervising Practice in Vocational Agriculture," op. cit., p. 107.

[184] Kiltz, "The Teaching Visit to the Farm Boy," loc. cit.

[185] Olney, "Visiting Farming Programs an Opportunity for the Teacher," op. cit., p. 115.

Judging from the opinions of leaders in vocational agriculture, there is probably no phase of supervised farming where so much dissatisfaction and uncertainty exists as in the area of record keeping and use of records. A state supervisor wrote: "Project records have been the nightmare of vocational agriculture."[186] Nearly twenty years ago, a teacher trainer took a rather dim view of the status of record keeping. He reported:

> We have recently had a good deal of delving into project record keeping. The gist of the findings to date is that we have made almost no progress in this respect since 1917, that project records generally are grossly inaccurate, incomplete, and misleading.[187]

More recently another teacher trainer reviewed the efforts that had been made in his state to improve the system of project accounting. With a note of futility he observed:

> In Ohio, project accounting has been carried to the greatest detail probably of any state. The procedure has been determined following close advisory relationships with the extension specialists in farm accounting--men of national reputations. Also, project books have been carefully analyzed and the various errors and shortcomings enumerated; courses have been offered for teachers or discussion groups have been held at our conferences to the end that

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[186] L. M. Sasman, "Supervised Practice in Farming," The Agricultural Education Magazine, 5:37, September, 1932.

[187] H. M. Hamlin, "Project Record Keeping," The Agricultural Education Magazine, 3:122, February, 1931.

> improvement might be made. Yet with all this care and detail, the best that can be truthfully said of the situation today is that many teachers do not direct their boys thru the accounting procedure correctly and hundreds of the boys fail to bring their project accounting to an acceptable analysis. After 25 years of trial and error we do not appear to have the answer. Who has the answer?[188]

Other cases could be cited to show that there is evidence of considerable concern by leaders in agricultural education for the low quality of project records which they believe generally exist.

If record keeping is as bad as it is often pictured, what are the reasons? Bender made an appraisal of the situation and concluded:

> In far too many cases boys are keeping records because they have to and the records consist of a series of estimates or guesses. Undoubtedly, some of the difficulty can be traced to the fact that both teacher and students do not realize the use that can be made of records.[189]

In spite of the criticism that is directed toward record keeping, in no instance has the writer come upon a recommendation that the practice be abandoned. Ekstrom pointed out that, "Almost all, if not all, vocational workers are agreed that records are essential

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[188] W. F. Stewart, "Policies and Needs in Agricultural Education," The Agricultural Education Magazine, 16:189, April, 1944.

[189] Ralph E. Bender, "An Analysis of Swine Project Records," The Agricultural Education Magazine, 15:66, October, 1942.

to the farming business and to the supervised practice work of the vocational agriculture students."[190]

The present consensus of opinion seems to be that greater efforts should be made to teach the importance of good records and then instruct students how to keep and use records. Hammonds, for instance, said:

> Keeping records cannot be justified unless the records are useful to those who keep them. Although records are a part of any good farming program, students should not be asked to keep them until they see why records should be kept. It is the responsibility of the teacher to teach the students that records should be kept and how to keep them and use them.[191]

Similarly, Deyoe observed:

> In departments where records of supervised farming are well kept, it is usually found that record keeping is included as a definite and regular part of the instructional program.[192]

Along the same line Cook suggested the desirability of explaining the importance of good records to students and teaching them how to keep records.[193]

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[190] Ekstrom, op. cit., p. 9.

[191] Hammonds, Teaching Agriculture, op. cit., p. 205.

[192] Deyoe, Supervised Farming in Vocational Agriculture, op. cit., p. 280.

[193] Cook, A Handbook on Teaching Vocational Agriculture, op. cit., p. 383.

After pointing out several causes for poor records, Kirkland offered some concrete suggestions for improving them. It can be seen that his ideas, if put into practice, would necessitate that the teacher use considerable time in the classroom for instruction in record keeping. Among Kirkland's suggestions were:

> Utilize the summaries of records of former students in helping newly enrolled students to determine the economic possibilities of certain enterprises and to aid them in making an estimated budget of expenses and receipts of the enterprises selected.
>
> Immediately after newly enrolled students have started an enterprise they should be taught how to keep the necessary records . . . involved in conducting the enterprise.
>
> Have regular dates for students to post labor and cash records in the record books. It is advisable to devote a portion of a class period to this activity every two to four weeks.
>
> Lead the students to analyze the records in order to determine how efficiently each enterprise was conducted and to determine what jobs should be studied further in order to increase the efficiency of the enterprises in the future.[194]

Making project budgets is recommended as a desirable activity associated with the teaching of record keeping. Cline,[195] Cook,[196] Deyoe,[197] Duck,[198] Gibson,[199]

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[194] James B. Kirkland, "What's Wrong with Record Keeping?" The Agricultural Education Magazine, 17:128, January, 1945.

[195] Russell W. Cline, "Why Use Enterprise Budgets?" The Agricultural Education Magazine, 11:68, October, 1938.

and Ekstrom are among those looking with favor upon having students prepare project budgets. Ekstrom wrote:

> A desirable set of records for vocational students should contain a budget based on a study of local situations, results of projects of former students, reference data--average group yields for the community and county, and summaries of the cost accounting route reports of the extension service.[200]

Once students have begun to keep records, it is recommended that the instructor check them regularly. In a Federal bulletin, Ross, Clements, and Johnson stated that students should be provided with a file or case in the classroom for their project record books so the books can be available to the instructor and students each day for study, recording, and checking.[201] Cook recommended that the instructor place a grade in the student's record book each time the boy is visited.[202]

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[196] Cook, A Handbook on Teaching Vocational Agriculture, op. cit., p. 340.

[197] Deyoe, Supervised Farming in Vocational Agriculture, op. cit., p. 221.

[198] Joe Duck, "Budget Making Is Educationally Sound," The Agricultural Education Magazine, 21:75, October, 1948.

[199] Gibson, "Developing Ability to Finance a Farm Business: a Major Objective in Vocational Programs in Agriculture," op. cit., p. 129.

[200] Ekstrom, op. cit., p. 9.

[201] Ross et al., op. cit., p. 62.

[202] Cook, A Handbook on Teaching Vocational Agriculture, op. cit., p. 397.

Hammonds, likewise, advised the teacher to examine record books. He said:

> Check the records for completeness and accuracy. If the teacher does not see the records, a student has ground to assume that records are not important. A student wants the teacher to see his records if they are well kept. Seeing the records on each supervisory visit promotes their being well kept.[203]

Considerable stress is placed upon the importance of putting the records kept to use. In this regard, Hammonds declared:

> If records are not to be summarized, interpreted, and used, they might as well not be kept. Summarizing records is necessary to interpreting them and to making use of them.[204]

Similarly, Ross, Clements, and Johnson observed:

> The keeping of project records is of no particular value unless some use is made of them. In order to measure progress properly and develop plans for the future, each student should summarize and analyze the results of the records on each completed project in his supervised farming program.[205]

Duck[206] and Sweany particularly commended analysis of records as a desirable activity for students.

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[203] Hammonds, Teaching Agriculture, op. cit., p. 221.

[204] Hammonds, Teaching Agriculture, op. cit., p. 210.

[205] Ross et al., op. cit., p. 61.

[206] Joe Duck, "Helping Teachers to Improve Students' Farming Records," The Agricultural Education Magazine, 18:6, July, 1945.

Sweany said: "The ability to analyze his projects to determine weaknesses should be developed in every boy."[207]

Summary. A review of the writings of supervisors and teacher trainers reveals that there is general dissatisfaction with the quality of project record keeping. It is recommended that students be taught the value of good records as well as how to keep and use records.

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[207] Sweany, loc. cit.

CHAPTER V

ANALYSIS OF PRACTICES USED IN CONDUCTING SUPERVISED FARMING

In this chapter is presented an analysis of the practices used by two groups of teachers: (1) those determined to have the more effective and (2) those found to have the less effective programs of supervised farming. Several comparisons are made between the two groups.

The presentation is divided into ten sections each corresponding to one of the ten working principles of conducting supervised farming which have been developed in Chapter IV. As pointed out previously, an effort was made to ask questions of the informants which reflected the extent that teachers were carrying out practices in conducting supervised farming which were in keeping with recommendations of expert opinion. As can be seen in the interviewing guide,[1] the questions were grouped by areas to correspond to the ten working principles. The discussion is designed to reveal not only the extent that the teachers in the two groups carried out recommended practices, but also the reasons offered by the

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[1] See Appendix A.

teachers for any failure to use these practices. For purposes of simplicity these reasons are categorized and presented in tables. Then in order that the reader may be further enlightened on the exact character of each teacher's response, they are broken down in further detail in the context.

A Chi-square test of significance was applied to the numbers of the different kinds of responses offered on each question to determine if there was a significant difference between the answers provided by the respondents in the two groups.

For purposes of comparison, the hypothesis was made that the combined responses offered by informants in Group I were the correct ones. Then a Chi-square test was applied to determine if the answers of respondents in Group II deviated from those in Group I more than could be expected from chance variation. Significance was tested at the five per cent level.

Since it seems to be generally agreed that the Chi-square test should not ordinarily be applied to data in which any cell entry is less than five, an adjusted value of Chi-square was calculated whenever the expected numbers were five or less.

GUIDING AND COUNSELING PROSPECTIVE STUDENTS

Table XVIII reveals that a much higher percentage of the beginning students in vocational agriculture were visited by teachers in Group I than in Group II. While the percentages of students visited by each teacher in Group I were not uniformly high, they were still much higher than those in Group II. Actually, there were ten of the thirteen teachers in Group II who made no visits whatsoever to beginning students.

A consideration of the reasons presented by the teachers for failure to consult with beginning students prior to enrollment in vocational agriculture brings out some interesting findings. In Table XIX are categorized the reasons advanced by teachers in Group I and in Group II. The reader should keep in mind that all of the teachers in Group I were following the practice of conferring with beginning students to some extent. Consequently, their responses reflect the reasons for failure to visit selected individuals but not all of their beginning students.

Seemingly, one of the principal causes for failure of teachers to confer with beginning students prior to their enrollment is the concept which they hold toward the need and character of counseling.

TABLE XVIII

EXTENT OF VISITATION TO BEGINNING STUDENTS PRIOR TO ENROLLMENT FOR PURPOSES OF GUIDANCE AND COUNSELING

Group I				Group II			
School	Number of Beginning Students	Number of Beginning Students Visited	Per Cent Beginning Students Visited	School	Number of Beginning Students	Number of Beginning Students Visited	Per Cent Beginning Students Visited
A	12	10	83.3	F	45	0	0
H	14	8	57.1	K	17	0	0
I	14	13	92.9	T	11	0	0
R	17	17	100.0	W	8	0	0
U	14	12	85.7	Y	10	0	0
DD	13	12	92.3	AA	39	15	38.5
GG	20	8	40.0	JJ	25	8	32.0
MM	26	20	77.7	VV	7	0	0
KKK	14	10	71.4	ZZ	11	0	0
LLL	31	27	87.1	PPP	14	2	14.3
QQQ	15	7	46.7	VVV	18	0	0
UUU	15	13	86.6	ZZZ	38	0	0
BBBB	14	12	85.7	FFFF	30	0	0



TABLE XIX

CATEGORIES ABOUT WHICH ARE GROUPED REASONS ADVANCED BY TEACHERS FOR NOT CONFERRING WITH BEGINNING STUDENTS BEFORE ENROLLMENT

Category	Times Reported	
	Group I	Group II
Concept of teacher toward counseling	3	8
Use of teacher's time	6	4
Pattern of school organization	3	2

For instance, two teachers in Group I and one in Group II thought that they did not need to confer with beginning students who came from homes where older brothers were enrolled in or had been enrolled in vocational agriculture. Another teacher in Group I felt that the need was not particularly great for conferences between him and beginning students because his program "spoke for itself" and the momentum which it had gathered in the past tended to carry it forward without a great deal of effort on his part. Two teachers in Group II could not see a need for counseling beginning students because their schools were consolidated and they believed that farm boys progressing through their schools became sufficiently informed regarding their programs in vocational agriculture and supervised farming. Similarly,

two other teachers in Group II explained that they felt no particular obligations to confer with beginning students, one because prospective pupils lived outside the high school district, and the other because the teacher believed his primary responsibility rested with his present students.

The character of counseling that teachers believed to be adequate was apparently a limiting influence on the extent that individual conferences were held with beginning students previous to their enrollment. Two teachers in Group II contended that beginning students could be counseled best in class work after they had enrolled because they believed that beginning agriculture was largely exploratory. Another teacher went so far as to hold that counseling with beginning students need not be on a formal basis but could be accomplished incidentally through contacts with parents and the prospective pupils.

It is also brought out in Table XIX that problems attendant to use of the teacher's time accounted for several of the reasons advanced by instructors for not conferring with beginning students. Teachers in both groups indicated that time was a consideration in their failure to contact beginning students but it was from a different viewpoint. Teachers in Group I pointed out

that limitations of time had prevented their visiting some of their beginning students while instructors in Group II cited time as a factor which compelled them to forego contacts with all or nearly all of their beginning pupils. Teachers in Group I offered responsibilities in teaching veterans on an overload basis and attendance at summer school as activities which interfered with their doing a complete job of contacting prospective students. Teachers in Group II did not volunteer any specific responsibilities which conflicted.

Considerations associated with the pattern of school organization accounted for a third category of reasons. Three teachers in Group I reported that there were a few students with whom they did not confer because they did not know about these pupils. In these instances the pupils either lived outside their customary school service area or they had recently moved into it.

Two teachers in Group II contended that organizational procedures in their schools precluded home conferences with prospective students. One of these instructors declared that his superintendent was opposed to any activity which might attract non-resident students. In the other instance the teacher held that the procedure which was followed in his school of counseling

prospective students in the spring before they enrolled in high school obviated the necessity for later counseling by him.

In general, it appeared that the teachers in Group I recognized the value and desirability of a teacher conferring with beginning students prior to their enrollment in vocational agriculture. Most of them, apparently, made rather concerted efforts to contact prospective students. In contrast, teachers in Group II made limited or no attempt to confer with beginning students prior to their enrollments in vocational agriculture. Furthermore, with few exceptions, the reasons which they offered for failure to hold such conferences indicated that they could see no particular need for preliminary contacts with beginning students.

Aside from conferring individually with beginning students to acquaint them with vocational agriculture and with supervised farming, several other approaches were used which the instructors felt contributed toward a better understanding of the program. These are grouped in Table XX.

In Group I, the activities carried on by the local F. F. A. [Future Farmers of America] chapter appeared to be particularly helpful. In four of the schools, prospective students were invited to attend one or more

TABLE XX

CATEGORIES OF METHODS USED BY TEACHERS TO INTRODUCE PROSPECTIVE STUDENTS TO SUPERVISED FARMING

Category	Times Reported	
	Group I	Group II
Contacts through F. F. A.	15	2
Contacts through lower grades	13	7
Contacts through publicity	6	0
Contacts through adult groups and older students	5	0
Contacts through 4-H Clubs	0	3

chapter meetings during the school year prior to the time when they would be likely to enroll in vocational agriculture. Four other teachers invited prospective students to participate in summer F. F. A. chapter activities. In two instances these students were invited to attend the summer meetings. In another case, the prospective students were invited to attend and participate in the local F. F. A. leadership training camp.

One instructor went so far as to hold a June initiation into the Greenhand degree for students who had just completed the eighth grade. In the most recent initiation prior to the interview, twenty-two Greenhands had been inducted. This teacher reported that each of

these students had started one or more production projects before he was eligible to gain membership. This instructor, as well as two others who encouraged students to have projects before enrolling in vocational agriculture, felt that the experience was highly valuable. He contended that an early start was necessary for a student to build up an inventory adequate to make a start in farming after graduation from high school, particularly in livestock. At the same time he believed that such pre-vocational experience had helped some boys discover that they did not care for agriculture. Consequently, these students would not enroll in vocational agriculture the following year.

All three of these teachers encouraged beginning students to use services provided by the local chapter of Future Farmers of America. At the same time they stimulated F. F. A. members to make these services available to needy students, particularly through giving financial aid and by making livestock available.

Three teachers gave special attention to encouraging prospective students to exhibit in the displays at local and county fairs. Another teacher invited prospective students to participate in the annual F. F. A. summer project tour. A teacher in a school where vocational agriculture was not taught in the ninth grade,

had organized a Junior F. F. A. Meetings were held every two weeks as one type of home-room activity. One of the primary objectives of the organization was to develop a better understanding of vocational agriculture including supervised farming.

Other ways in which the F. F. A. was used by teachers to develop a better understanding of vocational agriculture and supervised farming included: (1) conducting assembly programs for eighth-grade boys; (2) forming a team of F. F. A. members to visit rural schools to explain the program of vocational agriculture; and (3) assisting with visitation days at the high school for recent eighth-grade graduates from rural schools.

While it must be recognized that the activities which were conducted by the F. F. A. were not always aimed specifically toward the development of an understanding of supervised farming, the teachers seemed to think that these activities had contributed materially toward a realization of this purpose.

Even though most of the methods which were used to introduce students to supervised farming, among teachers in Group I, were rather closely associated with F. F. A. chapters, there were some other approaches to this problem. Contacts with lower grade groups represented an approach which was used rather frequently.

These included: explaining the program of vocational agriculture, including supervised farming, to farm boys in the eighth or the ninth grade depending upon whether the first year of vocational agriculture was started in the ninth or the tenth grade; and contacting rural eighth-grade students either in rural schools or at the high school during high-school visitation days for rural students. Teachers in Group II reported similar contacts with lower grade groups but, as Table XX shows, to a considerably lesser extent.

Use of publicity was reported to some extent by teachers in Group I but not at all by teachers in Group II to introduce students to supervised farming. These methods included use of the local newspaper, the school newspaper, and the sending of letters to students. A few of the teachers in Group I also reported use of contacts through fathers attending adult classes and older students, particularly older brothers, to inform prospective students.

As is revealed in Table XX, the special methods employed by teachers in Group II to bring about a better understanding of vocational agriculture and supervised farming, showed some similarity to those in Group I. However, the number of different activities and the number of teachers using these activities were considerably

fewer. Only two teachers indicated any use of F. F. A. but three teachers revealed that associations in 4-H Club had helped to develop a better understanding of vocational agriculture and supervised farming. Two of the instructors indicated that they were active 4-H Club leaders while one felt that his contacts with students through 4-H Club work had been helpful in developing a better understanding of his program.

Table XXI shows the responses of teachers in the two groups to three questions dealing with practices used in the selection of students. With two exceptions all the teachers in Group I answered in the affirmative to the question, Are students who enroll in your classes required to live on a farm or have the use of farm facilities for conducting individual programs of supervised farming? In contrast, only two teachers in Group II answered yes to this question. This difference is significant.

The data presented in Table XXII shed further light on the responses to this question. Only two of the teachers in Group I had five per cent or more of the enrollment in their departments made up of boys who did not live on a farm. In Group II, however, all of the teachers except one had more than five per cent of their enrollments consisting of boys who did not live on a farm.

TABLE XXI

PRACTICES USED BY TEACHERS IN SELECTION OF STUDENTS

Practice	Group I Responding		Group II Responding	
	Yes	No	Yes	No
*Are students who enroll in your classes required to live on a farm or have the use of farm facilities for conducting individual programs of supervised farming?	11	2	2	11
Do you consult with prospective students at the time of registration for classes?	7	6	3	10
*Do you inform beginning students that supervised farming is a required part of the program in vocational agriculture prior to enrollment?	13	0	6	7

*Data represent a significant difference at or above the five per cent level

In two instances, more than half of the enrollment was composed of boys who did not live on a farm.

Table XXI also reveals the responses of the two groups of teachers to the question, Do you consult with prospective students at the time of registration for classes? The teachers in Group I divided about equally on this question with seven responding yes and six no. Three of the teachers in Group II replied in the

TABLE XXII

EXTENT THAT BOYS NOT LIVING ON FARMS ARE ENROLLED IN VOCATIONAL AGRICULTURE

Group I				Group II			
School	Number of Students Enrolled	Students Not Living on Farms	Per cent Students Not Living on Farms	School	Number of Students Enrolled	Students Not Living on Farms	Per cent Students Not Living on Farms
A	35	0	0	F	72	14	19.4
H	48	0	0	K	36	6	16.7
I	63	0	0	T	36	3	8.3
R	65	0	0	W	34	7	20.6
U	36	1	2.8	Y	48	4	8.3
DD	38	1	2.6	AA	78	1	1.3
GG	87	1	1.2	JJ	49	25	51.0
MM	81	4	5.0	VV	35	6	17.1
KKK	30	5	16.7	ZZ	24	5	20.8
LLL	55	2	3.6	PPP	37	4	10.8
QQQ	46	2	4.3	VVV	33	17	51.5
UUU	48	2	4.2	ZZZ	27	26	22.2
BBBB	26	1	3.8	FFFF	64	20	31.3

affirmative while ten gave no as their answer to this question. The difference in the responses between the two groups was not significant.

Table XXI also shows the responses of teachers in the two groups to the question, Do you inform beginning students that supervised farming is a required part of the program in vocational agriculture prior to enrollment? Teachers in Group I were unanimous in answering this question in the affirmative while only six of the thirteen teachers in Group II gave the same response. This difference is significant.

Table XXIII shows a classification of reasons advanced by teachers for permitting students to enroll in their classes who were without farm facilities. Examination of these reasons reveals that they tend to fall into certain patterns. For instance, there are those reasons which tended to emphasize the benefit accruing to the town boy from enrolling in vocational agriculture. These reasons included: (1) teacher can't know whether a town boy will farm; (2) town boys make use of agriculture whether they farm or not; (3) a study of agriculture develops an appreciation of agriculture and farm problems; and (4) boys going into related work can benefit from training in agriculture.

TABLE XXIII

CATEGORIES OF REASONS ADVANCED BY TEACHERS FOR PERMITTING STUDENTS TO ENROLL IN CLASSES IN VOCATIONAL AGRICULTURE WHO DO NOT LIVE ON A FARM OR WHO DO NOT HAVE THE USE OF FARM FACILITIES FOR CONDUCTING INDIVIDUAL PROGRAMS OF SUPERVISED FARMING

Category	Times Reported	
	Group I	Group II
Benefits to student	1	9
Pattern of administration	1	8
Character of instruction	0	3

A second set of reasons might be classified as administrative in character. In this category are such reasons as: (1) town boys could not be legally excluded; (2) enrollment of town boys is necessary in order to get large enough classes to qualify for reimbursement; (3) school administrator demands an equitable distribution of students in all classes; and (4) enrollment of town boys may provide another credit which they can work into their schedules.

A third classification of reasons for permitting town boys to enroll in vocational agriculture centered on the belief that ninth grade agriculture was or should be largely exploratory in character. The men offering

this reasoning apparently thought that all boys should be permitted to enroll in vocational agriculture to learn about the subject and should not be denied this opportunity because they did not have the use of farm facilities with which to carry on a program of supervised farming. Some of the men indicated that they were able to satisfy the legal requirements for supervised farming by having the students perform a few supplementary farm skills or carry a home-garden project.

The following statement made by one of the teachers seems to embody the reasoning of the most of the teachers in Group II on the question of permitting town boys to enroll in their classes.

> Vocational agriculture is part of the public educational system. I do not feel that any town boy should be excluded. Town boys benefit as much or more in my classes as others. Some town boys ardently love the country. These boys can have a home-garden or carry some kind of improvement project or supplementary practice. Ninth-grade agriculture is largely an overview of the subject as an occupation. The work can be more selective beginning with the sophomore year.

One of these teachers took a point of view on this question which was somewhat different from the majority of the teachers in Group II. He declared:

> From the standpoint of the teacher, I would prefer classes with strictly farm boys. From an administrative standpoint, I can understand why all boys interested in taking agriculture should be allowed to enroll.

The reasons which the teachers offered for failure to consult with prospective students at the time of registration are classified in Table XXIV. Those presented by instructors in Group I seemed quite tenable. One gathered from the interviews that these men considered this contact with prospective students as, relatively speaking, of minor importance in so far as they were concerned. It appeared that there were certain established administrative procedures of registration in the six schools where these men were employed which did not involve the teacher of vocational agriculture acting in the capacity of counselor to assist beginning students with their enrollments. Seemingly, these men were quite satisfied to accept this arrangement.

As Table XVIII indicates, teachers in Group I had apparently done considerable preliminary work in counseling with beginning students before registration. In general, one must be impressed by the favorable administrative relationships which these teachers appeared to have with their school principals. For instance one teacher commented: "This responsibility is channeled through the principal. He takes a lot of pride in our ag department. He offers complete cooperation." Another teacher volunteered: "There is no reason why I should see these boys at registration. My

TABLE XXIV

CATEGORIES OF REASONS ADVANCED BY TEACHERS FOR NOT CONSULTING WITH PROSPECTIVE STUDENTS AT THE TIME OF REGISTRATION FOR CLASSES

Category	Times Reported	
	Group I	Group II
Administrative procedures and patterns	4	7
Attitude of other teachers	0	4
Attitude and procedures of teacher of agriculture	3	2

principal makes sure that worthy boys who are interested in agriculture get into my classes." A third teacher related: "I have a fine working relationship with my principal. Students who really want and need agriculture are guided into it."

The reasons advanced by teachers in Group II for not consulting with prospective students at the time of registration for classes does not reveal the same calm assurance prevailing among these instructors as seemed to exist among the men in Group I when this subject was discussed. Some of the teachers appeared to be worried about this point, and in particular exhibited some concern about relationships with the school administration and other teachers. One teacher lamented:

> I have no chance to contact boys at registration time. The principal is very dogmatic. There are some indications that he thinks the superior student should not take agriculture.

Another instructor declared:

> I haven't had an opportunity to contact individual students at registration in the last two years. In our school there seems to be a trend toward greater emphasis on college entrance courses. French and Spanish were introduced a year ago. The other teachers are out after students to teach.

In a similar vein, a teacher deplored the tendency for other instructors to look upon his work in a disparaging manner. He summed up their attitude by saying: "Teachers have commented that some of my boys are too smart to take ag."

The reasons advanced by the seven teachers in Group II for not pointing out the requirement of supervised farming before a student is enrolled in their classes were not particularly revealing except that these instructors did indicate in the main that they felt the first week of classes was the best time to acquaint students with this requirement. Obviously, if these teachers had not contacted their students prior to enrollment, as previous data in this chapter indicated was the case in most instances, then it would have been difficult, if not impossible, to inform beginning students about this requirement of supervised farming before enrolling in vocational agriculture.

PROVIDING CLASS INSTRUCTION ON SUPERVISED FARMING

Table XXV brings out that teachers in both Group I and Group II, with one exception, used class time to give instruction in supervised farming to first-year students on problems relating to the selecting and starting of programs of supervised farming. The teacher who did not provide this instruction explained: "Most of my beginning boys have been in 4-H Club so they are pretty well oriented to the program. I plan to tell the town boys about it on an individual basis."

Table XXV also shows that all but two of the teachers in Group I used the practice of taking beginning students to visit programs of supervised farming of older boys. On the other hand only five of the instructors in Group II followed this practice. This difference is significant. Ten of the thirteen teachers in Group I required each student to make a written plan of his supervised farming program. Only four of the thirteen teachers in Group II had their students prepare a written plan. This difference is also significant.

Although all but one of the teachers professed to use class time to give instruction in supervised farming to beginning students, Table XXVI brings out that instructors in Group I use much more time for this activity than those in Group II. In Group I the approximate number

TABLE XXV

PRACTICES USED BY TEACHERS IN TEACHING THE SELECTION AND PLANNING OF PROGRAMS OF SUPERVISED FARMING

Practice	Group I Responding		Group II Responding	
	Yes	No	Yes	No
Do you use class time to give instruction in supervised farming to first-year students on problems relating to the selecting and starting of programs of supervised farming?	13	0	12	1
*Do you use class time to review the individual supervised farming programs of the previous year and consider revisions for the coming years?	13	0	5	8
*Do you take beginning students to visit supervised farming programs of older boys?	11	2	5	8
*Do you require each student to make a written plan of his supervised farming program?	10	3	4	9

* Data represent a significant difference at or above the five per cent level

of days spent ranged from ten to fifty days with a median of thirty days. In Group II the range was from none to twenty days with a median of five days.

Table XXVII discloses that all of the teachers in Group I, not only used class time to give instruction to beginning students in supervised farming, but also set

TABLE XXVI

DAYS USED IN CLASS TO GIVE INSTRUCTION IN SUPERVISED FARMING TO FIRST-YEAR STUDENTS ON PROBLEMS RELATING TO SELECTING AND STARTING OF PROGRAMS OF SUPERVISED FARMING

Group I		Group II	
School	Days	School	Days
A	40	F	5
H	20	K	0
I	30	T	15
R	25	W	5
U	10	Y	10
DD	30	AA	5
GG	30	JJ	20
MM	30	VV	2
KKK	10	ZZ	20
LLL	20	PPP	5
QQQ	50	VVV	5
UUU	15	ZZZ	10
BBBB	30	FFFF	15
Median	30		5

aside class time to review the individual farming programs of the previous year and consider revisions for the coming year. Eight of the thirteen teachers in Group II did not follow this practice. Of the remaining five teachers in this group only one of them used

TABLE XXVII

DAYS USED IN EACH ADVANCED CLASS TO REVIEW INDIVIDUAL SUPERVISED FARMING PROGRAMS OF PREVIOUS YEAR AND CONSIDER REVISIONS FOR THE COMING YEAR

Group I		Group II	
School	Days	School	Days
A	15	F	0
H	15	K	2
I	20	T	5
R	3	W	0
U	15	Y	0
DD	10	AA	10
GG	15	JJ	0
MM	35	VV	0
KKK	15	ZZ	5
LLL	20	PPP	2
QQQ	30	VVV	0
UUU	20	ZZZ	0
BBBB	15	FFFF	0
Median	15		0

more than five days. All of the teachers in Group I, except two, used fifteen or more days for this activity.

A consideration of the reasons advanced by eight of the teachers in Group II revealed that six of them felt that this activity could be handled best on an individual basis. The other two teachers confessed their

own inability to carry out this responsibility because they could not find time to do it.

Of the two teachers in Group I who did not follow the practice of taking beginning students to visit farming programs of older boys, one reported that he had not had older students with programs which were suitable to show. The other teacher stated that a school board policy of requiring a written permit prevented his taking beginning students to visit the supervised farming programs of older students.

The reasons advanced by the eight teachers in Group II seemed somewhat vague, but they indicated that the teachers had elected to hold any discussions of programs of supervised farming of older boys in the classroom. For instance, one of the teachers stated, "It's just as satisfactory to look over the records of older boys in the classroom as it is to take the class to the farm."

The reasons offered by the teachers for not requiring a written plan are classified in Table XXVIII.

The reasons reported emphasized the unfavorable effect of this approach on the student. Nine of the teachers in Group II and two in Group I expressed a belief that their students did not like to make written plans. The other reasons centered on the teacher. One

TABLE XXVIII

CATEGORIES OF REASONS OFFERED BY TEACHERS FOR NOT REQUIRING EACH STUDENT TO MAKE A WRITTEN PLAN OF HIS SUPERVISED FARMING

Category	Times Reported	
	Group I	Group II
Effect on student	2	9
Influence on teacher	1	3

teacher in Group I and two in Group II asserted that it was difficult to carry out the instruction in an effective manner. A third instructor in Group II frankly admitted that he had ignored the possibilities of this instruction.

ACQUAINTING PARENTS WITH SUPERVISED FARMING

Table XXIX shows the extent that selected practices were used by the two groups of teachers to inform parents about supervised farming. Only two of the thirteen teachers in Group I held meetings for parents of beginning students which had as one of their purposes the development of an understanding of supervised farming. One teacher in Group II held such a meeting. The difference between the two groups is not significant.

Further examination of Table XXIX reveals that eight of the thirteen teachers in Group I followed the

TABLE XXIX

PRACTICES USED BY TEACHERS TO INFORM PARENTS ABOUT SUPERVISED FARMING

Practice	Group I Responding		Group II Responding	
	Yes	No	Yes	No
Do you hold meetings of parents of beginning students which have as one of their purposes the development of an understanding of supervised farming?	2	11	1	12
*Do you hold annual tours of supervised farming to which parents are invited?	8	5	1	12
*Do you take pictures of students and phases of their farming programs and show them to meetings of parents?	8	5	4	9

* Data represent a significant difference at the five per cent level

practice of holding annual tours of supervised farming to which parents were invited. Only one teacher in Group II used this practice. This difference is significant at the five per cent level.

It is also revealed in Table XXIX that eight of the thirteen teachers in Group I followed the practice of taking pictures of students and phases of their farming programs and showed them to meetings of parents. Four of the teachers in Group II used this practice.

This difference is significant at the five per cent level.

In Table XXX are classified the reasons offered by teachers for not holding meetings of parents to inform them about supervised farming. Eight of the teachers in Group II and five in Group I believed it would be difficult to get parents to attend meetings. Only one of them, an instructor in Group I, had ever tried such a meeting.

Five of the teachers in Group I and one in Group II felt that they had met the need for informing parents about supervised farming through other means. One teacher in Group I and one in Group II asserted that they were too busy to sponsor the activity. Another teacher reflected a desire to look out for his personal interests when he declared, "I'm too old for that. If I were younger I think that kind of meeting could do a lot of good."

As revealed in Table XXXI two of the teachers in Group I and five in Group II did not hold tours of supervised farming to which parents were invited because they did not believe that parents would attend. Conflicting activities were offered as additional reasons by five teachers in Group II and three in Group I. Two of the teachers in Group I stressed that their location near

TABLE XXX

CATEGORIES OF REASONS ADVANCED BY TEACHERS FOR NOT HOLDING MEETINGS OF PARENTS OF BEGINNING STUDENTS WHICH HAVE AS ONE OF THEIR PURPOSES THE DEVELOPMENT OF AN UNDERSTANDING OF SUPERVISED FARMING

Category	Times Reported	
	Group I	Group II
Response of parents	5	8
Need for meetings	5	1
Attitude of teacher	1	3

TABLE XXXI

CATEGORIES OF REASONS ADVANCED BY TEACHERS FOR NOT HOLDING ANNUAL TOURS OF SUPERVISED FARMING PROGRAMS TO WHICH PARENTS ARE INVITED

Category	Times Reported	
	Group I	Group II
Response of parents	2	5
Conflict of activities	3	5
Desires of teacher	0	2

industrial centers precluded tours including parents, because most of the fathers worked in the factory so they could not attend. Two teachers in Group II preferred not

to hold tours which included parents, one because he thought such a tour would be too large to manage, and the other because he believed a tour of groups to processing plants would be more valuable.

One of the teachers who held annual tours stated that usually only three or four parents attended because they were so busy. He still believed that the tours were worth-while from the standpoint of informing parents about supervised farming even though so few attended them. Another teacher from Group I did not expect that parents were going to remain with a tour throughout, but he was quite satisfied to have them present for a part of it. He said, "Parents don't always stay for all stops, but I often have seventy-five per cent or more of them who attend two or three stops."

Teachers in both groups were unanimous in recognizing the value of pictures as a medium with which to acquaint parents with supervised farming, but inability to take good pictures was the principal reason advanced by teachers for failure to use this activity. Two teachers in Group I indicated that no camera was available, while one teacher in Group II stated that he did not take pictures because the equipment was expensive.

Preparation of colored slides to be shown at parent-son banquets was the most common use which was made

of pictures of supervised farming. Three teachers in Group I planned to maintain regular displays of pictures of projects on bulletin boards in their classrooms. Another teacher made a special use of pictures of farming programs by preparing a display of them to be shown at each annual farmers' meeting which was sponsored by a local service club. A teacher in Group I had his students include a picture record of their farming programs in the F. F. A. scrapbook. In addition, he prepared special displays of pictures of farming programs which were exhibited in local business establishments and at the county fair. He also arranged to have pictures of supervised farming programs run in the local newspapers.

In addition to asking the teachers to indicate whether they used the three practices listed in Table XXIX, the teachers were requested to report any other methods which they used to inform parents about supervised farming. These are summarized in Table XXXII. Here it is shown that teachers in Group I and in Group II used similar methods to inform parents about supervised farming, but instructors in Group I used them to a much greater extent. Publicity methods included the use of the newspaper, radio, and letters to parents. Farm groups were contacted at parent-son banquets, at meetings

TABLE XXXII

CATEGORIES OF METHODS USED BY TEACHERS TO INFORM PARENTS ABOUT SUPERVISED FARMING

Category	Times Reported	
	Group I	Group II
Contacts through publicity	11	3
Contacts through farm groups	9	4
Informal contacts	2	0
Service contacts	2	1

of service clubs with farmers as guests, and at meetings of farm organizations.

MAKING AND USING FARM SURVEYS

It is revealed in Table XXXIII that none of the teachers in Group I or in Group II required their students to make a written farm survey. All but one of the teachers in Group I used some other method to obtain information about the home farm. Only three of the thirteen teachers in Group II reported the use of any method to obtain this information. This difference is significant.

A classification of the reasons which teachers in Group I submitted for not making a written farm survey

TABLE XXXIII

PRACTICES OF TEACHERS RELATING TO USE OF FARM SURVEYS

Practice	Group I Responding		Group II Responding	
	Yes	No	Yes	No
Do you require each student to make a written farm survey?	0	13	0	13
*Do you use other methods for obtaining information about the home farm?	12	1	3	10

* Data represent a significant difference at the five per cent level

is reported in Table XXXIV. These reasons indicate that the instructors are concerned particularly over the possible unfavorable reactions of parents and students if a survey form were used. Teachers in Group II appeared to be rather concerned about the unfavorable effects on students of using a survey form but they did not voice the same concern about its effect on parents as was the case with teachers in Group I. Five of the men in Group II believed the survey unnecessary because they felt themselves to be well acquainted with the community and its farms. Three of these teachers contended that making a written survey was a difficult job and they wouldn't know how to use the data which were obtained.

TABLE XXXIV

CATEGORIES OF REASONS ADVANCED BY TEACHERS FOR NOT MAKING A WRITTEN FARM SURVEY

Category	Times Reported	
	Group I	Group II
Reactions of parents	8	0
Reactions of students	2	4
Reactions of teacher	6	9

Two of the teachers in Group II granted that a survey could have some value. One of these teachers said:

> I used a survey form for a couple of years sometime ago. It gave me some worthwhile information but I doubt if they're necessary after you've been in the community awhile.

The other teacher declared:

> A good ag teacher has got to keep himself up to date on what's going on in his community. A survey is very important for a new man. Older men don't need this information so much.

While none of the teachers in either Group I or in Group II required each student to make a written farm survey, other methods were used by teachers to become acquainted with home-farm resources. Seven teachers in Group I indicated that they had collected farm data from students through the use of informal class summaries such

as the analyses and the amounts of fertilizers used or the varieties and the yields of crops grown. Two other teachers in Group I spoke favorably of information which they had been able to acquire by having students conduct farm planning activities in farm management classes in the eleventh and twelfth grades. Obviously, for most individuals, the latter data would have been collected too late in high school to have helped beginning students in vocational agriculture to plan long-time farming programs. Two instructors had their students prepare maps of their home farms while one teacher indicated the use of soil conservation records whenever the parents were members of the soil conservation district.

In general, one develops the impression that no concerted or very thoroughly organized efforts were used by teachers in Group I to obtain information about the home farms of their students. Apparently, these teachers preferred to rely primarily upon informal approaches to secure this information.

Teachers in Group II made even more limited efforts to obtain information about the home farms of their students. Only three of them reported any special attempts to become acquainted with home-farm resources.

GUIDING STUDENTS IN SETTING GOALS AND MEASURING EFFICIENCY OF PRODUCTION

Table XXXV shows the extent that the two groups of teachers used two selected practices relating to setting goals and the development and use of standards of production. Nine of the thirteen teachers in Group I followed the practice of encouraging students to set goals for each of their production projects. Only three teachers in Group II observed this practice. This difference is significant.

Table XXXV also shows that only seven out of the thirteen teachers in Group I had developed records of production among students in their departments to be used for purposes of comparison. None of the teachers in Group II had developed records of this type. This difference is likewise significant.

According to Table XXXVI, the reasons expressed by the teachers for not encouraging students to set up goals of production seem to reflect an inability of the teacher to gain the support of students for this type of instruction, either because of their lack of interest or because of their inadequate backgrounds. Five instructors in Group II brought up the unfavorable response of students as the most frequent reason for failure to encourage pupils to set up goals. Four teachers

TABLE XXXV

PRACTICES OF TEACHERS RELATING TO SETTING OF GOALS AND DEVELOPING AND USING STANDARDS OF PRODUCTION

Practice	Group I Responding		Group II Responding	
	Yes	No	Yes	No
*Do you encourage your students to set goals of production for each of their production projects?	9	4	3	10
*Have you developed average records of production to be used for purposes of comparison?	7	6	0	13

* Data represent a significant difference at the five per cent level

TABLE XXXVI

CATEGORIES OF REASONS ADVANCED BY TEACHERS FOR NOT ENCOURAGING STUDENTS TO SET UP GOALS OF PRODUCTION FOR EACH PRODUCTION PROJECT

Category	Times Reported	
	Group I	Group II
Reactions of students	2	5
Ability of teacher	1	4
Background of students	1	1

in Group II recognized their own inadequacies as the major reason for failure to encourage students to set up goals of production.

It is revealed in Table XXXVII that ten teachers in Group II and two in Group I were concerned because they had been unable to organize a program for the development and use of production records and keep it functioning smoothly or at all. As Table XXXVII indicates five of these teachers were concerned about the responses which they had received from their students in this program. They complained particularly because the students lost interest after the novelty wore off and failed to complete the records which they had started. On the other hand, it seemed quite evident that most of the teachers recognized real merit in a program of developing and using records of production, but they were somewhat at a loss to know how to proceed in order to get the best results.

Records of livestock production were more numerous than records of crop production. Dairy production records were the most commonly kept records even though teachers often indicated that it was difficult to get a very large percentage of the students in their classes to keep them. Some difficulty was also expressed with the problem of motivating students to keep dairy

TABLE XXXVII

CATEGORIES OF REASONS ADVANCED BY TEACHERS FOR NOT DEVELOPING AVERAGE RECORDS OF PRODUCTION AMONG STUDENTS OF THEIR DEPARTMENTS TO BE USED FOR PURPOSES OF COMPARISON

Category	Times Reported	
	Group I	Group II
Planning of teacher	2	10
Response of students	3	2
Response of father	1	1

production records during the summer months when school was not in session.

One teacher apparently had been able to bring about some outstanding accomplishments in the production of swine as a result of encouraging his students to keep litter weights. Twenty-six students had taken 56-day litter weights from litters that had been farrowed during the previous year. This teacher stated, "My students know when they are getting good production. They commonly talk in terms of gold, silver, and bronze medals."

Another teacher gave special recognition to students who had cows which had produced at least fifty pounds of butterfat per month or raised a litter of pigs which weighed at least 400 pounds fifty-six days after birth.

HELPING STUDENTS TO BECOME ESTABLISHED IN FARMING

It was decided to turn to students and parents to get an indication of the extent that the teachers were carrying out recommended practices in the areas of helping students to become established in farming and of developing favorable parent and son relationships in farming. While it is conceivable that the teacher, in some instances at least, could have a fairly accurate idea of the responses which the student or one of his parents might give to the questions which were asked during the interview, it seemed obvious that the pupil or one of his parents was in a much better position to supply the data desired.

This approach, however, precluded the possibility of getting responses from the teachers which might explain the failure of the instructors to provide a program of instruction which would bring about the recommendations indicated in working principles six and seven as they are stated in Chapter IV. It is assumed, of course, that the kind of instruction provided by the teacher may influence the status of the student in farming.

In addition to providing minimum responses to selected questions, the students and parents who were interviewed, often made additional spontaneous comments.

While limitations of space seem to make it inadvisable to include all of these in this report, some of them are introduced at appropriate points, largely for the purpose of personalizing the data presented.

Table XXXVIII summarizes the responses gathered from students and parents during the interviews. In the interpretation of this table, it should be pointed out that certain questions were not asked of selected students when it was obvious that the question did not apply to them. This was particularly true with students who did not live on a farm. Usually, they did not have an opportunity to carry a supervised farming program which included a production project. Consequently, several of the questions could not apply so they were not asked of them.

From an examination of Table XXXVIII it becomes apparent that a much higher proportion of the students of teachers in Group I plan to farm than was the case with students of teachers in Group II. It should be emphasized, however, as Table XXII reveals, that there are substantially more town boys or boys with limited farm facilities in Group II than in Group I. Of the ninety-six students in Group I, seventy planned to farm while thirteen planned to enter some other work. Thirteen were undecided. In Group II it was revealed that

TABLE XXXVIII

SUMMARY OF INTERVIEWS OF STUDENTS AND PARENTS

Questions	Group I Responding		Group II Responding	
	Yes	No	Yes	No
Does the student plan to farm?[1]	70[a]	13	21	26
Are the production and improvement projects different from the main kinds of livestock and crops grown on the home farm?[2]	18	74	23	53
Does the student own the production projects?[2]	86[a]	6	57	19
Does the student own anything as a result of savings from previous production projects?[2]	64[a]	28	27	49
Does the student have a part in deciding how production projects are carried out?[2]	87[a]	5	57	19
Is there a business agreement between parents and student indicating responsibilities of each party and how the income is to be divided?[2]	84[a]	8	52	24
Is there a written agreement?[2]	18[a]	74	0	76
Are there plans made toward developing a father-son partnership?[2]	29[a]	63	9	67
Have there been any changes in farming practices as a result of the student taking agriculture?[2]	84[a]	8	28	48
Is there a special time when it is preferred that the teacher visit?	5[a]	91	14	77
Is it preferred that the teacher announce his visit before arrival?	1	95	3	88
Are records kept up to date?[2]	50[a]	42	12	64

[1] Thirteen in Group I and forty-four in Group II had not decided whether they would farm.

[2] Question did not apply in cases when students did not live on a farm or have a production project.

[a] Data represent a significant difference at the five per cent level.

only twenty-one of ninety-one students planned to farm. Twenty-six had decided not to farm. Forty-four had come to no decision on this question. These differences are significant.

It is also brought out in Table XXXVIII that a higher proportion of the students in Group I had projects in enterprises which were the same as the main kinds of livestock and crops grown on the home farm. Seventy-four students out of the ninety-two in Group I satisfied this condition, while fifty-three students out of seventy-six in Group II had production projects in enterprises common to the home farm. However, this difference is not significant. Here again the reader should be reminded that a higher proportion of the students in Group II did not live on a farm. Consequently, these students, with few exceptions, did not have either a production or an improvement project, so most of them were not asked to respond to this question.

It is also revealed in Table XXXVIII that a large majority of the students in both Group I and Group II owned their production projects, although there is a higher proportion of ownership among boys in Group I. Eighty-six of the ninety-two students in Group I owned their production projects as compared to fifty-seven who had ownership in the production projects carried by

seventy-six students in Group II. This difference is significant.

In general parents seemed to be quite happy to give their sons an opportunity to have some degree of ownership in the farm operation although there were a few exceptions. For instance, one father summed up his viewpoint on ownership in these words:

> Our money all goes in the same pot around here. When the boys need money they can help themselves. We work together and plan together. With my four boys it would be hard to give them all ownership. They'd be owning everything some day.

Perhaps, the comments of another parent came closer to typifying the attitude of most of the parents toward allowing their sons to have ownership. He declared:

> I don't believe that every boy should be allowed to earn and spend money as he pleases. That could be the worst thing that could happen to a lot of boys. They need the help and advice of older heads. As they gain in experience and show that they can earn and use money wisely, they should be allowed to move ahead gradually toward more ownership.

While Table XXXVIII shows that a majority of the students in both Group I and Group II indicated ownership in production projects, it also reveals that the students in Group I had done a better job of saving from previous production projects than the students in Group II. Sixty-four of the ninety-two students in Group I reported ownership from savings from previous projects, while only twenty-seven out of the seventy-six students

in Group II had accumulated assets from savings from production projects. This difference is significant.

No attempt was made to determine a complete inventory of each student although in many instances the extent of ownership was substantial. Usually, it took the form of investments in livestock, machinery, cash crops in storage, or savings in the form of bank deposits or government bonds. In two instances, parents had been disappointed when their sons had invested money in automobiles. In the main, however, they seemed quite well satisfied with the way in which their sons had invested their earnings.

DEVELOPING FAVORABLE PARENT AND SON RELATIONSHIPS

Data reported in Table XXXVIII bring out some interesting facts concerning student and parent relationships in farming. Here it is revealed, for instance, that in eighty-seven out of the ninety-two families contacted in Group I, the son had a part in deciding how his production projects were to be carried out. Favorable relationships also existed, apparently, among the seventy-six families included in Group II, with fifty-seven of the students revealed to have a part in deciding how their projects were to be managed. There is a significant difference between the responses of the two groups.

The fine relationships which seemingly existed in so many of the families is illustrated by the statements which are reproduced below. One father commented:

> He [the son] can take over and do just as well as I can. Last week I went to Wisconsin. He looked after our herd of fifteen cows just as good as if I'd been at home.

Another case shows how far some parents are willing to go in permitting their sons to assume special responsibility. In this instance, the father related:

> My boys are more and more on their own. The other day they sold their hogs. We'd talked the matter over and decided it was about time to sell the pigs but I didn't know the trucker was coming to get the hogs until he drove into the yard.

Most students, as one would expect, seem to depend rather heavily upon the advice and help of their fathers. One boy summed up this feeling quite well when he declared:

> I can go ahead and handle my projects just about as I please but I still like to talk everything over with Dad. After all he's older than I am.

There were, of course, some evidences of conflict between parents and their sons. For instance, a mother, while commenting about a farm which her husband supposedly had purchased for their son, declared:

> My husband is one of the old school. He likes to keep things under his thumb. He says he bought the farm for our boy but I'm not sure.

A son revealed that he and his father did not always see eye to eye when he asserted:

> Dad's ideas don't always square with mine. I'd like to keep Holstein cows; he wants Durham. I'd like a tractor; he holds out for horses.

Another son was disturbed when his father resisted his efforts to introduce certain changes on the farm. While revealing a show of resignation, he declared:

> There's no use trying to do things different as long as Dad has control of the farm. He has some awfully stubborn ideas which he brought over from the old country.

Table XXXVIII shows that eighty-four of the ninety-two families in Group I had business agreements between parents and students indicating responsibilities of each party and how income is to be divided. Only eighteen of these were written, however, and these were concentrated almost entirely in three schools. In Group II, business agreements between parents and students were reported in fifty-two out of seventy-six families but none of these were written. The differences in the responses between members of Group I and Group II on these two questions were significant.

While no attempt was made to probe thoroughly into the feelings of parents on the subject, they appeared to regard written agreements as unnecessary. Frequently, after responding to the question of whether a written

agreement was in effect, parents would add such statements as, "We trust one another" or "Our word is good."

In only twenty-nine of the ninety-two families polled on the question in Group I had plans been made toward developing a father-son partnership. There was even less tendency toward the development of these partnerships in Group II where only nine of the seventy-six families had made plans for this arrangement. This difference is significant.

In many cases, it appeared that parents had never given any thought, whatsoever, to the formation of a partnership. There were instances, of course, when parents saw the need for some kind of an arrangement which would provide an interest for the son in the home farm. One father said:

> A parent has to give a boy some share in the farming set-up or he won't feel a part of it and some day he'll pull up and leave home.

Even when the parents were willing to work up some kind of an arrangement to assist their sons to become established, it was apparent that they wondered what was the best way to proceed. A father commented:

> It's hard to know whether to buy more land now. I work off the farm and if the boy didn't want to farm later, I'd have too much land.

It became apparent, too, that certain limitations made it difficult for many parents to do very much toward

helping their sons to become established in farming. This showed up particularly in those situations where the families were tenants. A mother volunteered:

> We're on a rented farm. Our boy would like to farm. The landlord is fine but it's hard for parents to do what they'd like for their children under these circumstances.

The size of the farm and the size of the family appeared to be other influences deterring the formation of partnerships. A father of a large family declared:

> There's no future for B---- here. This farm is too small. Already there are too many in the family for the farm to support.

In spite of obstacles, some of the parents were still making plans to assist their sons to become established in farming. A father explained:

> We'll need to rent more land if J---- stays at home. Then, I've got a younger boy who's just coming into the ninth grade.

There were instances, too, when parents were rather bitter about the prospect of their sons becoming farmers. A father of seven children, living on a twenty-acre farm, declared:

> I don't want my boys to be farmers. They couldn't get a decent start and if they didn't there's no future in farming. I can't help them. It takes a lot of money to get set up in farming today.

There was also an indication that a few parents of older boys were interested in arranging a partnership but didn't know how to go about it. When queried about

plans for a partnership a mother and father became very interested. He inquired:

> Where can we get more information on how to set up a father-son partnership? We realize the need for getting things down in writing. We want to protect our interests and at the same time look out for our son's. We've three older boys away from home.

RELATING CLASS INSTRUCTION TO SUPERVISED FARMING

Table XXXIX summarizes the extent that teachers in the two groups followed selected practices in relating classroom instruction to supervised farming. Twelve of the thirteen teachers in Group I revealed that they organized instruction in both livestock and crop enterprises in a given year according to the individual needs of the students in their supervised farming. In contrast, only one teacher of the thirteen in Group II set up his classroom instruction on this basis. This difference is significant.

Table XXXIX also shows that twelve of the thirteen teachers in Group I followed a plan of teaching which provides instruction at the time when the student needs it most in conducting his supervised farming. Six of the thirteen teachers in Group II reported that they followed such a plan of teaching. This difference is significant.

TABLE XXXIX

PRACTICES OF TEACHERS IN RELATING CLASSROOM INSTRUCTION TO SUPERVISED FARMING

Practice	Group I Responding		Group II Responding	
	Yes	No	Yes	No
*Do you organize your courses in agriculture to permit instruction in more than one type of farm enterprise (both crop and livestock) in a given year according to the individual needs of the students in their supervised farming?	12	1	1	12
*Do you follow a plan of teaching which provides instruction at the time when the student needs it most in conducting supervised farming?	12	1	6	7
*Do you visit individual supervised farming programs when, or soon after, the classroom instruction is provided to insure that it will be put to use?	8	5	0	13

* Data represent a significant difference at the five per cent level

It is also brought out in Table XXXIX that eight of the thirteen teachers in Group I visited individual supervised farming programs when, or soon after, the classroom instruction is provided to insure that it would be put to use. None of the teachers in Group II visited

programs of supervised farming at this time. This difference is also significant.

The reasons offered by the teachers for not organizing their courses in vocational agriculture to permit instruction in both livestock and crop enterprises in a given year reflect certain beliefs of the teachers. Seven of the teachers in Group II contended that such a pattern of instruction would lead to disorganization. The single teacher in Group I, who did not use this approach, as well as two instructors in Group II, were concerned that students might miss or fail to master important subject matter under a cross-sectional plan of organizing instruction. Finally, three teachers revealed that they did not use a cross-sectional pattern of teaching agriculture because they had not been trained in this method.

Reasons advanced by the single teacher in Group I and the seven in Group II for not following a plan of teaching which provided instruction at the time when the student needed it most in conducting his program of supervised farming, showed considerable similarity. These teachers generally agreed that such a pattern would lack system and continuity, and the jobs and problems would tend to pile up when taught seasonally.

There was considerable similarity also in the kinds of reasons advanced by the five teachers in Group I and the thirteen in Group II for not visiting individual supervised farming programs when or soon after the classroom instruction is provided. Twelve of the thirteen teachers in Group II, and three in Group I maintained that they had too many other responsibilities to make visits at this time. Two of the teachers in Group I stated that it was difficult to visit all students, while one teacher in Group II contended that he had too many students to consider visiting them under such a pattern.

One of the instructors in Group I placed particular stress on the importance of a close coordination between farm visits and the classroom instruction. He asserted, "If you don't follow up the classroom instruction with a farm visit, you can be pretty sure that the instruction will not be put to use."

As a means of securing additional data which might reflect the degree that teachers in Group I and in Group II carried out practices which brought about a close relationship between classroom instruction and programs of supervised farming, parents and students were asked if there had been any changes in farming practices on their farms as a result of the student taking vocational

agriculture. Table XXXVIII shows that all but eight of the ninety-two families responding in Group I reported one or more changes which had taken place, while only twenty-eight of the seventy-six families in Group II indicated changes. This difference is significant.

In a few instances parents and students in Group II were a bit caustic in their appraisals of the learning that had taken place as a result of the instruction in agriculture. A father assessed the learning of his son by asserting, "If he has learned anything worthwhile in his classes that he could bring home, he hasn't said anything about it." When one of the students was asked whether he had made any changes in his farming as a result of taking agriculture, he replied, "No, I think I've helped the work in agriculture more than it has helped me." In one case a parent could not credit the teacher with bringing about any changes on his farm as a result of instructing his son but he seemed to accept the situation by explaining, "Our teacher has been busy with other things in recent years. He's had too many other things to look after besides teaching agriculture."

MAKING VISITS TO HOME FARMS

Table XL shows the extent that the two groups of teachers followed selected practices relating to home

TABLE XL

PRACTICES OF TEACHERS RELATING TO HOME VISITS

Practice	Group I Responding		Group II Responding	
	Yes	No	Yes	No
When school is not in session, do you usually notify your students previous to making home visits?	4	9	1	12
*Do you make visits regularly after school?	9	4	1	12
*Do you have a part of the regular school day set aside for farm visits?	7	6	1	12
*Do you make farm visits regularly on Saturdays?	7	6	1	12
Do you keep a record of each farm visit other than that required by your school administration?	6	7	4	9

* Data represent a significant difference at the five per cent level.

visits. Only four of the thirteen teachers in Group I usually notified students previous to making home visits when school was not in session. Just one teacher in Group II made it the usual practice to notify students prior to making home visits. However, this difference is not significant.

Further information regarding practices of teachers in making home visits is revealed in Table XL. Nine of the thirteen teachers in Group I reported that they made visits regularly after school. Only one teacher in Group II indicated that he made visits regularly at this time. This difference is significant.

Table XL also reveals that just over half of the thirteen teachers in Group I had a part of the regular school day set aside for farm visits. There was only one teacher in Group II who had a part of the regular school day which could be used for making farm visits. This difference is significant.

It is also brought out in Table XL that seven of the thirteen instructors in Group I reported that they made farm visits regularly on Saturdays. Only one of the teachers in Group II reported such visits. Again, this is a significant difference.

It is also shown in Table XL that a majority of the teachers in both Group I and Group II did not keep a record of each farm visit other than that required by their school administration. Only six of the thirteen teachers in Group I kept these records while there were four of the thirteen teachers in Group II who maintained such records. This difference is not significant.

It is brought out in Table XLI that five of the teachers in Group I and four in Group II reported reasons involving the maintenance of schedules as being primarily responsible for their failure to notify students previous to making home visits. These men contended that they could not follow a definite schedule of farm visits. A teacher in Group I declared, "For some reason I can't seem to be able to schedule myself ahead so I can be at Joe Doak's at two o'clock on a certain Friday."

Home considerations, relating to the student and his family, evidently had some influence toward keeping some teachers from notifying students regarding farm visits. In these instances, the teachers expressed concern that announcements of visits would tend to make the student and his parents feel obligated to set aside time for seeing the teacher which they might have used for other purposes.

Four of the teachers suggested that they regarded the purpose of the visit as largely inspectional when they explained that they did not notify students previous to making visits because they wanted "to see the real picture" and have an opportunity to look over the projects without interference from anyone.

Two teachers suggested administrative considerations as reasons for not notifying students. An instructor

TABLE XLI

CATEGORIES OF REASONS ADVANCED FOR NOT NOTIFYING STUDENTS PREVIOUS TO MAKING HOME VISITS

Category	Times Reported	
	Group I	Group II
Maintaining schedules	5	4
Home considerations	3	3
Purpose of visits	0	4
Administrative considerations	1	1

in Group I stated that he visited students by geographical areas rather than any certain individuals, while another reported that he was able to conserve travel when he did not notify students prior to making home visits.

In contrast to the teachers who did not notify, three of the four instructors in Group I who followed the practice of notifying the student previous to making summer visits, made frequent use of the telephone. They indicated that the telephone permitted arrangement of visits at a time that was mutually satisfactory to the students and the teacher. In defending the practice of notifying students, one of the instructors pointed out that it tended "to keep parents from regarding the teacher as a snooper instead of a helper."

On the question of announcing visits, Table XXXVIII shows that parents and students were practically unanimous in feeling that the teacher should not announce his visit before arrival at the student's home. Only one family in Group I expressed a preference for a previous announcement, and only three of ninety-one families in Group II preferred that visits be announced. Table XXXVIII also brings out that a large majority of the parents felt that there was no special time when visits were preferred.

Several interesting comments were volunteered by parents when farm visits were discussed with them. Quite frequently parents made a point that it probably would be difficult for a teacher to maintain a schedule if he announced his visits in advance. A father reflected:

> It must be hard for him [the teacher] to keep dates. One day he was coming at one o'clock. E---- waited for him until three but he didn't show up at all.

In general, remarks by parents in Group I on the question of timing visits, revealed a fine attitude toward the teacher and farm visits. For instance, a mother declared, "When a teacher is coming to the farm to help the boy, anytime that is convenient for him is okeh."

A father commented, "We can stop work any time. I can learn too. A farmer should always be glad to pick up new ideas."

In certain instances, there was some indication that parents felt themselves and their work was on display, so to speak, when the teacher visited their farms. A father reacted by saying:

> He [the teacher] may not always find things up in good shape but we're still glad to have him. We would like to have him come even more than he does.

Another father took the viewpoint that the teacher should visit "when things aren't all slicked up." One other parent responded similarly when he said, "It's better for the teacher to catch the boy unawares. Then he can see exactly how things are." Still another father reasoned that it was "probably the best time for the teacher to come when everything doesn't look so good."

There were indications, too, that students had been disappointed when the teacher did not visit their farming programs. In one case a parent said, "S--- would like to have had his teacher see his pigs before he sold them." Another father in the same community gave a similar story. He related:

> He [the teacher] probably has many things to do and finds it hard to get out. One year F--- had his bean field in nice shape. He was disappointed when the teacher didn't come out to see it.

Conflicts with school and community assignments and responsibilities included most of the reasons advanced by teachers for not making home visits after school.

Three of the teachers in Group I and four in Group II reported that most of their students were engaged in athletics after school and consequently, they were not available for home visits.

Special school and community assignments were reported as interfering with farm visits by eight other teachers in Group II. One of these teachers described his situation in this way:

> The teachers in this school have to remain in the building until four-thirty. I usually have a few things to take care of down town. If I visited projects I would have to do it after supper. I realize that supervised farming is a weak spot in my program. I don't feel that I neglect my classroom work though.

There was an indication, indeed, that several of the men had rather extensive school and community commitments and assignments. One teacher summed up the problem by saying:

> A teacher, as he gets his roots down into a community, has to be careful or he will get spread out in too many directions.

The teachers did not offer very many different reasons for not using a part of the school day to make farm visits. Three instructors in Group I and eight in Group II reported that they were teaching a full day school schedule of classes. Under this arrangement, they contended, it was impossible for them to have time set aside for making farm visits during the school day. Two

teachers in Group I and four in Group II asserted that they could not consider making home visits with students during the school day because the pupils would be in other classes or activities and so they would not be available.

The reasons which the teachers offered for not making farm visits regularly on Saturdays are grouped in Table XLII. In Group I two teachers reported that they used Saturdays to teach veterans, while two others in this group, as well as one teacher in Group II, stated that they used Saturdays primarily to work in their classrooms.

Among the teachers in Group I who reacted favorably toward teachers making visits on Saturday, one stated, "If a man wants his program to go, he has to put in time on Saturday." Another declared, "Saturday visits are really not work. I enjoy them."

In contrast, a teacher in Group II lamented the undesirable consequences of his becoming so involved in his job that he had neglected his family. He said:

> Even with the trend toward a forty-hour week, I don't see how a teacher can do an effective job without making farm visits on Saturdays. Still, it's too bad when a man becomes completely tied to his job. A family man has an obligation to his home. I neglected my family. One day I woke up to the fact that my children were grown up and away from me and I hadn't given much attention to them.

TABLE XLII

CATEGORIES OF REASONS ADVANCED BY TEACHERS FOR NOT MAKING FARM VISITS REGULARLY ON SATURDAYS

Category	Times Reported	
	Group I	Group II
Other instructional responsibilities	4	1
Responsibilities of farm family	1	3
Personal and family responsibilities	0	8

Reference to Table XLIII reveals a classification of reasons advanced by teachers for not keeping a record of farm visits other than those required by the school administration. Five teachers in Group I and four in Group II believed that they were sufficiently acquainted with the students and their farming programs, thus, records of farm visits were unnecessary. Two teachers in Group I and five in Group II were unable to see any possible value to such records and pointed out that keeping them would become a task.

KEEPING AND USING RECORDS

Table XLIV summarizes the extent that two groups of teachers used selected practices relating to keeping and using records. All teachers in Group I, as well as Group II, provided special instruction in the correct

TABLE XLIII

CATEGORIES OF REASONS ADVANCED BY TEACHERS FOR NOT KEEPING A RECORD OF FARM VISITS OTHER THAN THAT REQUIRED BY THE SCHOOL ADMINISTRATION

Category	Times Reported	
	Group I	Group II
Teacher's acquaintance with the farm and the student	5	4
Attitude of teacher toward records	2	5

TABLE XLIV

PRACTICES OF TEACHERS RELATING TO KEEPING AND USING RECORDS

Practice	Group I Responding		Group II Responding	
	Yes	No	Yes	No
Do you provide special classroom instruction in the correct procedures to follow in keeping and summarizing project records?	13	0	13	0
Do you have students make project budgets?	2	11	0	13
Do you use class time to analyze and interpret records?	12	1	11	2
Have you experienced any difficulty getting your students to keep complete and accurate financial and production records?	13	0	13	0

procedures to follow in keeping and summarizing records. The teachers responded with just about the same uniformity on the question of whether they had students make project budgets, except that their answers were almost entirely in the negative. Only two of the teachers in Group I had their students prepare budgets while none of the teachers in Group II followed this procedure. This is not a significant difference.

Table XLIV also shows that the teachers in Group I gave nearly the same number of affirmative and negative responses to the question, Do you use class time to analyze and interpret records? Twelve of the thirteen teachers in Group I responded yes while eleven of the thirteen teachers in Group II offered yes for an answer. This difference is not significant. Likewise, it is also brought out in Table XLIV that teachers in both Group I and Group II were unanimous in declaring that they had experienced difficulty getting their students to keep complete and accurate financial and production records.

The reasons offered by teachers for not having students prepare project budgets are grouped in Table XLV. Six of the instructors in Group I and four in Group II thought that the backgrounds of their students were too inadequate to do an effective job of budgeting. Four

TABLE XLV

CATEGORIES OF REASONS ADVANCED BY TEACHERS FOR NOT HAVING STUDENTS PREPARE PROJECT BUDGETS

Category	Times Reported	
	Group I	Group II
Background of students	6	4
Reaction of students	4	7
Influence on Instruction	1	2

instructors in Group I and seven in Group II felt that budgeting would bring about an unfavorable reaction from students. It was pointed out that in many cases no cash outlay was involved so the students could see no point in budgeting. Furthermore, it was held by some teachers that an abundance of money on many farms in recent years had made it difficult to get students to recognize the need for project budgets.

Of the two instructors in Group I who indicated that they had had students make budgets, one admitted that he had encountered problems with the procedure. He declared:

> Budgeting seems to make sense to a boy if he is borrowing money. Our banker won't lend money to our students unless they have a budget. On the other hand, when a kid has a dairy animal and feeds it out of his Dad's grain bin and hay mow, he can't see much reason to work up a budget.

Three teachers, one in Group I and two in Group II, were concerned about the effect that budget making would have on their instructional program. Two of these men expressed concern about the time required to do the job while a third believed that valuable subject matter might be neglected if budgets were prepared.

With only three exceptions, the teachers reported that they used class time to analyze and interpret project records. The single teacher in Group I who did not use this practice asserted that students are not very interested in working with the figures involved in carrying out such a procedure. The two teachers who did not use the practice in Group II contended that the activity required more time than they had available to give to it.

It can be seen by an examination of Table XLVI that difficulties reported by teachers in getting students to keep complete and accurate financial and production records centered primarily on the students. Persons and influences associated with the students drew limited attention. In general, teachers in both Group I and Group II observed that students do not like to keep records, and they are often neglectful and forgetful in keeping their records. In addition, there were two teachers in both groups who felt that the unfavorable

TABLE XLVI

CATEGORIES OF DIFFICULTIES EXPERIENCED BY TEACHERS IN GETTING STUDENTS TO KEEP COMPLETE AND ACCURATE FINANCIAL AND PRODUCTION RECORDS

Category	Times Reported	
	Group I	Group II
Reactions of students	11	11
Reactions of parents	2	2

attitudes of parents had presented difficulties in getting sons to keep good records.

Quite generally, there seemed to be dissatisfaction among the teachers interviewed with the kind of records which they had been able to get their students to keep. One teacher in Group II felt that the trouble could be traced to the legal requirements for records. He asserted, "The State demands records but they are inaccurate. The present system encourages a boy to lie."

Another teacher in Group II, while commenting on problems of securing accurate financial and production records speculated, "About fifty per cent of the figures which are turned in by a boy on his project reports are reliable. Values such as those on pasture, manure, etc., are often picked out of thin air."

A teacher in Group I observed:

> I admire a teacher who does a good job with record keeping. I don't. I used to have records out in front of my students all the time but I found that was a sure way of killing interest in them. I believe that the kind of records which students keep is conditioned largely by the parents. When parents keep good records, boys tend to do the same thing. I sometimes wonder if we are doing the right thing to ask boys to keep an enterprise type of record. Perhaps, we may be asking for something that is pretty hard to get.

Another teacher in Group I commented, "A lot of farmers keep records on the back of a calendar and they can't see much point in doing it any different."

Finally, a teacher in Group II suggests a possible cause for what he believes to be an unfavorable attitude toward record keeping by high-school boys. He related:

> Generally speaking, students don't like to keep records. I've tried to find out why and have about concluded that the teacher doesn't develop among his boys a feeling of need for records. Maybe, our thinking is geared to the need of securing records from our students which will satisfy the requirement for state reports.

It seems pertinent, at this time, to refer to Table XXXVIII again to determine from students or their parents the extent that records were kept up to date. The data reveal that fifty of the ninety-two boys with production projects in Group I had kept their project records up to date. Only twelve of the seventy-six boys in Group II had up-to-date project records. This difference is significant.

The data summarized in Table XLVII may offer a clue as to the reasons for better record keeping by students in Group I. Here are classified the special methods used by the teachers interviewed to secure good records. It is particularly noticeable that teachers in Group I gave more attention to conducting classroom activities centered on record keeping. Five of the teachers used class time to bring records up to date. Three of these instructors had this responsibility taken care of once a month while the other two had records posted once a week. Other class methods used by teachers in Group I to stimulate the keeping of good records included: bring records up to date in September and use two days a month for records and planning during the school year; supply each student with two copies of a project book--student keeps one copy at home and the other at school; post records in John Deere book once a month in school--student keeps small account books at home; show best record books of older boys to beginning students before their record books are passed out; grade record books each marking period; and keep record books in classroom where they are available for reference.

Special awards were used by three teachers in Group I to stimulate good records. Two of these teachers allowed points for good records in local awards contests.

TABLE XLVII

CATEGORIES OF METHODS USED BY TEACHERS TO SECURE GOOD RECORDS

Category	Times Reported	
	Group I	Group II
Consider records in class work	11	1
Make special awards for records	3	2

The third teacher permitted a local business concern to present special money awards to students who had done the best work in keeping records of their production projects.

Only three teachers in Group II reported that they had used any special techniques to secure good records. Two teachers allowed points on F. F. A. awards for good records while one considered records in grading.

CHAPTER VI

SUMMARY, IMPLICATIONS AND SUGGESTIONS FOR FURTHER STUDY

In this chapter the general pattern which was used to conduct this study is reviewed briefly. This statement is followed by a summary of the major findings. Next, there are offered some possible implications of the investigation, which conceivably, could be useful in future programs of supervised farming. Finally, there is a listing of some possible future studies in the area of supervised farming.

As pointed out in the opening chapter, this is a study of the practices used by two groups of teachers of varying proficiency in conducting programs of supervised farming. Among other purposes, answers have been sought to the questions: (1) Do teachers in the two groups follow practices which are recommended by leaders in agricultural education? (2) What are the reasons for variable practices among the teachers in the two groups in conducting programs of supervised farming?

Eighty-four Michigan teachers of vocational agriculture, who had taught three years or longer in the positions which they held on September 1, 1948, were placed in rank order by applying nine measures of effectiveness to recorded data of their local programs of supervised

farming. The nine measures of effectiveness were developed with the assistance of a jury of experts. Thirteen teachers determined to have the more effective programs and thirteen teachers found to have the less effective programs were interviewed. In addition, from a total of 187 homes, representative students and/or one or both of the students' parents were interviewed.

Preliminary to the interviews, ten statements of working principles in conducting programs of supervised farming were developed by an examination of the literature to determine practices recommended by leaders in agricultural education. The questions asked during the interviews were designed to reveal the extent that the teachers were using these recommended practices.

SUMMARY

When the nine measures of effectiveness were applied to eighty-four departments of vocational agriculture in which the teacher had been employed three years or longer, it was found that a relatively small proportion of the students had individual programs of supervised farming which (1) included both livestock and crop projects; (2) showed at least one continuous productive enterprise project; and (3) revealed increasing scope in productive enterprise projects repeated for two or more

consecutive years. In general, it appears that broad, comprehensive programs of supervised farming consisting of continuous productive projects which show increasing scope, did not prevail in the farming programs of the students enrolled in the eighty-four departments.

The thirteen teachers found to have the more effective programs of supervised farming were designated as Group I. The thirteen teachers determined to have the less effective programs were referred to as Group II. A significantly greater number of the teachers in Group I than in Group II followed the practices listed below. Few or none of the teachers in Group II observed these practices. From an examination of the literature it appears that these practices are recommended by leaders in agricultural education.

1. Visited beginning students preceding their enrollment in vocational agriculture for purposes of guidance and counseling.

2. Required students who enroll in classes in vocational agriculture to live on a farm or have the use of farm facilities for conducting individual programs of supervised farming.

3. Informed beginning students that supervised farming is a required part of the program in vocational agriculture prior to enrollment in the work.

4. Used ten or more days of class time to give instruction in supervised farming.

5. Used fifteen or more days of class time to review individual programs of supervised farming of the previous year and consider revisions for the coming year.

6. Took beginning students to visit the supervised farming programs of older students.

7. Required each student to make a written plan of his program of supervised farming.

8. Held annual tours of supervised farming to which parents were invited.

9. Took pictures of students and phases of their farming programs and showed them to meetings of parents.

10. Encouraged their students to set goals of production for each of their productive projects.

11. Developed average records of production to be used for purposes of comparison.

12. Organized instruction in both livestock and crop enterprises in a given year according to the individual needs of the students in supervised farming.

13. Followed a plan of teaching which provided instruction at the time when the student needed it most in conducting supervised farming.

14. Visited individual supervised farming programs when or soon after the classroom instruction was provided to insure that it would be put to use.

15. Made farm visits regularly after school.

16. Had a part of the regular school day set aside for farm visits.

17. Made farm visits regularly on Saturdays.

Since these practices were used by a majority of the teachers who conducted the more effective programs of supervised farming but by few or none of the teachers who had the less effective programs, it seems reasonable to conclude, within the limitations of this study, that there is an association between the use of these practices and the development of successful programs of supervised farming.

The extent to which these practices were used by the teachers in Group I and in Group II is presented graphically in Figure 2. The practices are arranged in descending order according to the number of teachers in Group I who followed each practice. In so far as this study is concerned, these are the practices in which there were significant differences between the thirteen teachers found to have the more effective programs of supervised farming and the thirteen found to have the less effective programs.

Practice	Group I = Upper Bar Group II = Lower Bar Each x = One Teacher
Informed beginning students that supervised farming is required prior to enrollment	x x x x x x x x x x x x x x x x x x
Provided ten or more days of instruction in supervised farming to first-year students	x x x x x x x x x x x x x x x x x x
Organized instruction in both livestock and crop production each year	x x x x x x x x x x x x x
Provided instruction when needed by student in conducting farming program	x x x x x x x x x x x x x x x x x x
Visited at least 50 per cent of beginning students prior to their enrollment	x x x x x x x x x x x None
Used fifteen or more days to review programs of supervised farming carried previous year	x x x x x x x x x x x None
Required students to live on farm or have use of farm facilities for supervised farming	x x x x x x x x x x x x x
Took beginning students to visit the programs of supervised farming of older students	x x x x x x x x x x x x x x x x
Required each student to make a written plan of his program of supervised farming	x x x x x x x x x x x x x x
Made farm visits regularly after school	x x x x x x x x x x
Encouraged students to set goals of production for each of their productive projects	x x x x x x x x x x x x
Visited supervised farming programs when or soon after the instruction was provided	x x x x x x x x None
Held annual tours of supervised farming to which parents were invited	x x x x x x x x x
Took pictures of students and phases of their farming programs and showed them to parents	x x x x x x x x x x x x
Developed average records of production with students to be used for comparison	x x x x x x x None
Used a part of the school day for visits	x x x x x x x x
Made farm visits regularly on Saturdays	x x x x x x x x

FIGURE 2

PRACTICES IN CONDUCTING PROGRAMS OF SUPERVISED FARMING IN WHICH THERE WERE SIGNIFICANT DIFFERENCES BETWEEN TWO GROUPS OF TEACHERS

Some of the recommended practices were used by relatively few, if any, of the teachers in both groups. Practices which were used very little, if at all, by teachers in the two groups were:

1. Holding meetings of parents of beginning students which have as one of their purposes the development of an understanding of supervised farming.

2. Requiring each student to make a written farm survey.

3. Notifying students previous to making home visits.

4. Having students make project budgets.

The fact that teachers in Group I as well as Group II generally failed to use these four practices casts doubt on their value and practicability. At the same time the possibility must be recognized that the teachers did not use these practices because they had never been taught how to use them. Actually, the pattern under which participating experiences were provided for prospective teachers in their pre-service program, may have been such that it was difficult to offer first-hand contact with all the recommended activities in carrying out programs of supervised farming.

Responses of students and parents were used to get an indication of the extent that the teachers were

carrying out recommended practices in the areas of helping students to become established in farming and of developing favorable parent and son relationships in farming. This study revealed that a significantly higher proportion of the students of teachers in Group I than in Group II:

1. Planned to farm.

2. Owned productive projects.

3. Had ownership from savings from previous productive projects.

4. Had a part in deciding how productive projects were to be carried out.

5. Developed business agreements with parents.

6. Had made plans toward developing father-son partnerships.

These data lead one to infer that teachers in Group I, more than teachers in Group II, were engaging in practices which contributed toward helping students to become established in farming and toward developing favorable parent and son relationships in farming.

Categories of reasons for failure of the teachers to use recommended practices often reflected certain beliefs or philosophies held, or at least expressed, by the teachers. Specifically, these were apparent when teachers:

1. Indicated no need for visits to prospective students.

2. Extolled the benefits of vocational agriculture to town boys.

3. Contended that beginning agriculture was largely exploratory.

4. Declared that planning for supervised farming should be on an individual basis.

5. Held that parents' meetings were unnecessary.

6. Maintained that instruction including both livestock and crop enterprises in a given year lacked system and continuity and led to disorganization and the omission of important subject matter.

7. Regarded the keeping of records of home visits as unnecessary and a task.

Many of the reasons for failure to use certain recommended practices revealed concern over the possible unfavorable reactions of parents and students. These were evidenced particularly when instructors indicated the reasons why they did not have their students:

1. Make written plans of supervised farming.

2. Conduct written farm surveys.

3. Set up goals of production.

4. Prepare project budgets.

Problems of conflicting activities represented another category of reasons which was offered rather frequently by teachers for failure to use recommended practices. Considerations relating to the use of the teachers' time showed up especially when instructors explained why they did not:

1. Visit prospective students.

2. Hold project tours to which parents were invited.

3. Notify students previous to making home visits.

4. Make home visits after school and on Saturdays.

Reasons relating to school administrative relationships, patterns, and policies were in evidence as the teachers offered explanations for not:

1. Interviewing prospective students.

2. Requiring students to live on a farm or have the use of farm facilities in order to enroll in vocational agriculture.

3. Consulting with prospective students at the time of registration.

4. Having a part of the school day set aside for making farm visits.

To some degree teachers recognized their own inadequacies as reasons for failure to use certain recommended practices. This was apparent when the teachers presented reasons for failure to:

1. Take pictures of students and phases of their farming programs.

2. Encourage students to set up production goals and to develop standards of production.

3. Offer instruction in both livestock and crop enterprises in a given year according to the individual needs of the students in their supervised farming.

Thus, from a consideration of the categories of reasons presented, it would seem in many instances, that steps necessary to bring about an adoption of some of the recommended practices by more teachers in conducting programs of supervised farming might include:

1. Effecting changes in attitudes and beliefs which are currently held by instructors.

2. Developing effective techniques by teachers while working with parents and students in carrying out recommended practices.

3. Assisting teachers to budget and to plan for the use of their time.

4. Working with school administrators to effectuate a situation which will allow the introduction of certain recommended practices.

5. Helping teachers to acquire abilities which will make them better prepared to carry out recommended practices.

IMPLICATIONS OF THE STUDY

The implications which follow are based not only on the findings of this study but also on certain philosophical concepts currently held by the writer. It should be pointed out that the development of these concepts has been influenced by a number of experiences which the writer gained primarily while engaged as a teacher of vocational agriculture, as a teacher trainer in vocational agriculture, and as a graduate student.

1. Developing an Improved Philosophy of Supervised Farming.

Major differences in the ideas and concepts of supervised farming held by the teachers in Group I and Group II were apparent. These differences were particularly noticeable in regard to the teachers' attitudes toward (1) the requirements that should be set up for enrollment in supervised farming; (2) the amount of classroom instruction that should be offered in supervised

farming; and (3) the organization and relationship of classroom instruction to supervised farming.

Too, there was some evidence to indicate that differences existed between the recommendations of expert opinion and the practices which teachers in Group I actually used in conducting supervised farming. While the practices employed by teachers in Group I tended to be those recommended by leaders in agricultural education, there were a few discrepancies, notably in the use of written farm surveys, in the use of written project agreements, and in the making of project budgets.

Certainly, it would seem in order to re-examine current recommendations relating to matters of conducting farm surveys, notifying students before making home visits, making written agreements, and preparing project budgets, to determine if these recommendations are practical. Perhaps, it might not be out of order to have an appraisal of all of the beliefs and concepts on supervised farming which seem to be currently accepted by leaders in vocational agriculture. Particularly, if such an evaluation could be conducted by competent, unbiased laymen and educators who are not actively engaged in the field of vocational agriculture, it could point the way for further improvements in the program and free the profession from the accusation of attempting to

perpetuate the existing pattern. Currently accepted philosophies which are sound could then be disseminated with renewed vigor. Beliefs and concepts which are found wanting could be modified or discarded.

2. Improving Human Relationships in Supervised Farming.

Throughout this study there have been indications of problems and misunderstandings which developed as people associated and worked with one another. These became apparent in the conflicts which seemingly developed between some of the teachers of vocational agriculture and their principals as well as with other teachers when the question of registration of farm boys for classes was considered. They were apparent also when parents criticized the teacher for failure to visit their son's farming program. It may be possible that the failure of teachers to make regular contacts with students and parents, and to solicit their cooperation in worthy projects such as the holding of parent meetings could be traced to certain inadequacies which the teachers recognize in their abilities to work effectively with other people. It would appear that this study has revealed clues of additional needs which are required by teachers of vocational agriculture in the area of human relationships.

3. Improving the Pre-Service Preparation of Students in Training to be Teachers of Vocational Agriculture.

No attempt has been made in this study to evaluate the effectiveness of the specific training which teachers have received to prepare them to become capable instructors in supervised farming. Here again, however, there seem to be clues of needs that might deserve attention. For instance, teachers interviewed were unanimous in recognizing the value of skills in photography, yet there were several of them who reported that they did not take pictures of students and phases of their supervised farming because they lacked certain basic skills in photography.

Another area of a possible inadequacy was indicated in the analysis of data associated with the efforts of teachers to get students to set up goals of production and to develop acceptable standards of production. Here the teachers readily acknowledged lack of abilities to do an effective job of instruction. Another aspect of supervised farming in which the teachers readily admitted inadequacies pertained to developing effective abilities in their students to keep good records.

It would seem that the cases cited should point up the desirability for staff members of colleges engaged in teacher education to be constantly on the alert

for curriculum changes which would bring about an improved program.

4. Providing Extended Participating Experiences in Supervised Farming for Men Preparing to be Teachers of Vocational Agriculture.

Perhaps, it would be in order to give consideration to the possibility of extending still further the participating experiences in supervised farming received by men preparing to be teachers of vocational agriculture. While the findings of this study can not be interpreted as an evaluation of the training experiences which are presently available to prospective teachers, there were indications that greater opportunities for association and experience during the pre-service training program in conducting selected phases of supervised farming would have been appreciated by some of the teachers. It may be that present opportunities for the student to gain extensive experiences in supervised farming during his pre-service training are somewhat limited. Possibly an extension of these experiences by providing an opportunity for students to engage in summer activities under the supervision of a capable teacher of vocational agriculture before they enroll for student teaching and a fifth-year training program would be justified for prospective teachers of vocational agriculture.

5. Improving the Program of In-Service Education in Supervised Farming.

Findings of this study should afford some standards by which teachers of vocational agriculture, particularly in Michigan, should be able to judge the effectiveness of the practices which they are using to conduct programs of supervised farming. Conceivably, many teachers will see fit to adopt many of the practices which teachers with the more effective programs of supervised farming have been using. Possibly, school administrators will welcome an opportunity to familiarize themselves with these practices and thereby become better prepared to plan more effectively with teachers of vocational agriculture as these instructors carry out their local programs of supervised farming.

6. Developing an Improved Method for Determining Selected Groups of Teachers or Programs to be Studied.

A review of the literature has revealed several instances when research workers have relied upon personal judgment for the selection of teachers or programs of supervised farming to be studied. In this investigation, on the other hand, an attempt was made to make the selection of teachers just as impersonal as possible. It is believed that the measures of effectiveness of supervised farming developed in this study could be used

effectively in any future investigations when it seemed desirable to study teachers who have been selected on the basis of the programs of supervised farming which they have conducted. While presently it is a rather protracted procedure to apply all of the nine measures, there is a possibility that further study and refinement of the device would reveal that application of part of the measures would accomplish the same result as the use of all of them.

POSSIBLE FUTURE STUDIES

1. The possibilities of further development and refinement of the instrument which was devised for measuring the effectiveness of local programs of supervised farming, has been suggested. It is believed that this instrument could have considerable use in most states as long as the present pattern of reporting programs of supervised farming is continued.

2. Values of taking vocational agriculture by town boys should be investigated. A follow-up study of town boys who have been enrolled in one or more years of vocational agriculture seems desirable. A personal evaluation of the benefits, derived from the instruction, would appear to be a logical approach to the problem.

3. A study of the students who take one or more years of vocational agriculture and then transfer to some other curriculum should reveal some very helpful information which could be used to counsel prospective students of vocational agriculture.

4. What influence does instruction in supervised farming have on the ability of a student to become established in farming? Are there former students of vocational agriculture now engaged in farming who acquired equities in farming which they would not have acquired through the normal pursuits if they had not taken vocational agriculture? Answers to these questions should assist materially in establishing a case for supervised farming.

5. Teachers of vocational agriculture seem to be constantly faced with the problem of making the most effective use of their time. A study to determine the priority of activities of the teacher and the relative amount of time that should be given to each, including supervised farming, seems in order.

6. What is the relationship of the teacher's work load to his ability to conduct effective programs of supervised farming? What is the influence on supervised farming of such factors as size of classes taught, the number of classes taught, and other work assignments?

Answers to these questions should also shed some light on the proper amount and use of time in conducting supervised farming.

7. The necessity for more or less constant social contacts of the teachers of vocational agriculture with farm people while conducting supervised farming seems fairly obvious. Are there special traits of personality which a teacher should possess in order to do effective work in supervised farming?

8. Instances appear to be quite frequent when it seems desirable for the teachers to have access to rather confidential information in order to do the most effective work in assisting students to develop their programs of supervised farming. It would seem useful to know the attitude of parents toward making confidential data available to the teacher of vocational agriculture.

9. A comprehensive investigation of supervised farming from the viewpoint of the parent is a study that has not been made but it is one which should reveal much helpful information.

10. All evidence on the subject seems to indicate that there is great need for studies on the place and kind of records needed to do effective work in supervised farming.

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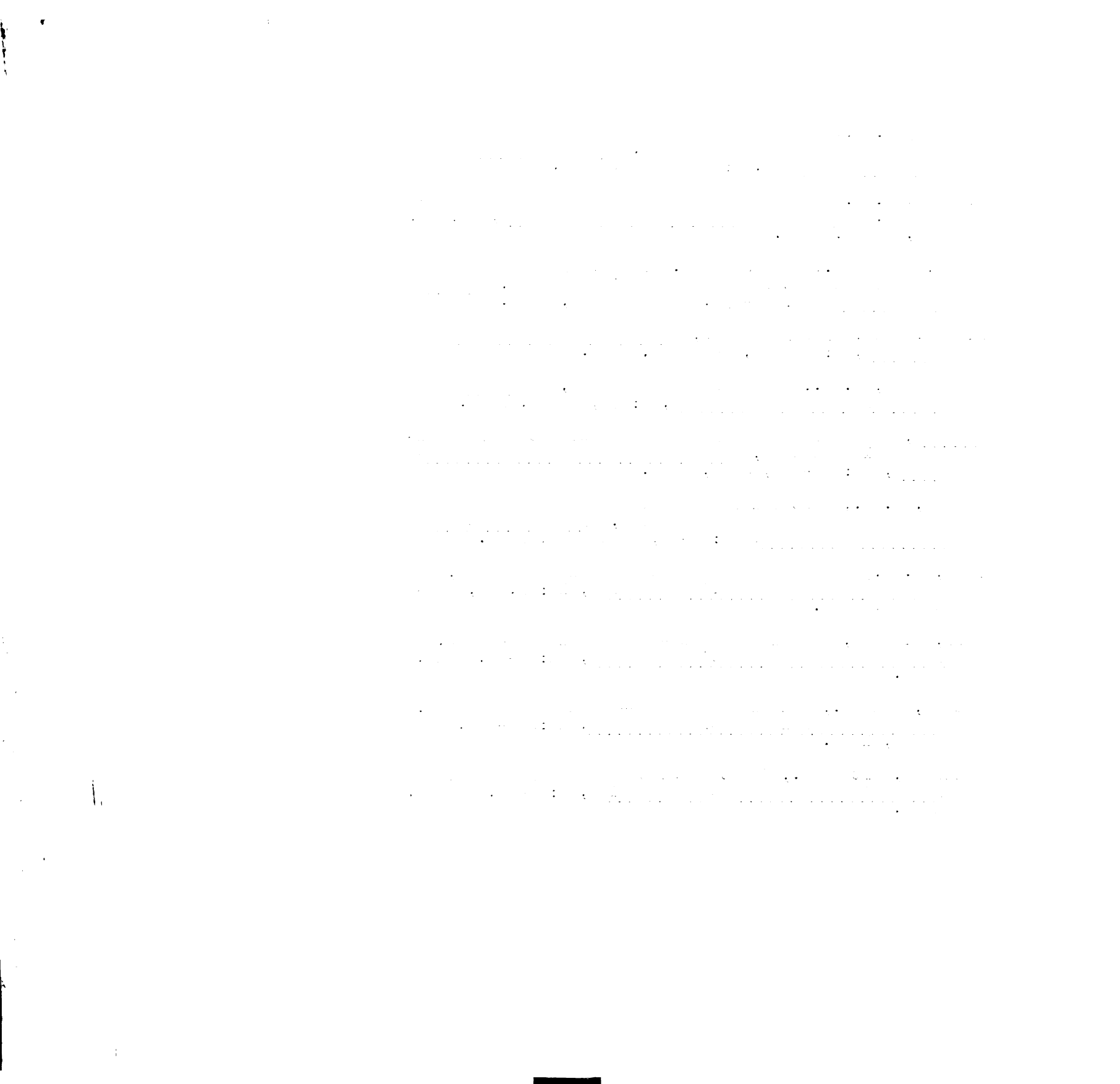
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APPENDICES



APPENDIX A

THE INTERVIEW OUTLINE

The interview outline presented below consists of a list of questions which were asked of the respondents. Whenever items marked with an asterisk were answered in the negative, further questions were presented in an effort to discover the reasons for failure of the informant to use the practice indicated. Throughout the interviews an effort was made to follow up any promising leads by means of further questioning. The questions are grouped under area headings each of which is numbered to correspond to ten working principles in conducting supervised farming. These principles are presented in Chapter IV.

QUESTIONS FOR INTERVIEW OF TEACHER:

Area I

1. How do you go about it to acquaint beginning students with supervised farming?

2. How many of your last class of beginning students did you visit preceding enrollment for purposes of guidance and counseling?

3. If you did not confer with all of your beginning students before enrollment, what were the reasons?

*4. Are students who enroll in your classes required to live on a farm or to have the use of farm facilities for conducting individual programs of supervised farming?

5. How many students enrolled in your agriculture classes neither live on a farm nor have the use of farm facilities for conducting individual programs of supervised farming?

*6. Do you consult with prospective students at the time of registration for classes?

*7. Do you inform beginning students that supervised farming is a required part of the program in vocational agriculture prior to enrollment?

Area II

*1. Do you use class time to give instruction in supervised farming to first-year students on problems relating to the selecting and starting of programs of supervised farming?

2. Approximately how many days?

*3. Do you use class time to review individual supervised farming programs of your students of the previous year and consider revisions for the coming years?

4. Approximately how many days?

*5. Do you take beginning students to visit supervised farming programs of older boys?

*6. Do you require each boy to make a written plan of his supervised farming program?

Area III

1. What methods do you use to acquaint parents with the aims and purposes of supervised farming?

*2. Do you hold meetings of parents of beginning students which have as one of their purposes the development of an understanding of supervised farming?

*3. Do you hold annual tours of supervised farming programs to which parents are invited?

*4. Do you take pictures of students and phases of their farming programs and show them to meetings of parents?

Area IV

*1. Do you require each boy enrolling to make a written farm survey?

2. Do you use other methods for obtaining information about the home farms of your students?

Area V

*1. Do you encourage your students to set up a goal of production for each of his production projects?

2. What records of production are kept by one or more students in your department?

*3. Have you developed average records of production among boys of your department to be used for purposes of comparison?

Area VIII

*1. Do you organize your courses in agriculture to permit instruction in more than one farm enterprise (both crop and livestock) in a given year according to the individual needs of the students in their supervised farming?

*2. Do you follow a plan of teaching which provides instruction at the time when the student needs it most in conducting his supervised farming?

*3. Do you visit individual supervised farming programs when or soon after the classroom instruction is provided to insure that it will be put to use?

Area IX

*1. When school is not in session, do you usually notify your students previous to making home visits?

*2. Do you make visits regularly after school?

*3. Do you have a part of the regular school day set aside for farm visits?

*4. Do you make farm visits regularly on Saturdays?

*5. Do you keep a record of each farm visit other than that required by your school administration?

Area X

*1. Do you provide special classroom instruction in the correct procedures to follow in keeping and summarizing project records?

*2. Do you have your students make project budgets?

*3. Do you use class time to analyze and interpret project records?

4. Have you experienced any difficulty getting your students to keep complete and accurate financial and production records?

5. How do you work with students to secure good records?

QUESTIONS FOR INTERVIEW OF PARENT:

Area VI

1. Does your son plan to farm?

2. Are any of the productive or improvement projects in your son's farming program different from the main kinds of livestock and crops grown on your farm?

3. Does your son own the productive projects in his farming program?

4. What does your son own that he purchased with savings from previous productive projects?

Area VII

1. What part does your son have in deciding how his productive projects are to be carried out?

2. Do you have a business agreement with your son indicating your and his responsibilities and how the income from the projects is to be divided?

3. Is this agreement in writing?

4. Have you and your son made plans toward developing a farm partnership?

Area VIII

1. Has your son made any changes in his way of farming because of his instruction in agriculture?

Area IX

1. Is there any special time of the day when you would prefer that your teacher of agriculture visit you?

2. Do you like to have your teacher of agriculture let you know in advance when he is planning a visit to your farm?

Area X

1. Does your son keep his project records up to date?

QUESTIONS FOR INTERVIEW OF STUDENTS:

Area VI

1. Are you planning to farm?

2. Are any of the productive or improvement projects in your supervised farming program different from the main kinds of livestock and crops grown on your farm?

3. Do you own the productive projects in your farming program?

4. What do you own that you bought with savings from previous productive projects?

Area VII

1. What part do you have in deciding how your productive projects are to be carried out?

2. Do you have a business agreement with your parents indicating your and their responsibilities and how the income from your projects is to be divided?

3. Is this agreement in writing?

4. Have you and your father made any plans toward developing a farm partnership?

Area VIII

1. Have you made any changes in your way of farming because of your instruction in agriculture?

Area IX

1. Is there any special time of the day when you would prefer that your agriculture teacher visit you?

2. Do you like to have your teacher let you know when he is planning a visit to your farm?

Area X

1. Do you keep your project records up to date?

APPENDIX B

MICHIGAN TEACHER TRAINERS AND STATE SUPERVISORS WHO SUGGESTED POSSIBLE MEASURES OF EFFECTIVENESS OF PROGRAMS OF SUPERVISED FARMING AND SERVED AS MEMBERS OF THE JURY OF EXPERTS

Teacher Trainers:

H. M. Byram, Professor of Agricultural Education, Michigan State College, East Lansing, Michigan

H. P. Sweany, Associate Professor of Agricultural Education, Michigan State College, East Lansing, Michigan

State Supervisors:

Harry E. Nesman, Chief, Agricultural Education, Office of Vocational Education, Lansing, Michigan

Raymond Clark, Supervisor, Agricultural Education, Office of Vocational Education, Lansing, Michigan

Luke M. Kelly, Supervisor, Agricultural Education, Office of Vocational Education, Lansing, Michigan

Thomas H. Kerrey, Supervisor, Agricultural Education, Office of Vocational Education, Lansing, Michigan

Elmer Lightfoot, Supervisor, Agricultural Education, Office of Vocational Education, Lansing, Michigan

APPENDIX C

COPY OF THE FORM USED TO SOLICIT POSSIBLE MEASURES OF EFFECTIVENESS OF SUPERVISED FARMING PROGRAMS

Dear Mr. _____:

The following are suggested as possible measures of effectiveness of supervised farming programs in vocational agricultural departments in Michigan. All of these are obtainable from the annual Final Report of Supervised Practice Program on file in the Office of Vocational Education. If in your opinion there are other possible measures which can be obtained from the Final Report of Supervised Practice Program, will you add them at the bottom of the list. Use the reverse side of the sheet if necessary.

1. Percentage of students enrolled in supervised farming who have completed one or more productive enterprise projects and other supervised practice.
2. Percentage of students enrolled in supervised farming who have completed both livestock and crop productive enterprise projects.
3. Average number of productive enterprise projects completed by students enrolled in supervised farming.
4. Percentage of students enrolled in supervised farming who, having completed two or more years of supervised farming, show at least one continuous productive enterprise project.
5. Percentage of students enrolled in supervised farming who show increasing scope in productive projects repeated in two or more successive years.
6. Percentage of students enrolled in supervised farming completing supervised farming programs.
7.
8.
9.
10.

APPENDIX D

LEADERS IN AGRICULTURAL EDUCATION OUTSIDE OF MICHIGAN WHO SERVED ON JURY OF EXPERTS

C. L. Angerer, Professor of Agricultural Education, Agriculture and Mechanical College, Stillwater, Oklahoma

Henry S. Brunner, Professor of Agricultural Education, Pennsylvania State College, State College, Pennsylvania

R. W. Cline, Professor of Agricultural Education, University of Arizona, Tucson, Arizona

G. P. Deyoe, Professor of Agricultural Education, University of Illinois, Urbana, Illinois

G. F. Ekstrom, Professor of Agricultural Education, University of Missouri, Columbia, Missouri

H. C. Fetterolf, Chief, Agricultural Education, Department of Public Instruction, Harrisburg, Pennsylvania

Ray Fife, Professor of Agricultural Education, Ohio State University, Columbus, Ohio

L. R. Humpherys, Professor of Agricultural Education, State Agricultural College, Logan, Utah

W. Howard Martin, Professor of Agricultural Education, University of Connecticut, Storrs, Connecticut

Louis M. Sasman, Chief, Agricultural Education, State Board of Vocational and Adult Education, Madison, Wisconsin

S. S. Sutherland, Professor of Agricultural Education, University of California, Davis, California

H. B. Swanson, Teacher Training Specialist, Office of Education, Washington, D. C.

W. R. Tabb, Assistant Professor of Agricultural Education, University of Kentucky, Lexington, Kentucky

John T. Wheeler, Professor of Agricultural Education, University of Georgia, Athens, Georgia

APPENDIX E

COPY OF THE FORM SENT TO MEMBERS OF THE JURY

Dear Mr. _____:

Below are suggested measures of effectiveness of supervised farming programs. All measures would be applied only to boys who are currently enrolled in all-day classes in vocational agriculture. Please indicate your judgment of the relative value of each of these as a measure of the excellence of the combined programs of supervised farming of all students in a department by placing one of the numbers below in the blank preceding each measure. The relative values of the numbers as measures of effectiveness are indicated below:

0 - no value	3 - above average value
1 - limited value	4 - highly valuable
2 - below average value	5 - extremely valuable

I. ____Percentage of students enrolled in supervised farming who have completed one or more productive enterprise projects and other supervised practice.

II. ____Percentage of students enrolled in supervised farming who have completed both livestock and crop productive enterprise projects.

III. ____Average number of productive enterprise projects completed by students enrolled in supervised farming.

IV. ____Average number of improvement projects completed by students enrolled in supervised farming.

V. ____Average number of supplementary farm practices completed by students enrolled in supervised farming.

VI. ____Percentage of students enrolled in supervised farming who, having completed two or more years of supervised farming, show at least one continuous productive enterprise project.

VII. ____Percentage of students enrolled in supervised farming who show increasing scope in productive enterprise projects repeated in two or more successive years.

VIII. ____Percentage of students enrolled in supervised farming completing supervised farming programs.

IX. ____Percentage of students enrolled in supervised farming who complete farm placement experience.

X. ____Percentage of students enrolled in supervised farming who complete supplementary practice only. (It is assumed that this measure is inversely related to effectiveness.)

XI. ____Percentage of students enrolled in supervised farming with productive enterprise projects which are important in the county where the department is located.

APPENDIX F

COPY OF LETTER SENT TO MEMBERS OF JURY

Dear Mr. _____:

I am making a study of selected supervised farming programs in Michigan. A necessary preliminary step is to determine the relative effectiveness of current programs in operation in the various departments of vocational agriculture. In order to do this as objectively as possible, I have turned to the annual Final Reports of Supervised Practice Programs on file in the office of the Michigan State Board of Control for Vocational Education.

I have made a survey of five state supervisors and two teacher trainers in Michigan who are familiar with the annual Final Report of Supervised Practice Programs and I have secured from them items which can be obtained from the reports, which in their judgment are possible measures of effectiveness of programs of supervised farming.

Their responses, together with some which I have supplied, have been compiled on the enclosed survey form. I am sending this list to a selected number of state supervisors and teacher trainers, fourteen in all, in addition to the seven from Michigan whom I am asking to serve as members of a jury. I would appreciate it very much if you could take the few minutes required to help evaluate these measures.

I am making this study under the guidance of Dr. H. M. Byram. I have consulted him before soliciting your cooperation in providing me with expert judgment to evaluate this prospective measuring instrument.

Yours sincerely,

Raymond Garner
Assistant Professor of
Agricultural Education

RG:sk

APPENDIX G

TABLE XLVIII

LIST OF SPECIALISTS, THEIR POSITIONS, AND PRODUCTIVE ENTERPRISES IN WHICH THEY WERE ASKED TO JUDGE IMPORTANCE

Name	Position at Michigan State College	Productive Enterprises
Graydon L. Blank	Associate Professor of Animal Husbandry in Extension	Beef, Swine, Sheep
Roy E. Decker	Professor and Head of Department of Farm Crops	Wheat, Oats, Barley, Corn, Field Beans, Potatoes, Sugar Beets, Soybeans, Hay
Hugh D. Hootman	Associate Professor of Horticulture in Extension	Tree Fruits, Small Fruits, Vegetables, Vineyards
John M. Moore	Associate Professor of Poultry Husbandry in Extension	Poultry
George E. Parsons	Assistant Professor of Dairy Husbandry in Extension	Dairy

APPENDIX H

TABLE XLIX

EIGHTY-FOUR MICHIGAN DEPARTMENTS OF VOCATIONAL AGRICULTURE PLACED IN RANK ORDER ON THE BASIS OF POINTS RECEIVED ON NINE MEASURES OF EFFECTIVENESS

School	Measures									Total
	I	II	III	IV	V	VI	VII	VIII	XI	
MM	76.05	33.58	69.57	57.35	17.56	32.73	10.91	80.00	74.07	451.82
I	77.46	45.71	62.61	34.66	21.92	34.54	18.18	77.46	77.46	450.00
KKK	69.34	53.34	64.64	31.60	14.47	34.66	21.34	80.00	64.00	433.39
A	77.71	41.14	62.03	19.49	9.94	28.45	7.11	80.00	77.71	403.58
UUU	71.66	21.66	46.38	60.00	44.89	16.84	5.62	71.66	60.00	398.71
R	71.38	23.38	53.04	27.15	37.34	28.57	17.14	72.62	64.00	394.62
YYY	61.34	53.34	74.49	16.71	2.53	25.37	11.70	80.00	56.00	381.48
QQQ	62.61	40.00	44.06	42.04	10.56	33.10	13.79	64.34	57.39	367.89
DD	61.06	54.74	80.00	4.45	6.28	24.00	8.00	67.37	61.06	366.96
BBBB	73.85	30.77	51.30	20.88	14.33	19.39	9.70	76.92	67.70	364.84
LLL	58.18	37.82	61.74	21.58	14.04	27.32	21.46	77.09	45.09	364.32
Z	52.10	35.35	47.25	8.35	6.61	48.00	32.00	68.84	65.12	363.62
GG	63.45	31.26	42.90	36.75	18.24	19.05	10.16	73.56	57.93	353.30
U	68.89	28.89	43.43	51.79	8.91	12.98	4.33	80.00	44.45	343.72
H	70.00	15.00	37.39	18.79	11.79	38.98	6.15	71.66	70.00	339.76
SSS	61.39	16.74	47.83	13.23	9.90	36.00	18.00	74.42	61.39	338.90
BB	77.14	17.14	44.06	23.67	16.84	25.81	14.19	77.14	42.86	338.85
QQ	59.31	19.31	46.38	23.25	10.97	27.14	11.43	63.45	55.18	316.42
NN	57.14	20.78	36.52	27.98	9.10	19.31	13.79	80.00	49.87	314.49
NNN	72.07	3.60	29.28	2.65	5.48	40.62	12.30	77.12	69.91	313.03
G	69.78	5.10	29.57	23.94	5.70	32.82	10.26	69.78	64.68	311.63

TABLE XLIX (CONTINUED)

School	Measures									Total
	I	II	III	IV	V	VI	VII	VIII	XI	
RR	63.75	22.50	53.33	7.66	5.02	21.62	12.98	72.50	51.25	310.61
II	60.49	23.42	46.67	21.72	4.47	21.82	14.54	60.49	56.58	310.20
PP	65.12	27.90	44.35	5.15	2.82	23.11	8.89	70.70	61.39	309.43
C	35.17	22.86	36.81	52.76	26.80	22.22	6.66	49.23	46.59	299.10
OO	63.64	10.91	37.68	1.53	5.19	32.50	12.50	80.00	52.73	296.68
DDD	64.52	0.00	22.32	13.09	40.96	12.30	3.08	80.00	59.35	295.62
TTT	46.66	20.00	31.30	17.82	22.00	38.86	22.86	46.60	44.45	290.61
CC	76.92	30.77	47.25	2.09	8.19	18.98	4.06	78.46	23.08	289.80
L	71.11	0.00	26.67	14.62	11.75	23.08	7.70	74.92	55.87	285.72
YY	59.13	6.96	25.22	.56	20.54	30.91	9.09	73.04	53.91	279.36
WW	57.14	6.86	29.86	24.22	3.93	29.09	7.27	73.14	45.71	277.22
XXX	41.48	26.66	46.09	6.40	4.24	22.61	15.66	65.18	48.89	277.21
UU	43.81	32.38	44.93	6.40	19.12	11.23	5.62	68.57	41.90	273.96
P	70.77	21.54	37.97	8.63	3.64	11.03	5.52	76.92	36.92	272.94
EEEE	42.10	25.26	45.80	42.18	18.42	16.66	6.66	44.21	31.58	272.87
EE	61.54	0.00	27.83	3.76	8.95	20.00	8.57	80.00	55.38	266.03
OOO	63.45	5.52	26.09	13.50	17.83	5.71	0.00	74.48	57.93	264.51
RRR	55.51	4.90	22.61	19.63	4.80	19.26	5.93	80.00	50.62	263.26
M	40.00	25.00	43.48	16.57	0.00	23.64	3.64	80.00	30.00	262.33
N	33.85	6.15	16.81	3.76	60.00	20.00	13.34	80.00	27.70	261.61
III	36.92	20.51	26.67	11.42	25.28	24.45	8.89	73.85	30.77	258.76
AAAA	59.18	3.29	32.17	3.76	13.87	14.54	3.64	78.90	48.23	257.58
O	36.80	0.00	13.33	51.79	45.16	4.21	4.21	70.40	30.40	256.30
WWW	53.91	8.70	32.17	2.78	23.86	4.80	3.20	78.26	41.74	249.42
EEE	53.95	14.88	34.49	10.30	3.50	10.22	6.81	66.98	46.51	247.64
S	44.21	12.63	35.07	8.77	12.68	22.22	8.89	56.84	40.00	241.31
TT	40.00	27.70	33.33	6.40	9.10	25.71	2.86	52.30	43.08	240.48

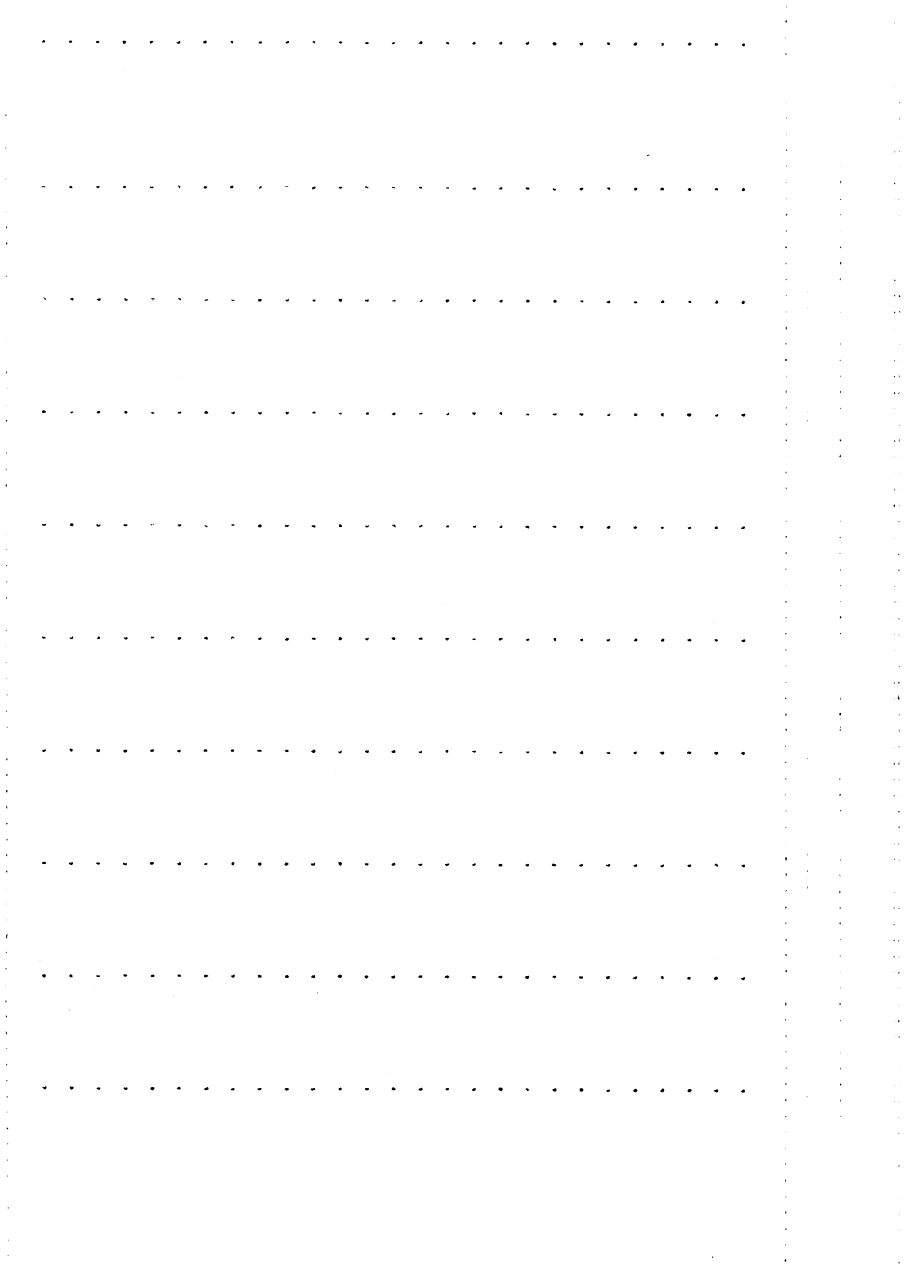


TABLE XLIX (CONTINUED)

School	Measures									Total
	I	II	III	IV	V	VI	VII	VIII	XI	
HHH	48.30	7.54	22.32	9.47	17.13	20.00	6.15	80.00	28.68	239.59
MMM	58.18	4.15	24.35	11.97	12.97	20.32	1.27	61.30	43.64	238.14
Q	48.00	14.22	30.14	24.08	5.68	7.27	0.00	69.34	37.34	236.07
D	41.56	18.70	45.80	7.80	1.69	20.65	12.90	55.06	28.05	232.21
CCCC	36.36	2.42	27.25	16.84	15.21	10.66	2.66	67.88	50.91	230.19
GGG	49.36	11.91	28.41	0.00	3.38	12.45	5.34	71.49	47.66	230.00
DDDD	58.82	0.00	21.45	2.51	10.23	9.41	4.70	77.65	44.70	229.47
FF	53.88	4.90	22.61	24.50	7.02	6.04	3.02	75.10	31.02	228.09
B	48.49	2.42	19.42	0.00	14.28	9.41	4.70	80.00	48.49	227.21
LL	43.78	9.06	27.83	5.99	2.53	17.46	7.27	78.49	33.21	225.62
FFF	42.10	8.42	29.86	1.11	7.37	6.15	0.00	80.00	44.21	219.22
BBB	40.98	11.70	31.01	.70	3.46	16.41	6.15	80.00	27.32	217.73
AAA	47.66	22.13	31.59	11.28	7.10	2.35	0.00	61.28	34.04	217.43
KK	55.55	6.66	22.61	1.95	3.99	23.53	9.41	55.55	37.78	217.03
E	34.78	0.00	12.46	47.19	7.06	6.04	3.02	76.52	29.57	216.64
HH	35.27	13.76	20.00	3.62	14.45	12.22	8.89	73.12	35.27	216.60
J	47.57	8.65	20.29	0.00	10.52	8.57	2.86	80.00	34.59	213.05
X	63.30	5.27	20.29	12.53	3.27	3.75	1.25	63.30	35.17	208.13
V	44.88	3.90	23.19	13.64	6.13	11.16	3.72	58.54	40.98	206.06
SS	36.36	8.73	32.17	0.00	3.60	17.14	4.29	59.64	39.27	201.20
JJJ	35.71	17.14	21.74	10.44	5.95	10.26	4.10	64.29	30.00	199.63
CCC	32.38	3.81	14.49	16.84	10.00	18.06	10.32	62.86	30.48	199.24
ZZ	43.34	0.00	15.65	8.07	10.04	0.00	0.00	80.00	40.00	197.10
W	44.70	2.35	22.03	9.47	16.16	9.41	7.06	44.70	40.00	195.88
AA	0.00	27.70	47.83	0.00	0.00	14.77	7.38	47.18	42.05	186.91
K	0.00	11.11	28.12	0.00	1.71	2.66	2.66	73.34	46.66	186.26
PPP	36.76	12.98	20.29	5.29	2.45	14.36	4.10	45.41	36.76	178.40

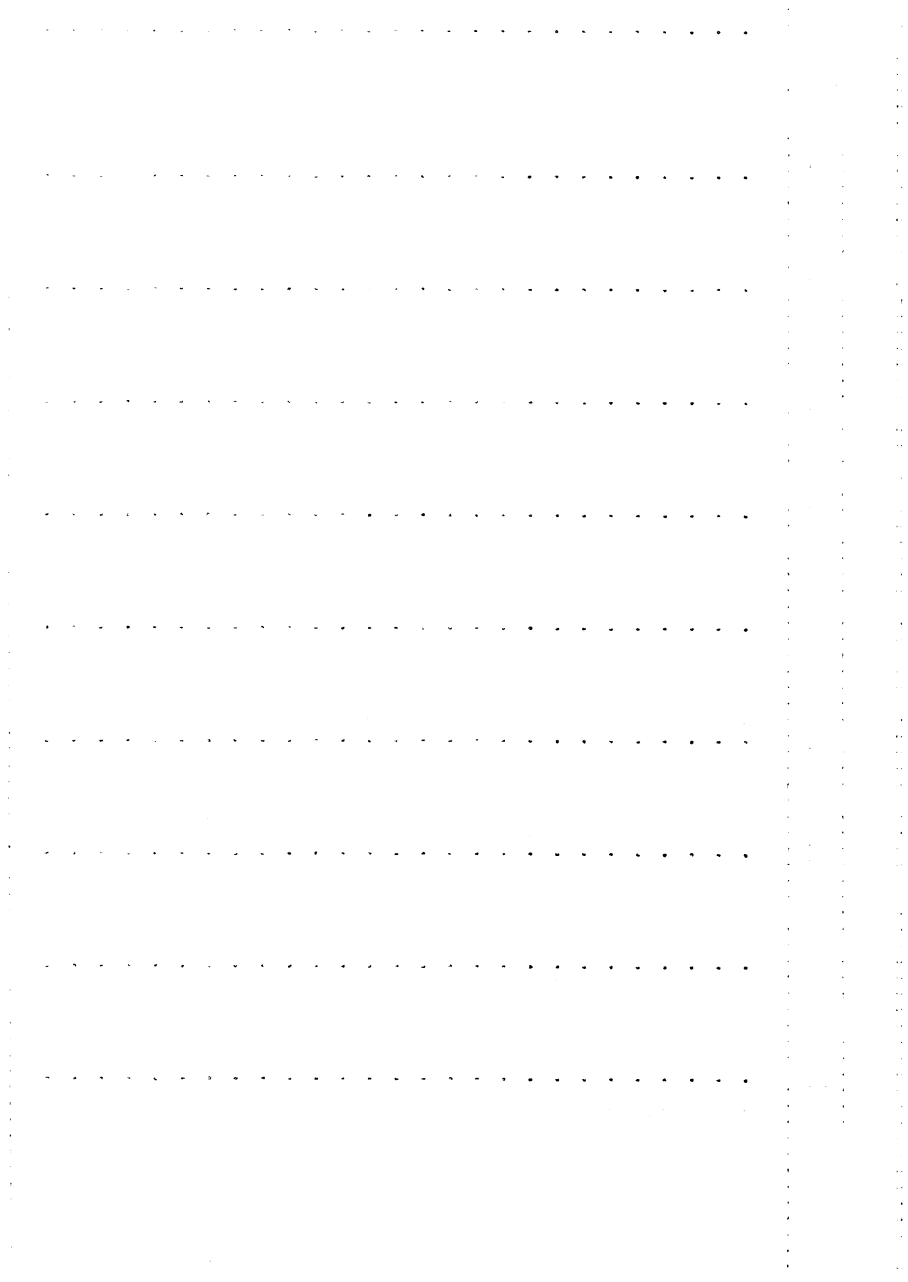
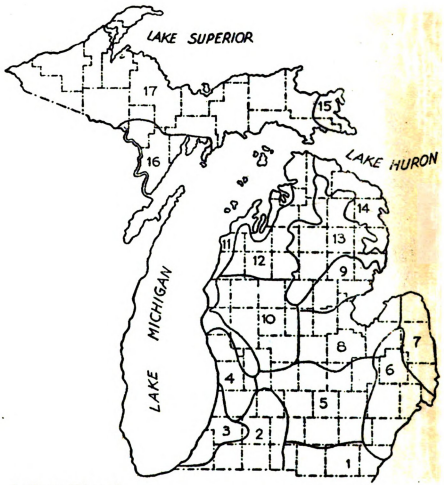


TABLE XLIX (CONTINUED)

School	Measures									Total
	I	II	III	IV	V	VI	VII	VIII	XI	
FFFF	35.00	2.50	19.13	8.21	4.53	10.23	3.72	65.00	28.75	177.07
ZZZ	23.70	0.00	27.83	16.57	0.00	15.00	5.00	71.11	14.82	174.03
XX	48.89	8.89	23.48	3.48	3.66	7.27	1.82	55.55	15.55	168.59
Y	23.34	6.66	16.23	4.04	6.85	14.54	9.70	70.00	16.66	168.12
T	26.66	15.55	16.23	4.59	3.38	14.12	4.70	57.78	20.00	163.01
VVV	33.94	0.00	13.91	0.00	7.49	7.74	5.16	67.88	24.24	160.36
JJ	26.12	1.63	19.42	.56	2.06	22.61	5.22	50.62	24.49	152.73
F	28.89	6.66	16.52	.56	4.26	5.71	2.86	47.78	35.55	148.79
VV	22.86	0.00	11.59	1.53	2.70	9.41	7.06	57.14	20.57	132.86

APPENDIX I

Type of Farming Areas in Michigan



1. Corn and Livestock
2. Small Grains and Livestock
3. Southwestern Fruit and Truck Crops
4. Poultry, Dairy and Truck Crops
5. Dairy and General Farming
6. Dairy and Cash Crops
7. Dairy, Hay, and Special Crops
8. Beans, Sugar Beets, and Dairy
9. Cattle, Sheep, and Forage
10. Central Potato and Dairy
11. Northern Fruit and Dairy
12. Northern Potato and Dairy
13. General, Self-Sufficing, and Part-Time
14. Cattle, Potatoes, and Self-Sufficing
15. Cattle, Hay, and Spring Grains
16. Dairy and Potatoes
17. Potatoes, Dairy, and Part-Time

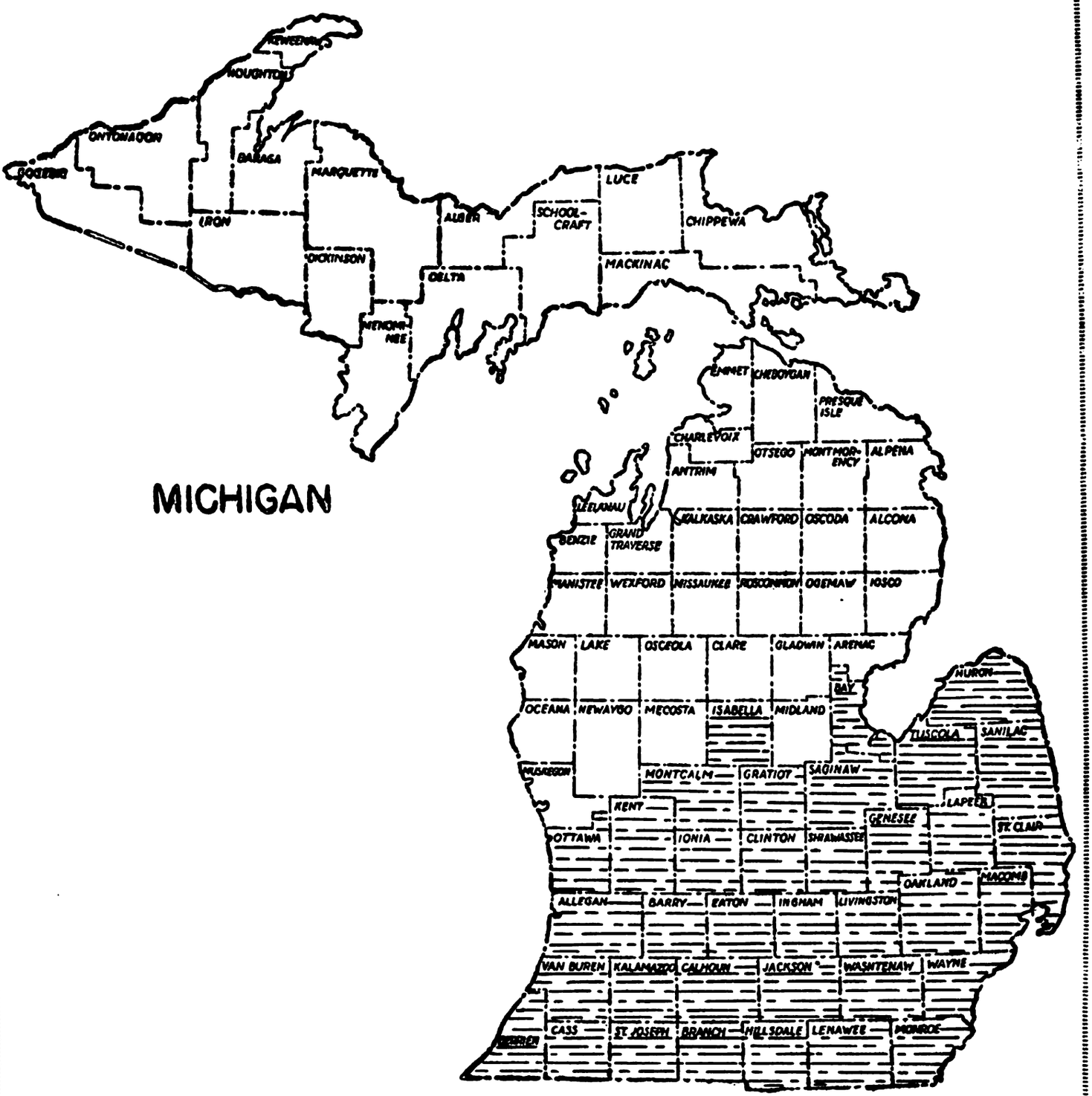
APPENDIX J

MAPS SHOWING MICHIGAN COUNTIES IN WHICH AGRICULTURAL ENTERPRISES ARE JUDGED IMPORTANT



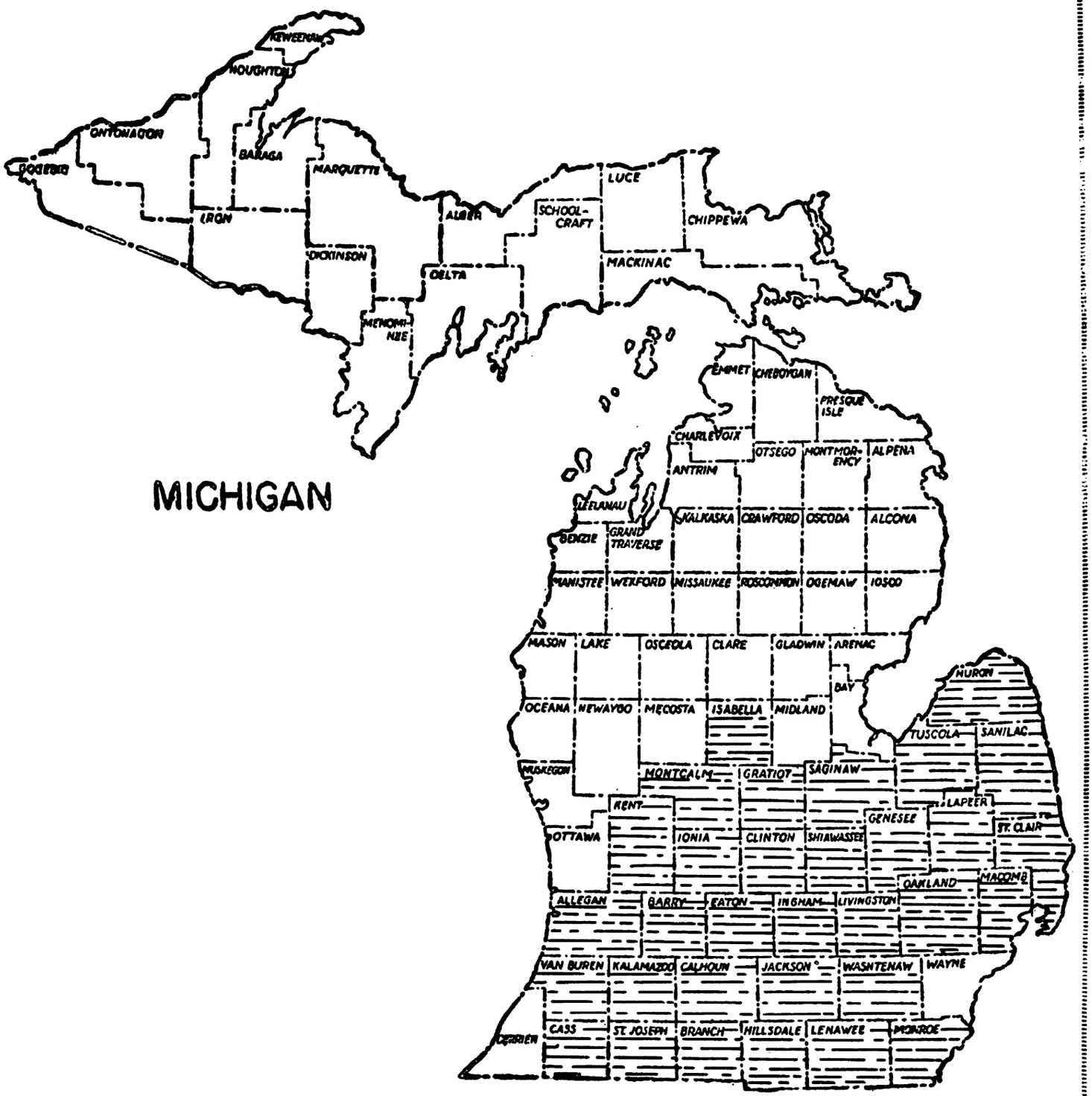
Shaded areas denote counties in which the dairy enterprise is judged to be important.





Shaded areas denote counties in which the poultry enterprise is judged to be important.



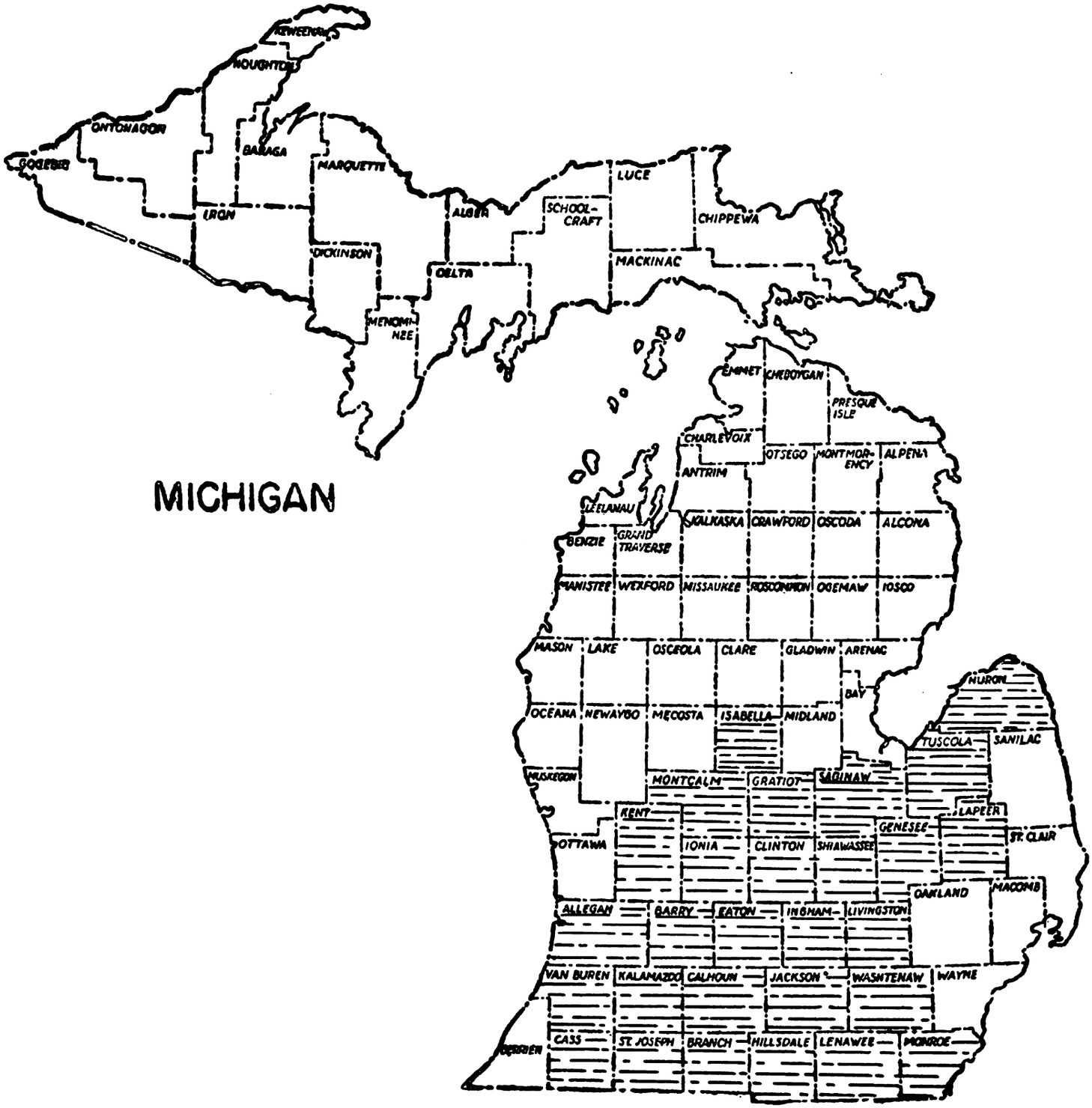


Shaded areas denote counties in which the beef feeding enterprise is judged to be important.



Shaded areas denote counties in which the commercial beef cattle raising enterprise is judged to be important.





Shaded areas denote counties in which the swine enterprise is judged to be important.





Shaded areas denote counties in which the sheep enterprise is judged to be important.





Shaded areas denote counties in which the wheat enterprise is judged to be important.





Shaded areas denote counties in which the oats enterprise is judged to be important.



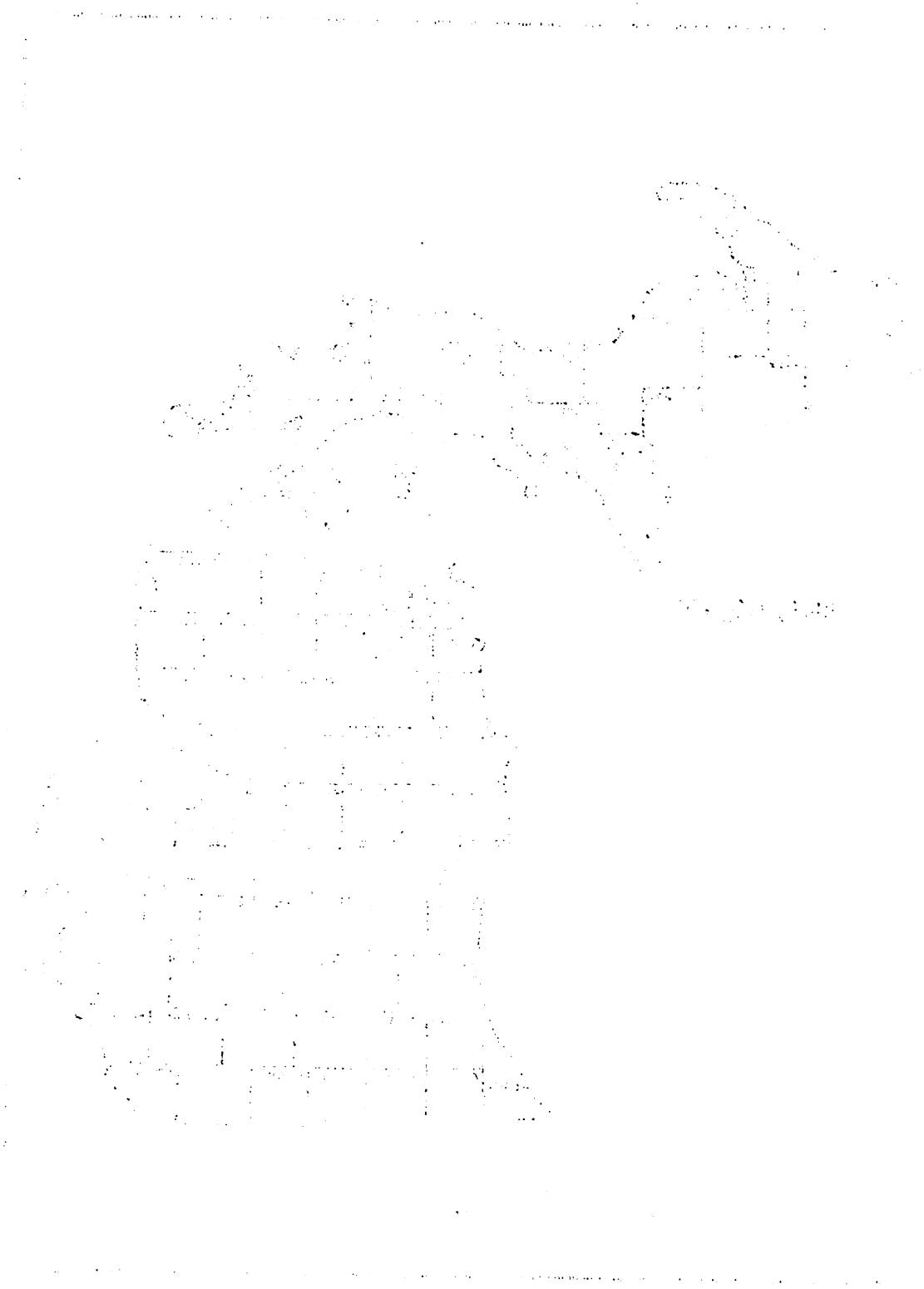


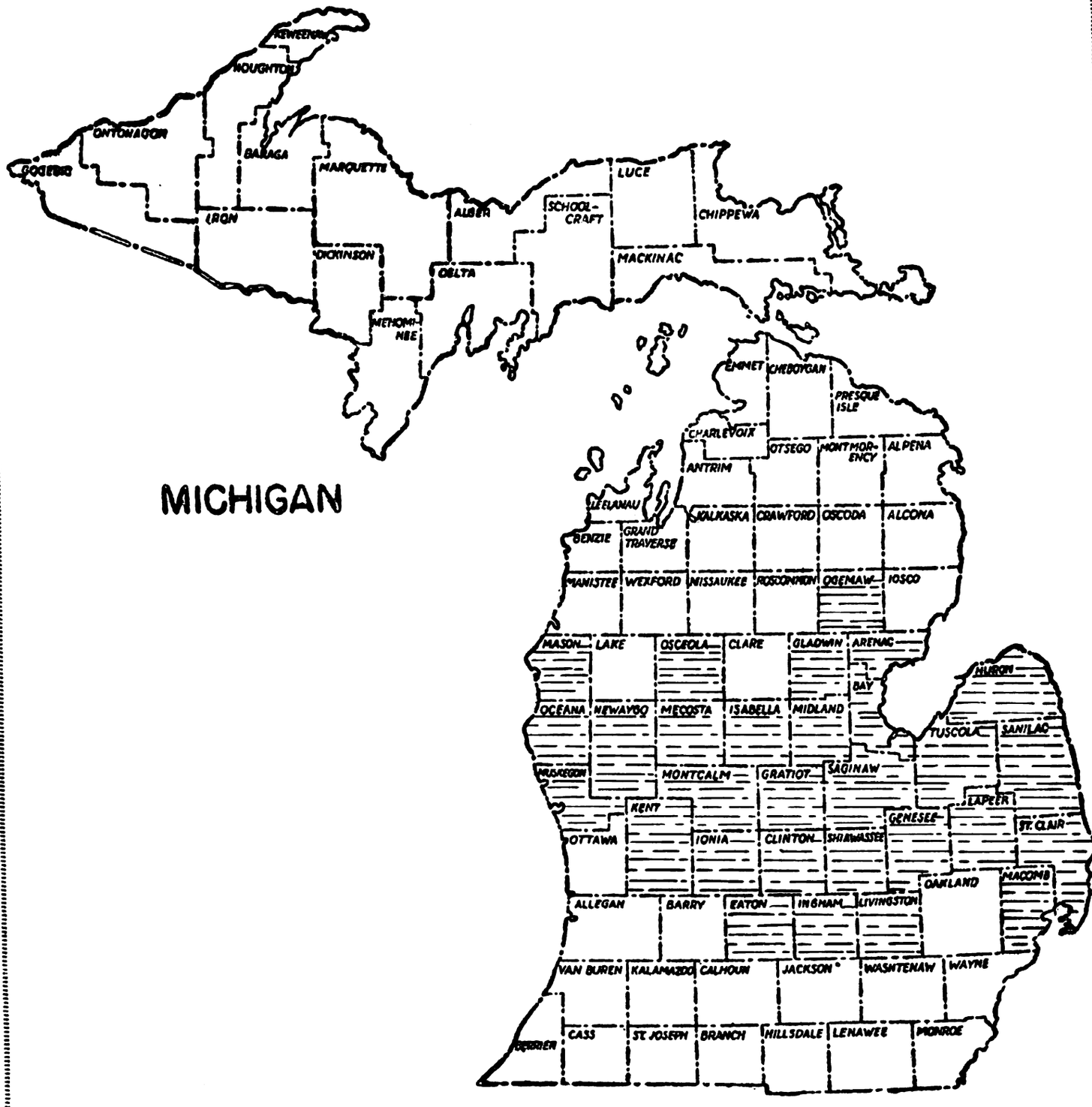
Shaded areas denote counties in which the barley enterprise is judged to be important.





Shaded areas denote counties in which the corn enterprise is judged to be important.





Shaded areas denote counties in which the field bean enterprise is judged to be important.





Shaded areas denote counties in which the potato enterprise is judged to be important.





Shaded areas denote counties in which the sugar beet enterprise is judged to be important.





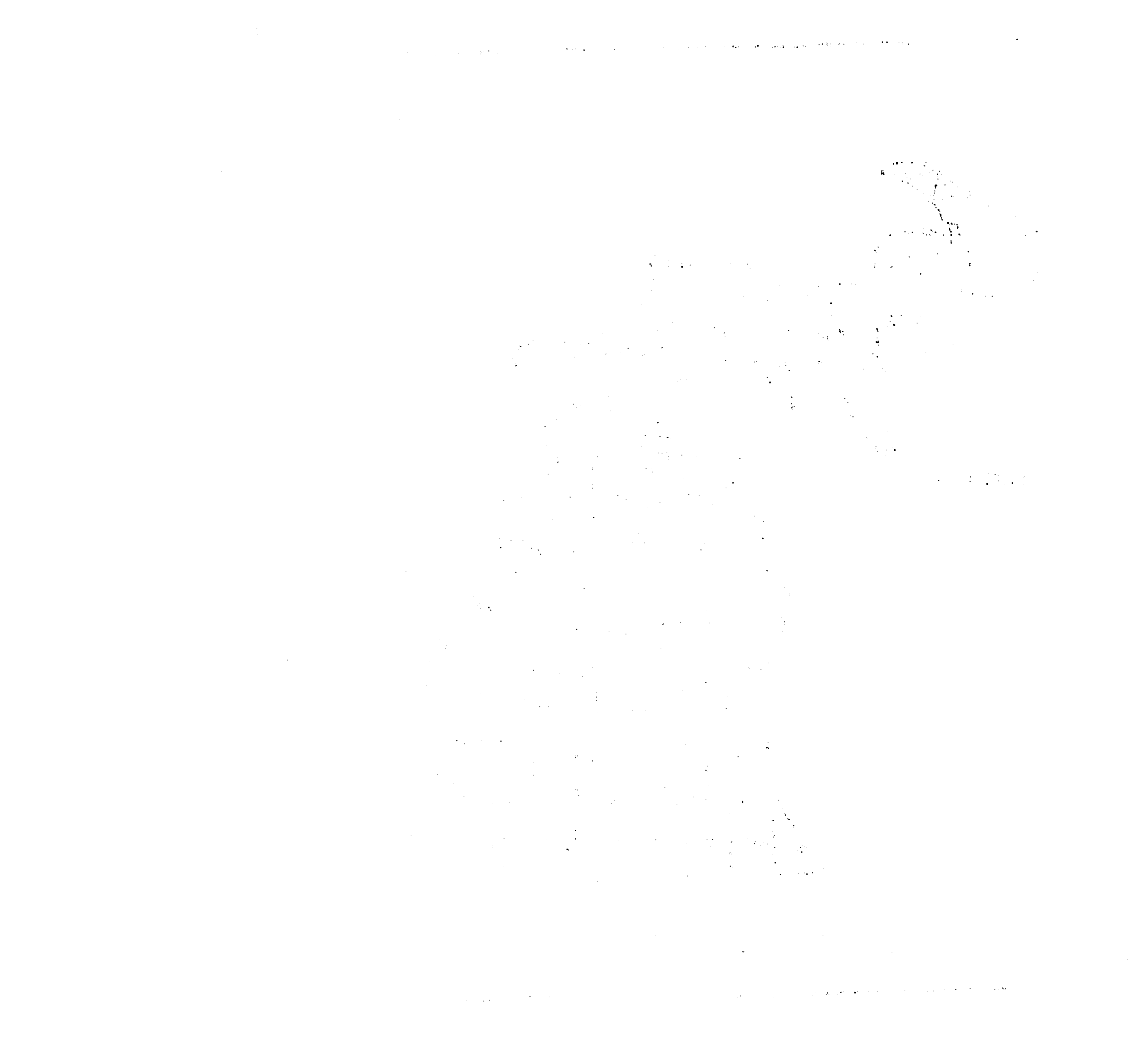
MICHIGAN

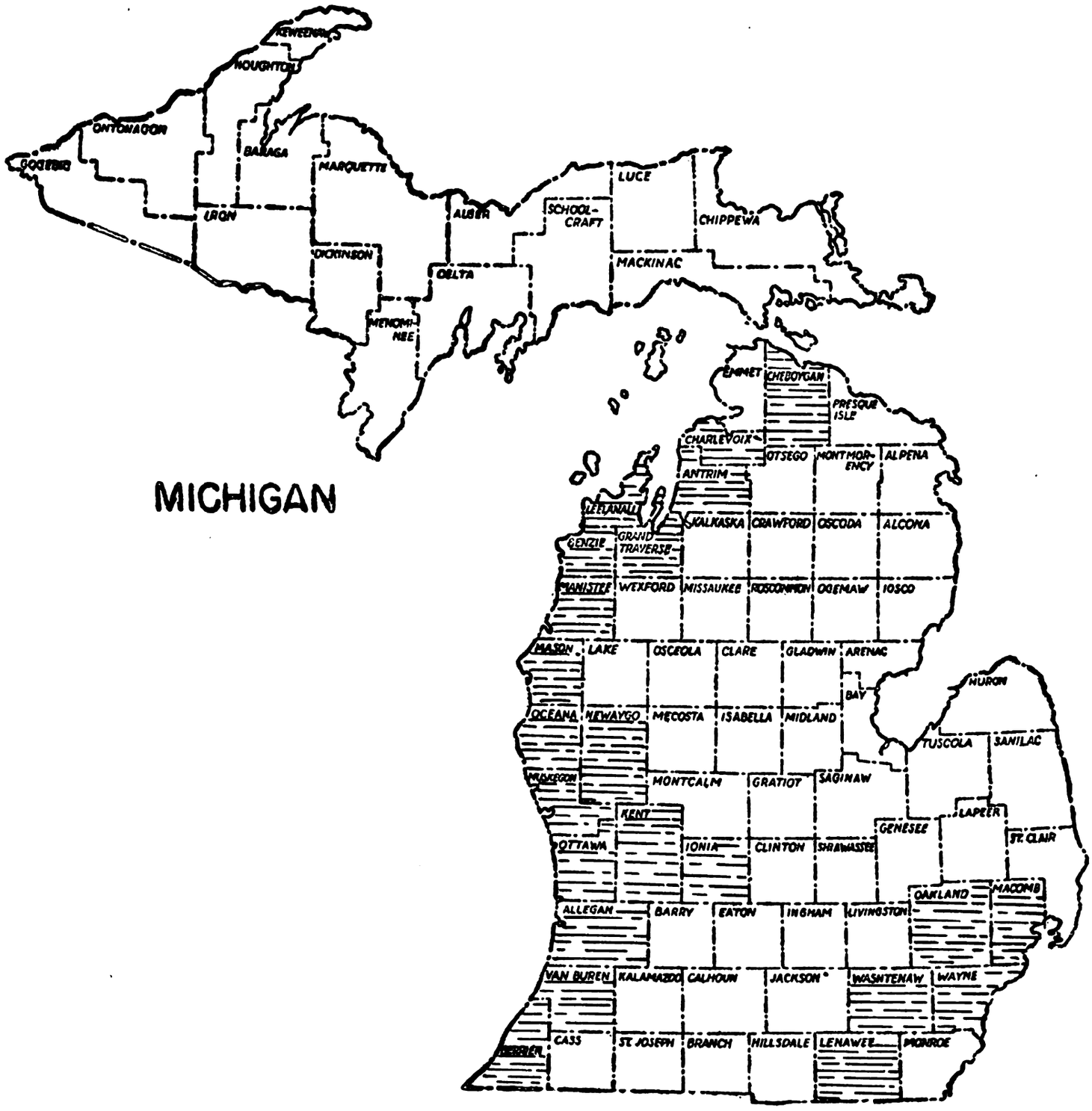
Shaded areas denote counties in which the soybean enterprise is judged to be important.





Shaded areas denote counties in which the hay enterprise is judged to be important.

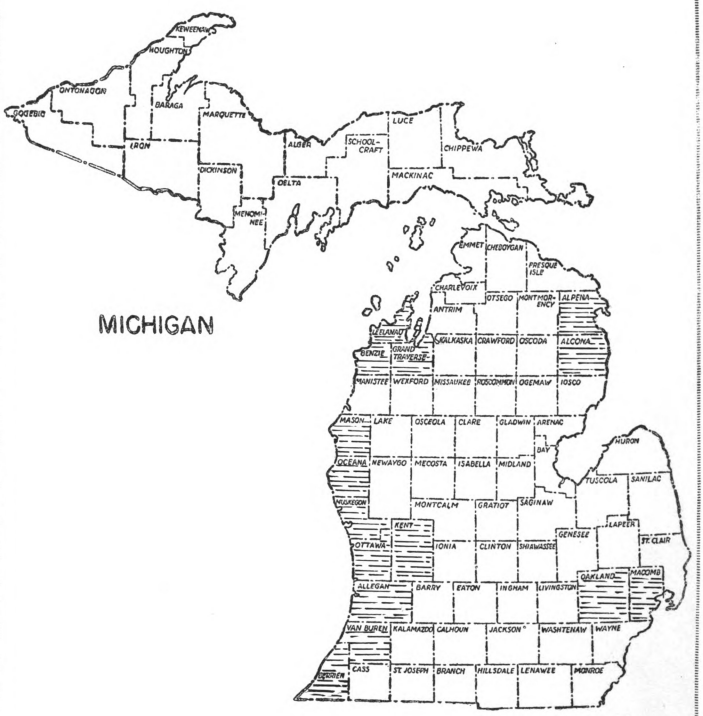




MICHIGAN

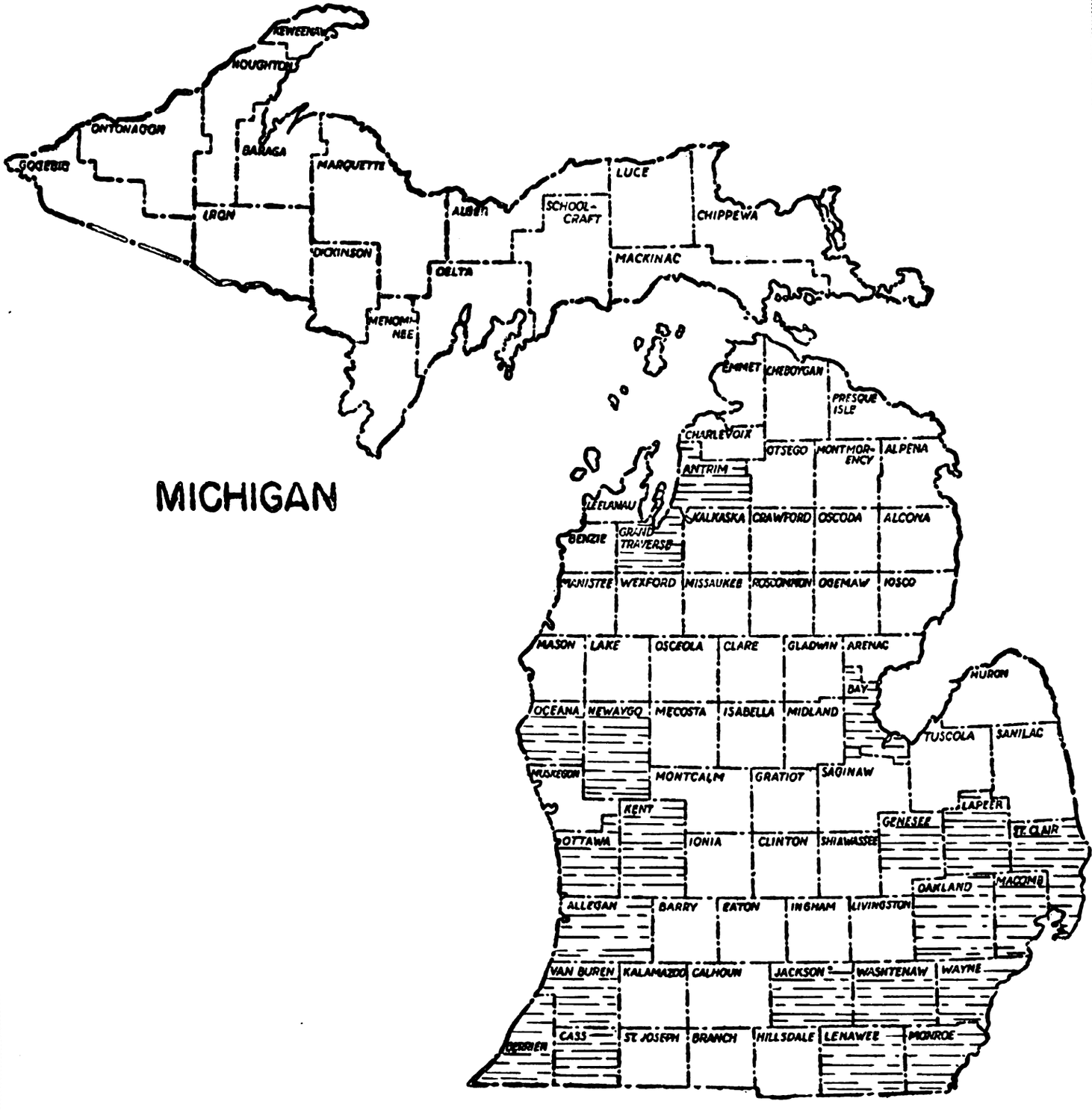
Shaded areas denote counties in which the tree fruit enterprises are judged to be important.





Shaded areas denote counties in which the small fruit enterprises are judged to be important.



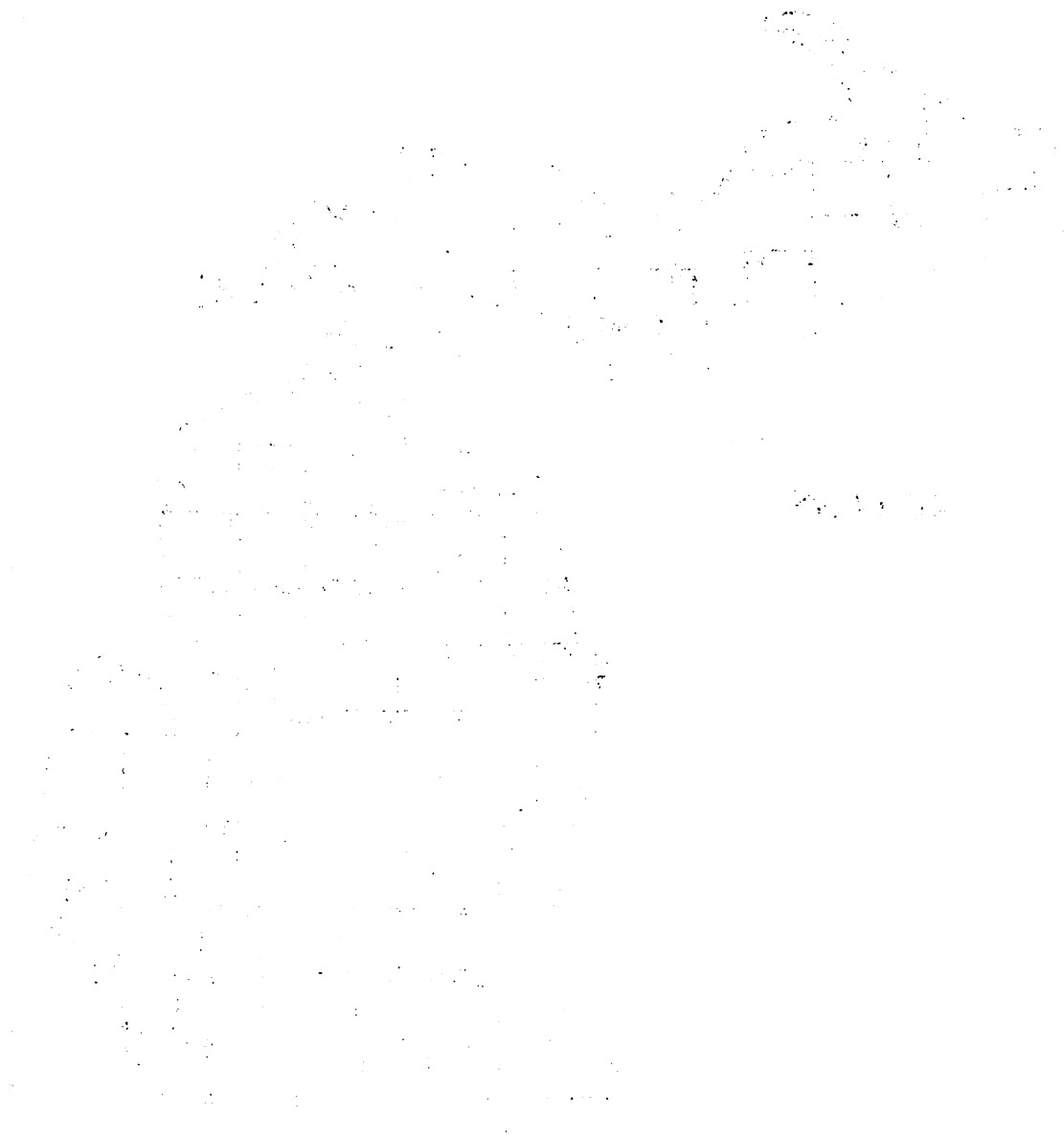


Shaded areas denote the counties in which the enterprise of vegetables harvested for sale is judged to be important.





Shaded areas denote the counties in which the grape enterprise is judged to be important.



ROOM USE ONLY

ROOM USE ONLY

Oc 24 '57

N 9 '52

Fe '53

Mr 31 '53

MY 5 53

Rec June 10, 1954

Ret June 2 5

AP 12 '54

Jan 4 '55

Feb 3 '55

FEB 1 0 '55

Jun 8 '55

Jun 21 '55

AUG 3 '55

Apr 22 '57

~~OCT 15 1960~~

~~APR 27 1962~~

SUMMARIZED FINAL REPORT ON OTHER SUPERVISED PRACTICE

OTHER SUPERVISED PRACTICE		NUMBER OF PROJECTS		SCOPE (Total Number of Units—Acres, Heads, etc.)
Improvement Projects	List Practices Introduced This Year	Begun	Completed	
CROPS				
1. Corn Improvement				
2. Bean Improvement				
3. Potato Improvement				
4. Oats Improvement				
5. Wheat Improvement				
6. Barley Improvement				
7.				
SOILS				
8. Soil Fertility Program				
9. Soil Erosion Control				
10. Planning and carrying out a land use program				
11.				
LIVESTOCK				
12. Dairy Herd Improvement				
13. Beef Herd Improvement				
14. Beef Steer Feeding Improvement				
15. Sheep Flock Improvement				
16. Lamb Feed Improvement				
17. Swine Improvement				
18. Swine Feeding Improvement				
19. Poultry Improvement				
20.				
FARM MANAGEMENT				
21. Plan and carry out a farm reorganization program based on recommended farm management practices				
22.				
FARM BUILDINGS*				
23. Construction				
24. Maintenance				
25. Others				
FARM IMPLEMENTS*				
26.				

NOTE:—*Do not duplicate projects on farm buildings or farm implements which are included as part of improvement or productive projects in agricultural enterprises.

PLACEMENTS FOR FARM EXPERIENCE

Name of Student	Size of Farm	Type of Farm	Date Placement Began	Date Placement Closes
1.				
2.				
3.				
4.				

SUPPLEMENTARY FARM PRACTICES

FARM CROPS	No. of Pupils
1. Clean and treat seeds	
2. Test seeds for germination	
3. Inoculate legume seeds	
4. Select an improved variety of seed	
5. Make hay	
6. Spray and dust crops	
7.	
8.	
LIVESTOCK	
9. Ring pigs	
10. Castrate pigs	
11. Treat animals to control external parasites	
12. Butcher an animal	
13. Dehorn cattle	
14. Dock and castrate lambs	
15. Dip and drench sheep	
16. Trim hooves	
17. Fit and show an animal	
18. Shear sheep	
19. Ring a bull	
20. Apply for registration papers for livestock	
21. Assist an animal at parturition	
22. Treat animals for disease	
23. Select improved breeding stock	
24. Feed minerals to livestock	
25.	
26.	
DAIRY	
27. Test milk for butterfat	
28. Clip cows	
29. Operate and clean milking machine	
30. Clean, disinfect and whitewash dairy stable	
31. Keep production records	
32.	
33.	
HORTICULTURE AND LANDSCAPING	
34. Prune trees and shrubs	
35. Plant trees and shrubs	
36. Graft and bud trees	
37. Landscape home grounds	
38.	
39.	
40.	
41.	
42.	

POULTRY	No. of Pupils
43. Cull a flock of poultry	
44. Caponize poultry	
45. Delouse poultry	
46. Dress poultry for market	
47. Operate a brooder	
48. Disinfect brooder or hen house	
49.	
50.	
FARM MACHINERY AND EQUIPMENT	
51. Operate and adjust farm machinery	
52. Construct farm equipment	
53. Repair farm machinery and equipment	
54. Oil and repair harness	
55. Mix and pour concrete	
56. Repair and maintain small hand tools	
57. Splice rope	
58.	
59.	
FARM BUILDINGS AND EQUIPMENT	
60. Repair farm buildings	
61. Paint farm buildings	
62. Construct farm buildings	
63. Build and repair fence	
64.	
65.	
SOILS	
66. Test soil for acidity	
67. Test soil for plant nutrients	
68. Apply fertiliser	
69. Drain soil	
70. Fit a seed bed	
71. Plow under green manure	
72.	
73.	
MISCELLANEOUS	
74. Keep farm accounts	
75. Reforest an area	
76.	
77.	
78.	
79.	
80.	
81.	
82.	
83.	

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LANSING, MICHIGAN

FINAL REPORT OF SUPERVISED PRACTICE PROGRAM

INSTRUCTIONS

This report is to be filled out for all-day and part-time students, one copy to be forwarded to the State Department and the other kept in the local department files. The report must be mailed not later than **January 1 for the preceding year's work.**

DEFINITION OF TERMS

Productive enterprise project: A business venture for profit, usually limited to a production cycle in a farm enterprise.

Improvement project: A project intended to increase appreciably the real estate value of the farm, or improve the efficiency of the farm business. It is usually of greater scope than a "job" or an "improved practice." Examples: draining a field, renovating an orchard, keeping a set of farm accounts.

Supplementary farm practice: Practice which has as its purpose development of ability in certain jobs or practices carefully selected by the teacher in conference with the student. These jobs or practices are more restricted in scope than improvement projects. Examples: culling the poultry flock, treating oats for smut, dipping sheep.

Placement for farm experience: Placement of a student on a farm—usually a town boy who is lacking in farm experience—or transfer to a suitable farm of a student who has too limited facilities on his home farm. The placement of such students on farms, and the follow-up of their programs, is a responsibility of the teacher of agriculture.

FINAL REPORT OF INDIVIDUALS

Individuals carrying projects and other supervised practice begun in the year preceding and completed during that year or during the fiscal year covered by this report. Summary for school as a whole **for the preceding year.**

NOTE: **No duplication should be included** in numbers reported under **a, b, c,** and **d.**

Type of Supervised Practice	Individuals Carrying Supervised Practice begun the Year Preceding	
	Number Beginning	Number Completing
a. **Productive enterprise projects:** Different individuals enrolled in such projects **only**		
b. **Other supervised practice:** Different individuals enrolled for: (1) Improvement projects **only**		
(2) Supplementary farm practice **only**		
(3) Placement for farm experience **only**		
c. **Productive enterprise projects and other supervised practice:** Different individuals enrolled in projects plus one or more forms of "other supervised practice" **only**		
d. **Two or more forms of "other supervised practice" only:** Different individuals enrolled		
TOTAL		

Total number of individuals who had no supervised practice program during preceding year - .....

Total number of individuals enrolled in vocational agriculture for preceding year - - - .....

Date..... Superintendent or Principal.....

School..... Teacher of Agriculture.....

SUMMARIZED FINAL REPORT ON EACH STUDENT'S PRODUCTIVE ENTERPRISE PROJECT OR OTHER SUPERVISED PRACTICE PROGRAM

	NAME OF STUDENT List All Students Enrolled Provide for All Projects (1)	Age (2)	Course (Crops, A.H., or Agri. 1, 2, 3)* (3)	Productive Enterprise Projects		Production (Bu., Tons, Lbs., etc.) (6)	Total Charges (7)	Total Credits (8)	Student's Project Income			Hours Student Spent on Project (12)	Student's Actual Income * (13)	Other Supervised Practice		
				Kind of Enterprise (4)	Scope (Total Number of Units—Acres, Heads) (5)				Net Profit (9)	Allowed for Self-Labor (10)	Net Project Income (11)			Improvement Projects ** (14)	Supplementary Farm Practices *** (15)	Placement for Farm Experience **** (16)
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
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26																
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28																
29																
30																
31																
32																
33																
34																
35																
36																

*This item refers to course taken by the student during the previous year in school.

*In this column indicate the amount actually received by the student. If student had full ownership the amount would be identical with column 11. If he had a share, the amount would be less than column 11.
Indicate in this column (column 14) the improvement projects carried out by the different individuals. On page 5 of this report is a summary of the improvement projects. Examples: **Bean improvement is listed as No. 2 on page 5; put 2 in column 14 opposite the name of the student carrying a bean improvement project.
***Indicate supplementary farm practices not including the practices carried out by the student in connection with the productive enterprise and improvement projects, by using same method of marking as used for improvement projects in column 14.
****Simply place a mark (X) in this column on the same line opposite the name of each student who was placed on a farm to secure farm experience.

SUMMARIZED FINAL REPORT ON PRODUCTIVE ENTERPRISE PROJECTS

Name of Project	Total Number Begun	Total Number Completed	Total Scope	Total Yield	Total Charges	Total Credits	Pupils' Project Income			
							Net Profit	Paid Self for Labor	Net Project Income	Students' Actual Income
1	2	3	4	5	6	7	8	9	10	11
Potatoes										
Beans										
Corn (Field)										
Corn (Pop)										
Corn (Sweet)										
Barley										
Oats										
Wheat										
Beets										
Cucumbers										
Tomatoes										
Melons										
Garden										
Small Fruits										
Orchard										
Poultry										
Hogs										
Sheep										
Stock Feeding										
Dairying										
Alfalfa										
Bees										
Horses										
TOTALS										

Complete totals for all columns except 1, 4, and 5.

1. If you have projects not listed in Column 1, write the names in the blank spaces near the bottom of Column 1.
2. In Column 3 give total number of each type of project you have; e. g., Potatoes 5, Corn 3, and so forth.
3. In Column 4 give number acres of crop and garden projects, number of birds in poultry, and number of animals in animal projects, and so forth.
4. In Column 6 give total charges or costs for each type of project.
5. In Column 7 give total credits or income for each type of project.
6. In Column 8 give net profit on each type of project. Net profit will be negative (—) when losses exceed profits.
7. In Column 9 give total amount paid "self" for each type of project.
8. Column 10 equals Column 8 plus Column 9.