A STUDY OF TEACHING AIDS AND CURRICULUM PLANNING GUIDES
FOR TEACHERS OF VOCATIONAL AGRICULTURE IN THE CENTRAL REGION,
OKLAHOMA AND COLORADO, AND A SURVEY OF COURSES OF STUDY PLANNING
BY THE VOCATIONAL AGRICULTURE TEACHERS OF KANSAS

by

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B. S., Kansas State College
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requirements for the degree

MASTER OF SCIENCE

Department of Education

KANSAS STATE COLLEGE
OF AGRICULTURE AND APPLIED SCIENCE

1956
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INTRODUCTION

The Smith-Hughes Act, commonly known as the Federal Vocational Education Act, passed by Congress in 1917, did not prescribe a set course of study to be taught in departments of Vocational Agriculture which are state and federally reimbursed. The basic law does state however, "that in order to secure the benefits of the appropriation for any purpose specified in the act, the state board shall prepare plans, showing the kinds of Vocational Education for which it is proposed that the appropriation shall be used; the kinds of schools and equipment; courses of study; methods of instruction ---".¹

It does not seem advisable to prescribe a course of study for Vocational Education in agriculture for the country as a whole, in fact there are very few states which could use the same course of study in all sections with any degree of practicality.

It seems necessary to develop the course of study in Vocational Agriculture on a local or area basis because of the diversity of farming conditions within a given region. The wide range of climatic conditions within a state or area of the state would also support the theory that the course of study must be developed on a local basis.

The primary aim of Vocational Education in Agriculture is to train present and prospective farmers for proficiency in the business of farming.

Bulletin Series No. 1, revised April 1, 1935, "Problems involved in establishing departments of Vocational Agriculture in Kansas", does not prescribe any set course of study for Kansas Vocational Agriculture Departments. In

the content of the bulletin it is stated that "it is a federal requirement that each boy enrolled in an approved reimbursed Vocational Agriculture Department carry a supervised farming program. The individual productive projects of the boys farming programs are the core around which the Vocational program is built".1

The above statement indicates that the course of study in Vocational Agriculture in Kansas should, for the most part, be based on the actual problems which a farm boy who is preparing to enter into the business of farming will be facing in the productive enterprises of his own farming program.

This method of developing the instructional program has the advantage of allowing the teacher to freely alter the course of study in order to fit the needs of the individual farming programs of the students of Vocational Agriculture or of the farmers in adult classes who may enroll.

When a high percentage of the students in Vocational Agriculture return to the farm for their livelihood, and where the teacher is thoroughly familiar with the problems of the farming program of each student, and is sufficiently skilled to integrate all parts of the program into a well rounded course of instruction then this method of developing a course of study is entirely feasible.

Because of the wide range in abilities to recognize and use problems emanating from student programs and from farmers of the community, and because of individual differences in skills necessary to coordinate the instructional program with the farming program and community problems, it was

1State Board for Vocational. Problems involved in establishing Departments of Vocational Agriculture in Kansas. Series A-1 revised April 1, 1955.
felt that more definite curriculum planning guides would be helpful to many of the Kansas teachers of Vocational Agriculture.

PURPOSE

It is the purpose of this report first, to make a survey of the states in the central region to determine what curriculum planning guides are made available to the local Vocational Agriculture teachers and to make a detailed survey of the four states adjacent to Kansas to discover what aids they are furnishing the teachers of Vocational Agriculture.

The second purpose is to conduct a survey of Vocational Agriculture teachers of Kansas to find how they organize their curriculum and course of study.

The third purpose is to summarize the curriculum planning guides furnished the teachers of Vocational Agriculture by the states in the central region, Oklahoma and Colorado and to ascertain the practices used by the Vocational Agriculture teachers of Kansas in organizing their programs of instruction.

PROCEDURE

After selecting the topic for this report the writer consulted several leaders in the Vocational Agriculture teacher training department at Kansas State College and supervisors of Vocational Agriculture with the State Board for Vocational Education. It was the consensus of opinion of this group that the course of study and methods of presentation were two points that needed strengthening in the Vocational Agriculture program in Kansas.

It was decided to make a survey study of the curriculum planning guides used in the states in the central region, and to make a more detailed study of the states adjacent to Kansas. The reason for selecting the
states adjacent to Kansas for a more detailed study was because it was thought these states would have similar problems to those found in Kansas.

A letter was sent to each state supervisor of Vocational Agriculture and head teacher trainer in Agriculture Education in the 13 states in the central region, plus Oklahoma and Colorado, requesting copies of the materials made available to the teachers in their states in developing the Vocational Agriculture curriculum.

A questionnaire was constructed and sent to each teacher of Vocational Agriculture in Kansas on February 7, 1956. A total of 213 questionnaires were mailed along with a cover letter and self addressed, stamped envelope. Consultants in phrasing the questionnaire included Professor A. P. Davidson, major instructor and Professor Howard Bradley, both of the department of Education, Kansas State College. A copy of the questionnaire, cover letter and reminder card is included in the appendix of this report.

ORGANIZATION OF THE STUDY

The first part of this report presents an introduction to the problem, the purpose of the study, the procedure used, a historical sketch of curriculum development and definitions of some of the fundamental terms used.

The second part presents a general summary of all the states in the central region in regard to the teaching aids provided their Vocational Agriculture teachers with a more detailed study of the states adjacent to Kansas.

The third part presents a summary of the answers to the questionnaire sent to the Vocational Agriculture teachers of Kansas.

The concluding part presents a summary and conclusions based on the overall findings in curriculum planning guides in Vocational Agriculture.
Curriculum offerings and classroom procedures have undergone many fundamental changes since the advent of secondary education. Viewed historically, the development of classroom method may be divided into four rather distinct periods.

The first period from 1860 to 1870 was characterized as a lesson hearing recitation method. This method involved drill and memorization techniques.

The second period from 1870 to 1910 was still a teacher-centered recitation method although attempts were made to develop sense perception, questioning and motivation.

The third period from 1910 to approximately 1930 saw the coming of supervised study, the project method and the socialized recitation.

The fourth period beginning about 1930 has been characterized by directed pupil activities toward a purposeful end. It was in the two decades following 1910 that the classroom became a pupil centered situation. It was in 1917 that Vocational Agriculture was introduced into the curriculum of the public secondary schools.

The Kansas state plan for offering Vocational Agriculture (17) from 1922 to 1927 stated that the course of study be so arranged that the student be occupied three hours per day in the study and practice of Vocational Agriculture and three hours per day in subjects designed to build up a well rounded course of instruction and to promote general intelligence and civic efficiency.

With the passage of the George-Dean act in 1936, the mandatory standard for continuous instruction in Vocational Agriculture was changed from 90 minutes to 60 minutes. Accordingly, Kansas in its 1937-1942 plan for offering
Vocational Agriculture made it possible to use 60 minutes of instruction in the ninth grade and the twelfth grade years. The tenth grade and eleventh grade years set a minimum of 120 minutes of continuous instruction in Vocational Agriculture. This change necessitated some definite reorganization in the curriculum offering and course of study planning.

In the 29th biennial report of the State Board of Agriculture 1933-34, (Mohler, 10) it is stated that from 80 to 90 per cent of the farm boys enrolled in the high schools of Kansas return to the farm upon completion of the work.

Gehlbaeh (7) found that of the 1941 and 1948 high school graduates who have received two years or more instruction in Vocational Agriculture, only 45.2 per cent were farming in 1955. These figures would seem to indicate that reorganization is needed in the Vocational Agriculture curriculum and course of study offering in Kansas.

DEFINITIONS OF SOME FUNDAMENTAL TERMS USED

There is a lack of standardization in terminology used in written and oral treatment of the program of Vocational Education in Agriculture. It is interesting to note that many times educators within the field have different understandings of the terminology. For purposes of clarification we are using definitive terms set forth by Missouri (Humphrey, et al., 9) and by Cook and Phipps (4).

(Humphrey, et al., 9) defines Vocational Agriculture Curriculum, course of study, enterprise or unit, job or problem, and objective in paragraphs 1 - 5, and Cook and Phipps (4) define traditional, cross sectional and modified cross sectional methods of course planning in paragraphs 6 - 8.

1. Vocational Agriculture Curriculum: The whole body of experiences
offered in a department of Vocational Agriculture, including courses for all day students, young farmers and adult farmers.

2. Course of study: A guide prepared to use in a specific class. It may include aims, objectives, enterprises or units and jobs or problems to be taught; instructional aids, student teacher activities, and plans for evaluating outcomes.

3. Enterprise or unit: A major productive unit in farming. Example: swine, beef cattle, dairy cattle, corn, wheat and grain sorghums. (Throughout this report the terms unit and enterprise are used as having the same definitions and may be used separately or together to mean the same thing).

4. Job or problem: A division of a farm enterprise or unit or other major enterprise or unit which expresses action; a segment of an enterprise or unit; example, choosing a breed of beef cattle, feeding dairy cows for winter milk production, etc.

5. Objective: An outcome to be attained as a result of teaching. It may be stated in terms of abilities, ideals, appreciations, attitudes or skills.

6. Traditional method of course planning: Each year is devoted to a different phase of instruction. For example a year may be devoted to crops and soils, another year to livestock, another year to farm management and a fourth year to marketing.

7. Cross sectional method of course planning: Where the problems in an enterprise are distributed throughout two or more years of instruction. A large amount of individualized instruction may be used in this plan of organization.

8. Modified cross sectional method of course planning: Where a certain phase or phases of instruction such as livestock or crops receive central emphasis in each course but may be digressed from to fit the needs of the boys farming programs.

CURRICULUM PLANNING GUIDES - MISSOURI

Missouri provides assistance to the teachers of Vocational Agriculture in planning the curriculum and course of study for the local departments through the preparation of a series of pamphlets. These pamphlets include source material and teaching suggestions pertaining to the different production enterprises and other major teaching units adapted to the state of
Table 1. Teaching aids which are furnished to teachers of Vocational Agriculture in the 13 states of the central region plus Oklahoma and Colorado.

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<tr>
<td>S. DAKOTA</td>
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<tr>
<td>COLORADO</td>
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</tbody>
</table>
Missouri. The pamphlets are issued by the Department of Agricultural Education at the University of Missouri with the cooperation of the Agricultural Education Section of the State Department of Education. Much of the work on these source units is done in cooperation with the Missouri Vocational Agriculture Teachers Association and other persons registered in the graduate school of the University of Missouri.

The Missouri State Department of Vocational Education subscribes to the six major objectives of Vocational Agriculture as outlined in the U. S. Office of Education Bulletin number one (16).

The six major objectives of Vocational Education in Agriculture are to:

1. Make a beginning and advance in farming.
2. Produce farm commodities efficiently.
3. Market farm products advantageously.
4. Conserve soil and other natural resources.
5. Manage a farm business.
6. Maintain a favorable environment.

Each teacher of Vocational Agriculture in Missouri should create objectives for his own local department based on the following: (9)

1. Summaries of farming programs of former student and other department records.
2. Information available from other agencies in the community.
3. Data obtained from local surveys.
4. Suggestions of advisory committees.

These specific objectives developed by the local department should be realized by the student through an instructional program providing guidance and exploratory experiences in the choice of an agriculture occupation. These objectives should lead to the training needed for the chosen occupation and assistance to the student in becoming established in the agriculture occupation of his choice.

Included in the criteria for selecting the major enterprises or units of instruction to be scheduled in the course of study for all day students are:
1. The supervised farming programs of the students.
2. The types of farming in which the students expect to be engaged.
3. The needs of the home farms.
4. The major types of farming in the area.
5. The needs of the students and the members of their families.
6. The experience and the interests of the students.
7. The anticipated changes in farming.
8. The possibility and probability of becoming established in farming locally. (Humphrey, et al., 9)

Missouri does not provide a time distribution plan. The time spent on each enterprise taught should correlate with the farming programs of a majority of the students. The material taught should be adjusted to the developing maturity of the students. The material presented in each enterprise or unit should progress from the less difficult or more familiar to the more difficult and advanced materials.

The foregoing suggestions indicate the curriculum in Vocational Agriculture in Missouri is based on the farming programs of the students and is adjusted to meet local conditions. Final development of the course of study for each class of Vocational Agriculture is the responsibility of the local teacher.

Suggestions as to what should be included in the course of study for Vocational Agriculture in the ninth, tenth, eleventh and twelfth years are outlined as follows:

Vocational Agriculture I

The course should include jobs or problems pertaining to the enterprises occupying important places in the supervised farming programs of the students. Emphasis is placed on approved practices as they relate to achieving desirable farm enterprise goals rather than technical scientific principles.

Time is allocated to supervised farming in order to guide students in
the selection of a farming program. Record keeping and the evaluation of results is also included.

Necessary time is also allocated to farm mechanics, Future Farmers of America activities, livestock shows, sales and state and district sponsored contests.

**Vocational Agriculture II**

This course includes jobs or problems of the important enterprises of the community not taught in Vocational Agriculture I. Some continuation of enterprises in the supervised farming programs may also be taught. Special attention is given to correlation of facts, principles and practices with those encountered in enterprises previously studied.

Supervised farming study should result in increased scope of farming programs and more activities relating to farm problems. Class analysis of farming programs should lead to more accurate evaluation of practices used, increase the number of approved practices used, and refine the approved practices in use.

Time is also allocated for farm mechanics, Future Farmers of America activities, shows, sales and contests.

**Vocational Agriculture III**

The Vocational Agriculture III course is designed for the more technical jobs pertaining to the supervised farming program, such as plant and animal nutrition, plant and animal improvement; and control of insects, diseases and parasites. Emphasis is placed on development of principles in acquiring a more thorough understanding of approved practices.
Further development and improvement of the supervised farming programs with emphasis on efficiency and expansion. The goal is always establishment in farming.

Time should also be allotted for farm mechanics, Future Farmers of America activities, shows, sales and contests.

Vocational Agriculture IV

1. The Vocational Agriculture IV course is designed for the application of approved farm practices and principles to the organization or re-organization of the individual farm unit.

2. Emphasis in supervised farming is placed on establishment in farming.

3. Time should also be allocated for farm mechanics, Future Farmers of America activities, shows, sales and contests.

The Missouri leaders suggest the following four steps in laying out the course of study for each class. (Humphrey, et al., 9)

Step 1. List the enterprises or units to be taught.
Step 2. Make a job layout indicating the time required to teach each job and the year in which it is to be taught.
Step 3. Make a teaching layout, indicating time allotment by years for the various enterprises or units.
Step 4. Formulate the day to day teaching calendar.

Form A "An example form for making a job layout for the entire curriculum" pertains to step two above.

Form B "An example form for making a teaching layout" pertains to step three above.

Form C "An example of a day by day teaching calendar" pertains to step four above.
Form A. An example form for making a job layout for the entire curriculum. (Humphrey, et al., 9)

**ENTERPRISE - POULTRY**

<table>
<thead>
<tr>
<th>Jobs</th>
<th>Number of days</th>
<th>required to teach</th>
<th>Years to be taught</th>
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Form B. An example form for making a teaching layout. (Humphrey, et al., 9)

**Teaching layout for school year 1956-57**

<table>
<thead>
<tr>
<th>School</th>
<th>Instructor</th>
<th>Enterprises and other units</th>
<th>Number</th>
<th>Number</th>
<th>Enterprises and other units</th>
<th>Days</th>
<th>Enterprises and other units</th>
<th>Days</th>
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<tbody>
<tr>
<td>Vocational Agriculture I</td>
<td></td>
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<td></td>
<td></td>
<td>Vocational Agriculture II</td>
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<tr>
<td>Vocational Agriculture III</td>
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<td></td>
<td></td>
<td>Vocational Agriculture IV</td>
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<td>Total</td>
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</tr>
</tbody>
</table>

**Vocational Agriculture I**: 
- Number:
- Days:

**Vocational Agriculture II**: 
- Number:
- Days:

**Vocational Agriculture III**: 
- Number:
- Days:

**Vocational Agriculture IV**: 
- Number:
- Days:
Form C. An example of a day by day teaching calendar. (Humphrey, et al., 9)

<table>
<thead>
<tr>
<th>Form</th>
<th>Course</th>
<th>Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Enterpise or:</td>
<td>Job:</td>
</tr>
<tr>
<td>2.</td>
<td>teaching unit</td>
<td>Type of class meeting</td>
</tr>
</tbody>
</table>

It is recommended that form A be worked out for each enterprise which the teacher has decided to include in the course of study. After the teaching layout has been completed to the teachers apparent satisfaction, he should compare the time allotted to each enterprise in form B with the time required to teach the job listed in form A. Then the teacher should eliminate the jobs of lesser importance until there is a time balance between the time allotted to teach each enterprise and the time required.

Form C is an example of a day to day teaching schedule which may be developed as far in advance as is practical and workable.

The Missouri state department recommends that each teacher develop teaching plans for each job that is to be taught and a separate folder kept in files for each lesson taught.

The following items have been listed by the Missouri state department as desirable to include in the teaching plan:

1. Enterprise of unit.
2. Job or problem.
3. Production goals for the enterprises.
4. Teaching objectives.
5. Type of class meeting.
6. Motivation or interest approach.
7. Problems or study questions.
8. Teaching aids.
9. Supervised study suggestions.
10. Procedures for handling class discussion.
11. References.
12. Approved practices or improved practices for the job or problem. (Humphrey, et al., 9)

CURRICULUM PLANNING GUIDES - OKLAHOMA

The Oklahoma State Department for Vocational Education requires that each teacher of Vocational Agriculture prepare a course of study for each class of Vocational Agriculture offered in the school. One copy of the course of study is filed with the State Department for Vocational Education and one copy must be on file in the local department.

The Oklahoma Vocational Education staff provides a suggested course outline for a department of Vocational Agriculture offering a four year program. The major part of the assistance given to teachers in Oklahoma however, is to offer suggestions for organizing a program of Vocational Education in Agriculture. Each teacher is urged to use the following suggestions in organizing the curriculum and course of study for the local department.

Oklahoma recommends the following procedure for developing the curriculum and course of study for a Vocational Agriculture department.

The first step for developing a program of Vocational Education in Agriculture is to secure, organize and analyze information pertaining to the agriculture of the community for which the program is developed. This information should assist the teacher to, (a) recognize the enterprises and problems of importance to the farmers of the service area, (b) to recognize trends in the enterprises and problems and (c) to secure information that may be used in teaching adults or high school pupils.

The second step is to decide on the amount of time to spend on the enterprise or unit. The amount of time used for the study of a problem would be
determined by the importance of the problem in the area. A teacher in one
community might spend considerable time in the study of soybean production
while in another community, that enterprise might be omitted entirely. It is
generally accepted however that most all students of Vocational Agriculture
should receive training in the major problems in the agriculture of the area
in which they live.

The third step is to decide on a tentative grouping of the enterprises
and problems for each year of instruction in Vocational Agriculture. Some
of the factors to consider in grouping the problems are:

1. The relative importance of the problems to the farmers of the area.
2. The importance of the problems to the pupils.
3. The ability of the pupils to understand the problems.
4. The length of time the pupils remain in school. (Orr, 11)

Oklahoma recommends that some work related to crops production and soils,
and some work related to animal husbandry be included each year in order to
afford a wider range of activities and make the work more appealing to
students. Some work in farm mechanics should also be included each year to
add interest and variety to the program.

A further analysis of the Oklahoma curriculum planning guides shows that
problems of major importance to all farmers such as soil conservation and
feeding of livestock be included in the first two years. The relative high
percentage of drop outs, (approximately 50 per cent of the students who take
Vocational Agriculture in the ninth grade drop out by the time they reach the
eleventh grade in Oklahoma) means that these drop outs will have had at least
some help in the major problems.

The study and planning of supervised farm training programs should be
provided each year because it is such a vital part of the total program.

Oklahoma suggestions as to how problems may be grouped for a four year
An illustration of how farm problems may be grouped for
a four year course in Vocational Agriculture
for high school students (Orr, 11)

Major problems for Agriculture I

1. Supervised farm training and individual farm problems.
2. The Future Farmers of America organization.
3. Feeding livestock and poultry.
4. Provide shelter for livestock and poultry.
5. Produce vegetables for home use.
6. Farm shop.

Major problems for Agriculture II

1. Supervised farm training and individual farm problems.
2. Soil conservation and improvement.
3. Produce fruits for home use.
4. Livestock selection.
5. Select varieties of field crops.
6. Select seeds for planting.
7. Plant and cultivate field crops.

Major problems for Agriculture III

1. Supervised farm training and individual farm problems.
2. Harvest and market crops.
3. Control diseases and parasites of plants.
4. Control diseases and parasites of livestock and poultry.
5. Market situation and outlook for major enterprises.
6. Borrowing money to finance farming.
7. Animal improvement.
8. Landscaping the farmstead.
9. Farm shop.

Major problems for Agriculture IV

1. Supervised farm training and individual farm problems.
2. Organize the farm business.
3. Marketing livestock and livestock products.
4. Securing a farm.
5. Buying insurance.
6. Farm organizations (Farmers Union, Grange, etc.)
7. Farm shop.

The Oklahoma Agriculture teacher training department in cooperation with
the teachers organization provide lesson plans for each of the problems in a
A four-year course in Vocational Agriculture. Recommendations are given as to the year each lesson should be taught and the number of periods to spend on each lesson.

CURRICULUM PLANNING GUIDES - NEBRASKA

The State Department for Vocational Education of Nebraska publishes a booklet entitled "Curriculum in Vocational Agriculture for Nebraska High Schools". This curriculum is not meant to be used without adaptation. The publication gives a complete job or problem analysis for all farm enterprises or units of importance in the state of Nebraska. More jobs are listed than any one teacher can use. A selection of those jobs or problems to be taught must be made individually by each instructor for his own school. It is suggested that the local day by day teaching outline for each class to be taught should be prepared or revised to suit varying conditions each year.

The booklet is developed in cooperation with the Agriculture Education Department of State University, the Vocational Agriculture teachers organization and the State Department for Vocational Education.

The procedure for planning the course of study for each class is given as follows. (Clements, et al., 3)

I. Select the enterprises or units and list the jobs or problems to be taught in the course.
   a. List under each enterprise the main fundamental jobs to be taught to the entire class. (Example 1)
   b. Make an additional list of specialized jobs which should be taught to those boys who actually face the jobs in their farming programs (Example 2)

II. Determine the number of instructional days that is to be used with each enterprise (Example 3)
III. Construct a day by day teaching outline, distributing the jobs in as near seasonal order as possible throughout the year. (Example 4)

IV. Cite references, teaching materials, visual aids etc. which should be used to enhance the effectiveness of teaching each job. (Example 4)

Example No. 1 A list of fundamental jobs to be taught to the entire class. Poultry enterprise used to illustrate. (Clements, et al., 3)

1. Surveying the possibilities of poultry production on the home farm.
2. Selecting for the laying flock.
3. Housing the laying flock.
4. Planning interior fixtures and equipment.
5. Feeding for egg production.
6. Preventing and controlling diseases of the laying flock.
7. Controlling parasites of the laying flock.
8. Producing and marketing quality eggs.
10. Brooding baby chicks.
11. Feeding and managing baby chicks.

Example No. 2 A list of specialized jobs to be taught to those boys who have poultry as part of their farming programs. (Clements, et al., 3)

1. Mixing home grown feeds.
2. Buying protein supplements.
3. Producing winter broilers and fryers.
4. Selecting and incubating eggs.
5. Fattening for market.
6. Producing capons.
7. Providing range and rotating pastures.
8. Cleaning and cooling and grading eggs.
9. Fitting and showing poultry at fairs.
10. Keeping specialized poultry records.
**Example No. 3** A time distribution sheet for the fundamental jobs to be taught in Vocational Agriculture I.

<table>
<thead>
<tr>
<th>Jobs to be considered</th>
<th>Days to devote to each job and</th>
<th>month in which job is to be taught</th>
</tr>
</thead>
<tbody>
<tr>
<td>X 1. Surveying the possibilities of poultry on the home farm</td>
<td>1</td>
<td>Sept; Oct; Nov; Dec; Jan; Feb</td>
</tr>
<tr>
<td>X 2. Selecting the laying flock</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>X 3. Feeding the laying flock</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>X 4. Feeding interior Fixtures</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>X 5. Feeding for egg production</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>X 6. Preventing and controlling diseases</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>X 7. Controlling parasites</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>X 8. Selecting quality eggs</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>X 9. Feeding baby chicks</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>X 10. Feeding baby chicks</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

**Example No. 4** A day by day course outline. First two weeks of number nine year used to illustrate. Farm mechanics days omitted.

| Month : Day : Jobs or problems : References, illustrative materials etc. |
|-------:|:-----------------------------|-------------------------------------|
| Sept.  6 | Organization and get acquainted | Project manual                      |
| Sept.  6 | Introducing the farming program | Project pictures State farmer records |
| Sept. 10 | Surveying the possibilities of poultry on the home farm | Home farm survey |
| Sept. 13 | Selecting the laying flock | Nebr. E.C. 1400 pp. 18-21 |
| Sept. 15 | Selecting the laying flock | Field trip Actual Practice |
| Sept. 17 | Selecting breeding ewes | F.B. 840 pp. 5-8 Horlacher, and Hammond Chapter 5 |
A further analysis of the Nebraska material shows that Nebraska furnishes printed suggestions listing points to be emphasized in connection with each lesson taught. In addition they list "things to do" which are meant to be helpful to teachers in getting practical application of the lessons taught.

Example No. 5 An example of the "key points" and "things to do" in connection with the job, housing the laying flock. (Clements, et al., 3)

<table>
<thead>
<tr>
<th>Key points</th>
<th>Things to do</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Floor, light and ventilation requirements.</td>
<td>1. Study blueprints and plans of poultry houses.</td>
</tr>
<tr>
<td>2. Improving the present poultry house.</td>
<td>2. Visit a well equipped poultry house.</td>
</tr>
<tr>
<td>3. Materials and designs for new poultry houses.</td>
<td>3. Build nests and feeders.</td>
</tr>
<tr>
<td>4. Requirements for roosts, feeders, waterers, manure pits, nests and ventilators.</td>
<td>4. Wire poultry house for lights.</td>
</tr>
<tr>
<td>5. Location and kinds of lights.</td>
<td>5. Construct model houses.</td>
</tr>
</tbody>
</table>

Of the farm mechanics phase of the Nebraska program, a monthly enterprise and job analysis chart is provided for the entire year. A day by day teaching outline with suggested activities and references is also provided for teachers in farm mechanics.

CURRICULUM PLANNING GUIDES - COLORADO

The Vocational Agriculture Education staff of Colorado furnishes three publications to the teachers of Vocational Agriculture in planning their curriculum and courses of study, namely:

1. A guide for course construction in Vocational Agriculture for Colorado high schools.

2. The Colorado manual for supervised farming programs in Vocational Agriculture.
Form D illustrates an example of a long time job or problem outline, using the poultry enterprise to illustrate.

Form D. An example of a long time job or problem outline. (Schmidt, 15)

<table>
<thead>
<tr>
<th>Job or problem</th>
<th>Year or years job or lesson is taught</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ag. I : Ag. II : Ag. III : Ag. IV</td>
</tr>
<tr>
<td>Choosing a suitable breed</td>
<td>X</td>
</tr>
<tr>
<td>Culling the farm flock</td>
<td>X</td>
</tr>
<tr>
<td>Housing the laying flock</td>
<td>X</td>
</tr>
<tr>
<td>Providing essential equipment</td>
<td>X</td>
</tr>
<tr>
<td>Feeding laying hens</td>
<td>X X X</td>
</tr>
<tr>
<td>Other jobs or problems</td>
<td>X</td>
</tr>
</tbody>
</table>

Form E. An example of a yearly job or lesson outline. (Poultry enterprise used to illustrate)

<table>
<thead>
<tr>
<th>Jobs to be considered</th>
<th>Days to devote to each job and month to teach</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>S O N D J F M A M Summer</td>
</tr>
<tr>
<td>Choosing a suitable breed</td>
<td>2</td>
</tr>
<tr>
<td>Culling the farm flock</td>
<td>2</td>
</tr>
<tr>
<td>Housing the laying flock</td>
<td>2</td>
</tr>
<tr>
<td>Providing essential equipment</td>
<td>2</td>
</tr>
<tr>
<td>Feeding laying hens</td>
<td>2</td>
</tr>
<tr>
<td>Other jobs or problems</td>
<td>1</td>
</tr>
</tbody>
</table>

Form E illustrates a yearly analysis of the jobs or problems to be taught in the poultry enterprise. Schmidt (15) recommends that a seasonal sequence be followed in each of the enterprises taught.

An analysis of the jobs or problems in each enterprise of importance in
Suggestions are offered as to the procedure for teaching each job or problem.

An example of the analysis of the job "Housing the farm flock" is given to show the type of assistance provided the teachers of Vocational Agriculture in the state of Colorado. (Schmidt, 15)

Housing the farm flock:

1. Observe a good job of poultry housing with the class.
2. Develop or formulate a series of practical questions for study and discussion. Include: square feet per bird; light and ventilation requirements; nests, hopper and roost space; avoiding drafts and extreme coldness.
3. Discuss surveys pertaining to these points.
4. Indicate minor improvements that can be made.
5. Show picture or slides of good poultry housing.

Each job of possible importance in the state of Colorado is handled in a similar manner and is furnished to each teacher of Vocational Agriculture in that state.

The State Department for Vocational Education requires that each teacher of Vocational Agriculture have on file with the State Supervisor of Vocational Agriculture a complete course of study for each class offered in the local department.

DATA

Of the questionnaires sent to the Vocational Agriculture teachers in Kansas, one hundred sixty eight were returned by February 27, 1956. On that date a reminder card was sent to those teachers who had not replied. One hundred ninety three questionnaires had been returned by March 12, 1956 when final tabulation of the results was completed. Three questionnaires were not sufficiently completed to be used in this report.
Percentages used in these figures are based on 190 usable returns. This figure represents 69.2 per cent of all the Vocational Agriculture teachers in the state of Kansas.

Percentages for the figures for the three-year programs are based on 115 Vocational Agriculture departments which carry on three-year programs. The percentages used for the figures for the four-year programs are based on 75 Vocational Agriculture departments which carry on four-year programs in their schools.

Figure 1 pertains to the percentage of time spent in farm mechanics instruction in the ninth grade of Vocational Agriculture in Kansas. In the 75 schools having four-year programs (Fig. 1) the teachers spent from 20 per cent to 60 per cent of their time in farm mechanics instruction in the ninth grade; 15.33 per cent spent 20 per cent of their time, 12 per cent spent 30 per cent, 65.33 per cent spent 40 per cent, 8 per cent spent 50 per cent and 1.33 per cent spent 60 per cent of their time in this phase of the work.

In the 115 schools having three-year programs (Fig. 1) the teachers spent from 20 per cent to 60 per cent of their time in farm mechanics instruction in the ninth grade; 13.04 per cent spent 20 per cent of their time, 14.79 per cent spent 30 per cent, 60 per cent spent 40 per cent, 11.34 per cent spent 50 per cent and 6.66 per cent spent 60 per cent of their time in this phase of the work.

Figure 2 pertains to the percentage of time spent in farm mechanics instruction in the tenth grade of Vocational Agriculture in Kansas. In the 75 schools having four-year programs the teachers spent from 20 per cent to 50 per cent of their time in farm mechanics instruction in the tenth grade; 5.33 per cent spent 20 per cent of their time, 8 per cent spent 30 per cent, 60 per cent spent 40 per cent, and 6.66 per cent spent 50 per cent of their
time in this phase of the work.

In the 115 schools having three-year programs (Fig. 2) the teachers spent from 20 per cent to 60 per cent of their time in farm mechanics instruction in the tenth grade. 7.82 per cent spent 20 per cent of their time, 7.82 per cent spent 30 per cent, 73.91 per cent spent 40 per cent, 9.56 per cent spent 50 per cent and 0.86 per cent spent 60 per cent of their time in this phase of the work.

Figure 3 deals with the percentage of time spent in farm mechanics instruction in the eleventh grade of Vocational Agriculture in Kansas. In the 73 schools having four-year programs (Fig. 3) the teachers spent from 20 per cent to 60 per cent of their time in farm mechanics instruction in the eleventh grade. 4 per cent spent 20 per cent of their time, 6 per cent spent 30 per cent, 81.33 per cent spent 40 per cent, 5.53 per cent spent 50 per cent, and 1.33 per cent spent 60 per cent of their time in this phase of the work.

In the 115 schools having three-year programs (Fig. 3) the teachers spent from 20 per cent to 60 per cent of their time in farm mechanics instruction in the eleventh grade. 7.82 per cent spent 20 per cent of their time, 8.69 per cent spent 30 per cent, 73.45 per cent spent 40 per cent, 9.56 per cent spent 50 per cent, and 0.86 per cent spent 60 per cent of their time in this phase of the work.

Figure 4 deals with the percentage of time spent in farm mechanics instruction in the twelfth grade of Vocational Agriculture in Kansas. In the 73 schools having four-year programs (Fig. 4) the teachers spent from zero per cent to 60 per cent of their time in farm mechanics instruction in the twelfth grade. 16.00 per cent spent zero per cent of their time, 16 per cent spent 20 per cent, 9.33 per cent spent 30 per cent, 49.33 per cent spent 40
Fig. 5. Percentage of Vocational Agriculture teachers spending 20, 50, 40, 50 or 60 per cent of their time in farm mechanics instruction in the eleventh grade.
Fig. 4. Percentage of Vocational Agriculture teachers spending 20, 30, 40, 50, or 60 per cent of their time in farm mechanics instruction in the twelfth grade.

* There were eight three year programs which reported some farm mechanics instruction in the senior year, however it was too small a number to be tabulated in this report.
50 per cent, 9.33 per cent spent 50 per cent, and 1.33 per cent spent 60 per cent of their time in this phase of the work.

Only eight three-year programs reported any farm mechanics instruction in the twelfth grade. This was considered too small a group to be of significance in this report.

Figure 5 pertains to the year in school in which major emphasis is placed on livestock production in the Vocational Agriculture curriculum. In the 75 schools having four-year programs 20 per cent of the teachers emphasize livestock production in the ninth grade, 42.66 per cent in the tenth grade, 4 per cent in the eleventh grade, zero per cent in the twelfth grade, and 33.33 per cent provide equal emphasis in each of the four years.

In the 115 schools having three-year programs 21.73 per cent emphasize livestock production in the ninth grade, 57.36 per cent in the tenth grade, 1.60 per cent in the eleventh grade, zero per cent in the twelfth grade and 15.80 per cent provide equal emphasis in each of the four years.

Figure 6 deals with the percentage of teachers who place major emphasis on crops and soils in the ninth, tenth, eleventh, and twelfth grade years.

In the 75 schools having four-year programs 5.33 per cent of the teachers emphasize crops and soils in the ninth grade, 22.66 per cent in the tenth year, 45.33 per cent in the eleventh year, 1.33 per cent in the twelfth year, and 25.33 per cent provide equal emphasis in each of the four years.

In the 115 schools having three-year programs (Fig. 6) 7.82 per cent of the teachers emphasize crops and soils in the ninth year, 35.43 per cent in the tenth grade, 44.34 per cent in the eleventh grade, zero per cent in the twelfth grade, and 14.39 per cent provide equal emphasis in each of the years.

Figure 7 pertains to the percentage of teachers who place major emphasis on farm management in the ninth, tenth, eleventh, and twelfth grade years.
Table 2. Percentage of Vocational Agriculture teachers in Kansas spending 20, 30, 40, 50, or 60 per cent of their time in farm mechanics instruction in the ninth, tenth, eleventh and twelfth grades.

| Per cent | Four-year programs * | | Three-year programs ** | | | | |
|----------|----------------------|----------|----------------------|----------|----------|----------|----------|----------|
|          | Ninth grade | Tenth grade | Eleventh grade | Twelfth grade | Ninth grade | Tenth grade | Eleventh grade | Twelfth grade |
| 20       | 13.33       | 5.33       | 4.00       | 16.00       | 13.04       | 7.82       | 7.82       |
| 30       | 12.00       | 8.00       | 8.00       | 9.33       | 14.79       | 7.82       | 8.69       |
| 40       | 65.33       | 30.00      | 31.33      | 49.33      | 60.00       | 73.91      | 71.43      |
| 50       | 8.00        | 6.66       | 5.33       | 9.33       | 11.34       | 9.59       | 9.56       |
| 60       | 1.33        | .00        | 1.33       | 1.33       | .56         | .86        | .86        |

** There were eight three-year program teachers who reported spending some time in farm mechanics instruction in the number 12 year, however the number was considered too small to be tabulated in this report.

* 16.48 per cent of the teachers having four-year programs reported spending zero per cent of their time in farm mechanics instruction in the twelfth grade.
Fig. 5. Percentage of Vocational Agriculture teachers in Kansas placing major emphasis on livestock production in grades 9, 10, 11, and 12, and those placing equal emphasis in each grade level.
<table>
<thead>
<tr>
<th>Year</th>
<th>9th Year</th>
<th>10th Year</th>
<th>11th Year</th>
<th>12th Year</th>
<th>Equal Emphasis</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>32.33</td>
<td>22.66</td>
<td>45.33</td>
<td>44.33</td>
<td></td>
</tr>
<tr>
<td></td>
<td>14.79</td>
<td>25.66</td>
<td>14.67</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fig. 6. Percentage of Vocational Agriculture teachers in Kansas placing major emphasis on crops production and soils in grades 9, 10, 11, and 12 and those placing equal emphasis in each grade level.
In the 75 schools having four-year programs zero per cent of the teachers emphasize farm management in the ninth grade, zero per cent in the tenth grade, 4 per cent in the eleventh grade, 60 per cent in the twelfth grade, and 16 per cent provide equal emphasis in each of the four years.

In the 115 schools having three-year programs (Fig. 7) .86 per cent emphasize farm management in the ninth grade, .86 per cent in the tenth grade, 70.43 per cent in the eleventh grade, 15.65 per cent in the twelfth grade, and 12.17 per cent give equal emphasis in each of the four years.

In a small percentage of the three-year programs there are four years of instruction provided as a result of combining the eleventh and twelfth grades. In some of the three-year programs, Vocational Agriculture is offered in the tenth, eleventh, and twelfth grades instead of the usual pattern of offering the course in the ninth, tenth, and eleventh grades.

Figure 8 pertains to the percentage of teachers who emphasize instruction in the Future Farmers of America in the ninth, tenth, eleventh, and twelfth grades. In the 75 schools having four-year programs 64 per cent of the teachers emphasize FFA in the ninth grade, zero per cent in the tenth grade, zero per cent in the eleventh grade, 4 per cent in the twelfth grade, and 32 per cent provide equal emphasis in each of the four years.

In the 115 schools having three-year programs (Fig. 8) 78.25 per cent emphasize FFA in the ninth grade, 1.75 per cent in the tenth grade, .86 per cent in the eleventh grade, zero per cent in the twelfth grade, and 19.13 per cent provide equal emphasis each year.

Figure 9 pertains to the percentage of teachers rating teacher guide example number one on a scale of 1, 2, 3, 4, (1 being most helpful - 4 being

\[1 \text{See questionnaire - Appendix pp. 61-62.}\]
<table>
<thead>
<tr>
<th>Year</th>
<th>9th Year</th>
<th>10th Year</th>
<th>11th Year</th>
<th>12th Year</th>
<th>Equal Emphasis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1945</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1946</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1947</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fig. 7: Percentage of Vocational Agriculture teachers in Kansas placing major emphasis on farm management in grades 9, 10, 11, and 12, and those placing equal emphasis in each grade level.
Fig. 3. Percentage of Vocational Agriculture teachers in Kansas placing major emphasis on Future Farmers of America in grades 9, 10, 11, and 12 and those placing equal emphasis in each grade level.
Table 3. Percentage of Vocational Agriculture teachers in Kansas placing major emphasis on livestock production, crops production and soils, farm management and Future Farmers of America in grades 9, 10, 11, and 12 and those placing equal emphasis in each grade level.

<table>
<thead>
<tr>
<th>Area of Instruction</th>
<th>Four-year programs</th>
<th>Three-year programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livestock Production</td>
<td>20.00 42.66 4.00 .00 33.33</td>
<td>21.75 57.36 2.60 .00 18.90</td>
</tr>
<tr>
<td>Crops and soils</td>
<td>5.33 22.66 45.33 1.33 25.33</td>
<td>7.82 53.43 44.34 .00 14.79</td>
</tr>
<tr>
<td>Farm management</td>
<td>.00 .00 4.00 80.00 16.00</td>
<td>.88 .86 70.34 15.65 12.17</td>
</tr>
<tr>
<td>FFA*</td>
<td>64.00 .00 .00 4.00 32.00</td>
<td>78.25 1.75 .86 .00 19.13</td>
</tr>
</tbody>
</table>

* Future Farmers of America
least helpful). In the 75 schools having four-year programs 41.33 per cent of the teachers rated it one, 25.33 per cent rated it two, 17.33 per cent rated it three, and 10 per cent rated it four.

In the 115 schools having three-year programs 33 per cent of the teachers rated teacher guide example number one as one, 33 per cent rated it two, 13 per cent rated it three, and 15.55 per cent rated it four.

Figure 10 deals with the percentage of teachers rating teacher guide example number two on a scale of 1, 2, 3, 4, (1 being most helpful - 4 being least helpful). In the 75 schools having four-year programs 8 per cent of the teachers rated it one, 32 per cent rated it two, 33.33 per cent rated it three, and 26.66 per cent rated it four.

In the 115 schools having three-year programs 23.47 per cent rated teacher guide example number two as one, 29.56 per cent rated it two, 26.95 per cent rated it three, and 19 per cent rated it four.

Figure 11 pertains to the percentage of teachers rating teacher guide example number three on a scale of 1, 2, 3, 4, (1 being most helpful - 4 being least helpful). In the 75 schools having four-year programs 38.66 per cent of the teachers rated it one, 34.66 per cent rated it two, 16 per cent rated it three, and 10.66 per cent rated it four.

In the 115 schools having three-year programs 35.65 per cent of the teachers rated teacher guide example number three as one, 26.95 per cent rated it two, 27.82 per cent rated it three, and 9.56 per cent rated it four.

Figure 12 pertains to the percentage of teachers who rated teacher guide example number four on a scale of 1, 2, 3, 4, (1 being most helpful - 4 being least helpful). In the 75 schools having four-year programs 26 per cent of

1See questionnaire - Appendix pp. 61-62.
Fig. 9. Percentage of Vocational Agriculture teachers in Kansas who rated teacher guide example number one on a scale of 1, 2, 3, 4, (1 being most helpful - 4 being least helpful).
Fig. 10. Percentage of Vocational Agriculture teachers in Kansas who rated teacher guide example number two on a scale of 1, 2, 3, 4, (1 being most helpful - 4 being least helpful).
Fig. 11. Percentage of Vocational Agriculture teachers in Kansas who rated teacher guide as example number three on a scale of 1, 2, 3, 4, (1 being most helpful - 4 being least helpful).
Fig. 32. Percentage of Vocational Agriculture teachers in Kansas who rated teacher-guide example number four on a scale of 1, 2, 3, 4, (1 being most helpful - 4 being least helpful).
the teachers rated it one, 9.33 per cent rated it two, 25 per cent rated it three, and 34.66 per cent rated it four.

In the 115 schools having three-year programs 31.30 per cent of the teachers rated teacher guide example number four as one, 17.39 per cent rated it two, 21.73 per cent rated it three, and 29.56 per cent rated it four.

Table 4. Percentage of Vocational Agriculture teachers in Kansas who rated teacher guide examples one, two, three and four on a scale of 1, 2, 3, 4, (1 being most helpful -- 4 being least helpful).

| Teacher Guide | Four-year programs | | | | Three-year programs | | |
|---------------|-------------------|---|---|---|---|---|---|---|---|---|
|               | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| 1             | 41.33 | 25.33 | 17.33 | 16.00 | 33.00 | 33.00 | 18.90 | 15.66 |
| 2             | 6.00 | 32.00 | 35.33 | 25.66 | 29.47 | 29.56 | 26.95 | 20.00 |
| 3             | 35.66 | 34.66 | 16.00 | 10.66 | 35.65 | 28.95 | 27.82 | 9.56 |
| 4             | 28.00 | 9.33 | 28.00 | 34.66 | 31.30 | 17.39 | 21.73 | 29.56 |

Figure 13 pertains to the percentage of teachers who plan their day to day teaching schedule one day, one week, one month, six weeks, entire year in advance, and no advance planning. In the 75 schools having four-year programs 2.66 per cent of the teachers plan their work one day in advance, 45.33 per cent plan one week, 17.33 per cent plan one month, 10.66 per cent plan six weeks, 17.33 per cent plan the entire year, and 6.66 per cent do no planning in advance.

In the 115 schools having three-year programs 4.34 per cent plan their work one day in advance, 54.77 per cent plan one week, 12.17 per cent plan one month, 9.56 per cent plan six weeks, 10.33 per cent plan the entire year,
<table>
<thead>
<tr>
<th>1 Year Programs</th>
<th>3 Year Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>6.69</td>
<td></td>
</tr>
<tr>
<td>6.66</td>
<td></td>
</tr>
<tr>
<td>10.33</td>
<td></td>
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<tr>
<td>17.33</td>
<td></td>
</tr>
<tr>
<td>9.56</td>
<td></td>
</tr>
<tr>
<td>10.66</td>
<td></td>
</tr>
<tr>
<td>12.17</td>
<td></td>
</tr>
<tr>
<td>17.33</td>
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<td>54.77</td>
<td></td>
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<td>45.33</td>
<td></td>
</tr>
<tr>
<td>4.34</td>
<td></td>
</tr>
<tr>
<td>2.66</td>
<td></td>
</tr>
</tbody>
</table>

Fig. 13. Percentage of Vocational Agriculture teachers in Kansas planning their teaching schedule one day, one week and month six weeks, entire year or no advance planning.
45

and 3.69 per cent do no planning in advance.

Table 5. Percentage of Vocational Agriculture teachers in Kansas planning their teaching schedule one day, one week, one month, six weeks, entire year and no advance planning.

<table>
<thead>
<tr>
<th></th>
<th>Four-year programs</th>
<th>Three-year programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>One day</td>
<td>2.66</td>
<td>4.54</td>
</tr>
<tr>
<td>One week</td>
<td>45.33</td>
<td>54.77</td>
</tr>
<tr>
<td>One month</td>
<td>17.33</td>
<td>12.17</td>
</tr>
<tr>
<td>Six weeks</td>
<td>10.66</td>
<td>9.56</td>
</tr>
<tr>
<td>Entire year</td>
<td>17.33</td>
<td>10.33</td>
</tr>
<tr>
<td>No advance planning</td>
<td>6.66</td>
<td>8.69</td>
</tr>
</tbody>
</table>

Figure 14 pertains to the percentage of teachers who use the traditional, cross sectional or modified cross sectional methods of course planning in Vocational Agriculture. In the 75 schools having four-year programs 4 per cent of the teachers use the traditional method, 17.33 per cent use the cross sectional method and 78.56 per cent use the modified cross sectional method of course planning.

In the 115 schools having three-year programs 7.82 per cent of the teachers use the traditional method of course planning, 23.47 per cent use the cross sectional method and 68.69 per cent use the modified cross sectional method of course planning.
Table 6. Percentage of Vocational Agriculture teachers in Kansas using the traditional, cross sectional, or modified cross sectional method of course planning.

<table>
<thead>
<tr>
<th>Method of course planning</th>
<th>Four-year programs</th>
<th>Three-year programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional</td>
<td>4.00</td>
<td>7.82</td>
</tr>
<tr>
<td>Cross sectional</td>
<td>17.33</td>
<td>23.47</td>
</tr>
<tr>
<td>Modified cross sectional</td>
<td>78.66</td>
<td>68.69</td>
</tr>
</tbody>
</table>

Note: It was thought that the information obtained from question four page 2 and 3 of the questionnaire (See appendix) would be a duplication of the information furnished under question three, namely; the year in which livestock, crops and soils, farm management and Future Farmers of America is emphasized. For this reason the answers obtained in question four were not used in the presentation of data or in the summary and conclusions.

SUMMARY AND CONCLUSIONS

In analyzing the aids furnished Vocational Agriculture teachers in the central region, Oklahoma and Colorado, the following important points were significant:

1. Eight types of teaching aids were furnished, namely: job analysis, time distribution suggestions, day to day teaching schedules, source units in enterprises, supervised farming manuals, Future Farmers of America activity handbooks, Future Farmers of America newsletters and periodical service letters to the teachers of Vocational Agriculture.

2. The fifteen states surveyed furnished an average of 4.1 of the above listed aids.
3. Of the eight aids listed, Kansas furnished only one, namely the Future Farmers Newsletter.

4. In addition to the Future Farmers Newsletter, Kansas provides subject matter problem outlines which are available to teachers on request.

A further analysis of states adjacent to Kansas (Nebraska, Missouri, Oklahoma, and Colorado) reveals:

1. Of the eight aids furnished Vocational Agriculture teachers by states in the central region, Colorado and Oklahoma; Colorado furnished six, Nebraska five, Oklahoma five and Missouri four.

2. Each of the states adjacent to Kansas furnish their teachers of Vocational Agriculture with forms and suggestions for course construction and planning.

3. Oklahoma and Colorado require each teacher of Vocational Agriculture to have a complete course of study on file with the State Supervisor of Vocational Agriculture.

4. Nebraska furnishes printed suggestions listing points to be emphasized in connection with each lesson taught. In addition they list "things to do" which are intended to be helpful to teachers in making practical application of lessons taught.

In analyzing the questionnaires sent to the teachers of Vocational Agriculture in Kansas, the following points were revealed:

1. In the 75 schools having four-year programs 25.33 per cent of the teachers spent less than 40 per cent of their time in farm mechanics instruction in the ninth grade and 8.31 per cent spent more than 40 per cent.

In the 115 schools having three-year programs 27.63 per cent of the teachers spent less than 40 per cent of their time in farm mechanics in-
struction in the ninth grade and 12.24 per cent spent more than 40 per cent.

2. In the 75 schools having four-year programs 13.33 per cent of the teachers spent less than 40 per cent of their time in farm mechanics instruction in the tenth grade and 6.66 per cent spent more than 40 per cent.

In the 115 schools having three-year programs 15.64 per cent of the teachers spent less than 40 per cent of their time in farm mechanics instruction in the tenth grade and 10.42 per cent spent more than 40 per cent.

3. In the 75 schools having four-year programs 12 per cent of the teachers spent less than 40 per cent of their time in farm mechanics instruction in the eleventh grade and 6.66 per cent spent more than 40 per cent.

In the 115 schools having three-year programs 16.51 per cent of the teachers spent less than 40 per cent of their time in farm mechanics instruction in the eleventh grade and 10.42 per cent spent more than 40 per cent.

4. In the 75 schools having four-year programs 42.11 per cent of the teachers spent less than 40 per cent of their time in farm mechanics instruction in the twelfth grade and 10.66 per cent spent more than 40 per cent.

(Note: The state plan for offering Vocational Agriculture in Kansas requires that 60 per cent of the time be spent in the study of agriculture in the classroom and on the farm and 40 per cent of the time be spent in farm mechanics instruction.)

5. In the 75 schools having four-year programs it was found that 42.66 per cent of the teachers emphasized livestock production in the tenth grade, 24 per cent in the ninth, tenth and eleventh grades combined and 33.33 per cent provide equal emphasis in each of the four years.

In the 115 schools having three-year programs 57.36 per cent emphasize livestock in the tenth grade, 24.33 per cent in the ninth and eleventh grades
6. In the 75 schools having four-year programs 45.33 per cent of the teachers emphasize crops and soils in the eleventh grade, 29.82 per cent in the ninth, tenth and twelfth grades combined and 25.83 per cent provide equal emphasis in each of the three years.

In the 115 schools having three-year programs 44.34 per cent emphasize crops and soils in the eleventh grade, 41.25 per cent in the ninth and tenth grades combined and 14.79 per cent provide equal emphasis in each of the three years.

7. In the 75 schools having four-year programs 80 per cent of the teachers emphasize farm management instruction in the twelfth grade, 4 per cent in the eleventh grade, zero per cent in the ninth and tenth grades and 16 per cent provide equal emphasis in each of the four years.

In the 115 schools having three-year programs 70.43 per cent of the teachers emphasize farm management instruction in the eleventh grade, 27.37 per cent in the ninth, tenth and twelfth grades combined and 12.17 per cent provide equal emphasis in each of the three years.

There is a small percentage of three-year program teachers emphasizing farm management in the twelfth grade because of the combination of the eleventh and twelfth grades in some schools. A few schools provide instruction in Vocational Agriculture in the tenth, eleventh and twelfth years instead of the conventional pattern of offering instruction in the ninth, tenth and eleventh grades.

8. In the 75 schools having four-year programs 64 per cent of the teachers emphasize Future Farmers of America in the ninth grade, 4 per cent in the tenth grade, zero per cent in the tenth and eleventh grades, and 32 per cent provide equal emphasis in each of the four years.
In the 115 schools having three-year programs 78.25 per cent of the teachers emphasize Future Farmers of America in the ninth grade, 2.59 per cent in the tenth and eleventh grades combined, zero per cent in the twelfth grade, and 19.13 per cent provide equal emphasis in each of the three years.

9. Of the 190 Vocational Agriculture teachers rating teacher guide sample number one\(^1\) on a scale of 1,2,3,4, (1 being most helpful - 4 being least helpful), 37.16 per cent rated it one, 29.16 per cent rated it two, 11 per cent rated it three, and 15.82 per cent rated it four.

10. Of the 190 Vocational Agriculture teachers rating teacher guide sample number two\(^1\) on a scale of 1,2,3,4, (1 being most helpful - 4 being least helpful), 15.73 per cent rated it one, 50.78 per cent rated it two, 11.14 per cent rated it three, and 23.35 per cent rated it four.

11. Of the 190 Vocational Agriculture teachers rating teacher guide sample number three\(^1\) on a scale of 1,2,3,4, (1 being most helpful - 4 being least helpful), 37.15 per cent rated it one, 50.66 per cent rated it two, 9.31 per cent rated it three, and 12.81 per cent rated it four.

12. Of the 190 Vocational Agriculture teachers rating teacher guide sample number four\(^1\) on a scale of 1,2,3,4, (1 being most helpful - 4 being least helpful), 29.65 per cent rated it one, 13.56 per cent rated it two, 6.24 per cent rated it three, and 32.11 per cent rated it four.

13. Of the 190 Vocational Agriculture teachers 50.5 per cent plan their teaching schedule one week in advance. Forty-one and eighty-three hundredths per cent of the teachers plan their teaching schedule from one month to a year in advance. Seven and sixty-seven hundredths per cent make no advance planning of their day to day course outline.

\(^1\)See questionnaire - Appendix pp. 61-62.
14. Of the 190 Vocational Agriculture teachers 73.67 per cent use the unified cross sectional method of course planning, 20.40 per cent use the cross sectional method of course planning and 5.91 per cent use the traditional method of planning their course of study. There was no significant difference between the teachers in the three-year programs and the teachers in the four-year programs.
ACKNOWLEDGMENTS

Acknowledgment is due Professor A. F. Davidson of the Department of Education, Kansas State College for his valuable assistance and advice as major instructor and Professor Howard R. Bradley of the Department of Education, Kansas State College for his helpful suggestions in this study.

The writer also wishes to express his appreciation to the Vocational Agriculture teachers of the State of Kansas, and the state supervisors of Vocational Agriculture in the central region, Oklahoma and Colorado, who cooperated in furnishing the necessary data for this report.
LITERATURE CITED


11. Orr, Don M. *Suggestions for Organizing a Program of Vocational Education in Agriculture for High School Students,* Oklahoma A & M College, Stillwater; 1953.

12. Orr, Don M. *Outline for a Four Year Course of Study in Vocational Agriculture for All Day Students.* Oklahoma A & M College, Stillwater; 1953.


APPENDIX
Dear Fellow Worker:

Enclosed you will find a questionnaire concerning your methods of planning the course of study for your local department.

I have chosen this subject for my report, in hopes that it will, in the future provide information that may be helpful to the state staff and Vocational Agriculture Teachers Association, by providing course of study planning helps, to the teachers of the state.

I have attempted to make the questionnaire as simple as possible.

I would like to have the completed questionnaire returned to me by February 27, 1956 in order that I may proceed with the report.

I will greatly appreciate your cooperation in this matter.

Very Sincerely yours,

John W. Lacey

John W. Lacey
Dear Vo-Ag Instructor:

Mr. John Lacy, Assistant State Supervisor of Agricultural Education, Topeka, Kansas, has chosen as the subject of his Master's Report, "A Survey of the Curriculum and Course of Study Planning Guides Provided for the Teachers of Vocational Agriculture by 13 States in the Central Region, and a Survey of Course of Study Planning by the Teachers of Vocational Agriculture in Kansas." Accordingly, a questionnaire on this subject is being sent you for your consideration. I am confident that all teachers of vocational agriculture in Kansas will be interested in the subject being studied by Mr. Lacy. The value of the findings in this study will depend upon accurate and prompt reporting. May we count on your cooperation.

Sincerely,

A. P. Davidson
Head Teacher Trainer
Agricultural Education

AIB: To
A SURVEY OF THE CURRICULUM AND COURSE OF STUDY PLANNING GUIDES PROVIDING FOR THE TEACHERS OF VOCATIONAL AGRICULTURE BY 13 STATES IN THE CENTRAL REGION, AND A SURVEY OF COURSE OF STUDY PLANNING BY THE TEACHERS OF VOCATIONAL AGRICULTURE IN KANSAS

Name of High School

Name of Vocational Agriculture teacher

Number of years experience teaching Vocational Agriculture

Number of years in present position

Instructions for filling out data sheets.

1. Check (✓) items or questions unless otherwise instructed to use rating scale.

2. Additional information to answer any question may be included on the back of the sheets. (Indicate the specific number of the question being discussed.)

3. Questions which call for more than one answer should be checked under each of the various divisions.

I. What pattern of instruction most nearly fits the program offered in your department?

( ) ✓ 1-2-2 pattern

( ) ✗ 1-2-2-1 pattern

( ) ✗✗ 2-2-1 pattern

Other (where classes are combined in various ways) ____________________________

* One unit offered for number 9; Two units offered for number 10; Two units offered for number 11; No seniors.

** One unit offered for number 9; Two units offered for number 10; Two units offered for number 11; One unit offered for number 12.

*** Two units offered for number 9; Two units offered for number 10; One unit offered for number 11; No seniors.
II. Indicate the percentage of time spent in the farm mechanics shop in the

<table>
<thead>
<tr>
<th>Number 9 year</th>
<th>Number 10 year</th>
<th>Number 11 year</th>
<th>Number 12 year</th>
</tr>
</thead>
<tbody>
<tr>
<td>( ) 20%</td>
<td>( ) 20%</td>
<td>( ) 20%</td>
<td>( ) 20%</td>
</tr>
<tr>
<td>( ) 30%</td>
<td>( ) 30%</td>
<td>( ) 30%</td>
<td>( ) 30%</td>
</tr>
<tr>
<td>( ) 40%</td>
<td>( ) 40%</td>
<td>( ) 40%</td>
<td>( ) 40%</td>
</tr>
<tr>
<td>( ) 50%</td>
<td>( ) 50%</td>
<td>( ) 50%</td>
<td>( ) 50%</td>
</tr>
<tr>
<td>( ) 60%</td>
<td>( ) 60%</td>
<td>( ) 60%</td>
<td>( ) 60%</td>
</tr>
<tr>
<td>Other</td>
<td>Other</td>
<td>Other</td>
<td>Other</td>
</tr>
</tbody>
</table>

III. In your Vocational Agriculture course planning, indicate the year in which major emphasis is placed on:

a. Livestock production—
   (Check one)
   ( ) Number 9
   ( ) Number 10
   ( ) Number 11
   ( ) Number 12
   ( ) Equal Emphasis

b. Crops production including soils—
   (Check one)
   ( ) Number 9
   ( ) Number 10
   ( ) Number 11
   ( ) Number 12
   ( ) Equal Emphasis

c. Farm management—
   (Check one)
   ( ) Number 9
   ( ) Number 10
   ( ) Number 11
   ( ) Number 12
   ( ) Equal Emphasis

d. Future Farmers of America—
   (Check one)
   ( ) Number 9
   ( ) Number 10
   ( ) Number 11
   ( ) Number 12
   ( ) Equal Emphasis

IV. Please check in section I, yes (✓) or No (✗) as to whether you teach in the following phases of Vocational Agriculture; and check (✓) in section II the year in which most emphasis is given.

A. Livestock Production:

<p>| Sect. I | Section II |</p>
<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>#9</th>
<th>#10</th>
<th>#11</th>
<th>#12</th>
</tr>
</thead>
</table>
   1. The various feed Nutrients
   2. The digestion, absorption and uses of feed by animals
   3. Balancing rations for livestock
   4. Control of diseases and parasites
   5. Basic livestock systems for Kansas
<table>
<thead>
<tr>
<th>Section I</th>
<th>Section II</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Varietal characteristics</td>
<td></td>
</tr>
<tr>
<td>2. Varietal Adaptation</td>
<td></td>
</tr>
<tr>
<td>3. Prevention and control of disease and insects</td>
<td></td>
</tr>
<tr>
<td>4. Planning for crop rotations</td>
<td></td>
</tr>
<tr>
<td>5. Soil classification as to types</td>
<td></td>
</tr>
<tr>
<td>6. Fertilization of soils</td>
<td></td>
</tr>
<tr>
<td>7. Prevention of soil erosion</td>
<td></td>
</tr>
</tbody>
</table>

C. Farm Management:

1. Establish farm credit
2. Farm taxation, (Including income tax)
3. Agriculture legislation
4. Principles of purchasing and marketing
5. Principles of farm organization
6. Analyzing farm enterprise labor requirements

D. Future Farmers of America:

1. History of the Future Farmers of America
2. The aims and purposes of Future Farmers of America
3. The FFA creed
4. Degrees and kinds of membership
5. The National Constitution
6. The FFA colors, motto and salute
7. Developing the program of work
8. Basic parliamentary procedure

V. Please rate the following examples of course planning procedures as to their value in assisting a teacher in establishing a course of study in a local department.

Rating scale: 1, 2, 3, 4 (1 - most helpful; 4 - least helpful etc.)

( ) Example #1 - A suggested job analysis for all enterprises of importance in Kansas. (Poultry used to illustrate)

Enterprise or unit: Poultry production.
Job or problem:

1. Surveying the possibilities of poultry on the farm.
2. Selecting for the laying flock.
3. Housing the laying flock.
4. Planning fixtures and equipment.
5. Feeding for egg production.
6. Etc. etc.
( ) Example #2 - A time distribution sheet for all enterprises or units.
(Above problems in poultry to illustrate)

<table>
<thead>
<tr>
<th>Jobs or problems to be considered</th>
<th>Days to devote to each job; and</th>
<th>month to teach job.</th>
</tr>
</thead>
</table>

( ) Example #3 - Listing of key points to be taught and suggested activities for each job or problem in a given enterprise of unit.
(Job or problem: Surveying the possibilities of poultry on the farm is used as an illustration)

<table>
<thead>
<tr>
<th>Key Points</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Housing and equipment needed and available.</td>
<td>1. Visit a successful poultry farm.</td>
</tr>
<tr>
<td>2. Relation of other livestock to poultry enterprise.</td>
<td>2. Special report from Doane's on poultry outlook.</td>
</tr>
<tr>
<td>3. Home grown feed available and necessary</td>
<td>3. Figure a budget for broiler program.</td>
</tr>
<tr>
<td>4. Market outlook (Present and Future)</td>
<td></td>
</tr>
<tr>
<td>5. Labor supply and demand</td>
<td></td>
</tr>
<tr>
<td>6. Complementary or competing enterprises</td>
<td></td>
</tr>
</tbody>
</table>

( ) Example #4 - A day by day course outline for each year. (First week instructional areas in No. 9 year used to illustrate)

<table>
<thead>
<tr>
<th>Month</th>
<th>Day</th>
<th>Jobs or Problems</th>
<th>References etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sept.</td>
<td>6</td>
<td>First day. Organization and get acquainted.</td>
<td>Ask each boy to introduce himself.</td>
</tr>
<tr>
<td>Sept.</td>
<td>7</td>
<td>Shop instruction. Whipping ends of rope.</td>
<td>By demonstration and practice.</td>
</tr>
<tr>
<td>Sept.</td>
<td>8</td>
<td>Introducing the Farming program.</td>
<td>State Farmer records.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Pix of F.P.s!</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&quot;Your Farming Program&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hammonds and Tabb</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Page 12 - 18</td>
</tr>
<tr>
<td>Sept.</td>
<td>9</td>
<td>Shop Instruction. Tying the crown knot and crown splice.</td>
<td>Demonstration and practice.</td>
</tr>
<tr>
<td>Sept.</td>
<td>10</td>
<td>Surveying the possibilities of poultry on the farm.</td>
<td>Home farm survey forms.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Kans. Circ. 2h4 pp. 6.</td>
</tr>
<tr>
<td>Etc. etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
VI. Which of the following types of organization do you follow in your course planning? (check one)

( ) The traditional type. *
( ) The cross sectional plan. **
( ) The modified cross sectional plan. ***
( ) Other (Explain) ____________________________________________________________

* Each year is devoted to a different phase of instruction. For example, a year may be devoted to crops and soils, another year to livestock, another year to farm management and a fourth year to marketing.

** Where the problems in an enterprise are distributed throughout two or more years of instruction. A large amount of individualized instruction may be used in this plan of organization.

*** Where a certain phase or phases of instruction such as livestock or crops receive central emphasis in each course but may be disregressed from to fit the needs of the boys farming programs.

VII. In your course of study planning, how far in advance do you prepare the day to day course outline? (See example #4 in question V)

( ) one day
( ) one week
( ) one month
( ) six weeks
( ) entire year
( ) no day to day course outline made.

Return to:

John W. Lacey
1025 Kansas Avenue
Topeka, Kansas
A STUDY OF TEACHING AIDS AND CURRICULUM PLANNING GUIDES FOR TEACHERS OF VOCATIONAL AGRICULTURE IN THE CENTRAL REGION, OKLAHOMA AND COLORADO, AND A SURVEY OF COURSE OF STUDY PLANNING BY THE VOCATIONAL AGRICULTURE TEACHERS OF KANSAS

by

JOHN WALLACE LACEY

B. S., Kansas State College of Agriculture and Applied Science, 1949

AN ABSTRACT OF A MASTER'S REPORT

submitted in partial fulfillment of the requirements for the degree

MASTER OF SCIENCE

Department of Education

KANSAS STATE COLLEGE OF AGRICULTURE AND APPLIED SCIENCE

1956
The purpose of this study was first, to make a survey of the states in the central region to determine what curriculum planning guides are furnished the Vocational Agriculture teachers and to make a detailed survey of the four states adjacent to Kansas to discover what aids they are furnishing the teachers of Vocational Agriculture.

The second purpose was to conduct a survey of Vocational Agriculture teachers of Kansas to find how they organize their curriculum and course of study.

The third purpose was to summarize the curriculum planning guides furnished the teachers of Vocational Agriculture by the states in the central region, Oklahoma and Colorado, and to ascertain the practices used by Vocational Agriculture teachers of Kansas in organizing their programs of instruction.

The information for this study was secured by writing a letter to each state supervisor in the central region, Oklahoma and Colorado, requesting copies of the curriculum planning guides furnished the teachers of Vocational Agriculture in their respective states.

A questionnaire was constructed and a copy sent to each Vocational Agriculture teacher in Kansas. The questionnaires were mailed to the teachers on February 7, 1956 and by March 12, 1956 there had been 192 or 90.6 per cent of the questionnaires returned. Three questionnaires were not sufficiently completed to be used in this report. In the final tabulation questionnaires from 150 or 89.2 per cent of the Vocational Agriculture teachers were used.

In analyzing the aids furnished Vocational Agriculture teachers in the central region, Colorado and Oklahoma, the following important points were significant:

1. Eight types of teaching aids were furnished, namely: job analysis, time distribution suggestions, day to day teaching schedules, source units in
enterprises, supervised farming manuals, Future Farmers of America activity handbooks, Future Farmers of America newsletters and periodical service letters to teachers of Vocational Agriculture.

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In the 115 schools having three-year programs 44.34 per cent emphasize crops and soils in the eleventh grade, 41.35 per cent in the ninth and tenth grades combined and 14.70 per cent provide equal emphasis in each of the three years.

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There is a small percentage of three-year program teachers emphasizing farm management in the twelfth year because of the combination of the eleventh and twelfth grades in some schools. A few schools provide instruction in Vocational Agriculture in the tenth, eleventh and twelfth grades instead of the conventional pattern of giving instruction in the ninth, tenth and
eleventh grades.

8. In the 75 schools having four-year programs 64 per cent of the teachers emphasize Future Farmers of America instruction in the ninth grade, 4 per cent in the twelfth grade, zero per cent in the tenth and eleventh grades and 22 per cent provide equal emphasis in each of the four years.

In the 115 schools having three-year programs 78.25 per cent of the teachers emphasize Future Farmers of America instruction in the ninth grade, 2.59 per cent in the tenth and eleventh grades combined, zero per cent in the twelfth grade and 19.13 per cent provide equal emphasis in each of the four years.

9. Of the 190 Vocational Agriculture teachers rating teacher guide example number one\(^1\) on a scale of 1, 2, 3, 4, (1 being most helpful - 4 being least helpful), 37.16 per cent rated it one, 29.16 per cent rated it two, 16.11 per cent rated it three, and 15.82 per cent rated it four.

10. Of the 190 Vocational Agriculture teachers rating teacher guide example number two\(^1\) on a scale of 1, 2, 3, 4, (1 being most helpful - 4 being least helpful), 15.73 per cent rated it one, 30.76 per cent rated it two, 30.14 per cent rated it three, and 23.33 per cent rated it four.

11. Of the 190 Vocational Agriculture teachers rating teacher guide example number three\(^1\) on a scale of 1, 2, 3, 4, (1 being most helpful - 4 being least helpful), 37.15 per cent rated it one, 30.80 per cent rated it two, 21.91 per cent rated it three, and 10.11 per cent rated it four.

12. Of the 190 Vocational Agriculture teachers rating teacher guide example number four\(^1\) on a scale of 1, 2, 3, 4, (1 being most helpful - 4 being

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\(^1\)See Questionnaire - Appendix pp. 61-62.
least helpful), 29.65 per cent rated it one, 13.86 per cent rated it two, 24.82 per cent rated it three, and 32.11 per cent rated it four.

13. Of the 190 Vocational Agriculture teachers 50.5 per cent plan their teaching schedule one week in advance. Forty one and eighty three hundredths per cent of the teachers plan their teaching schedule from one month to a year in advance. Seven and sixty seven hundredths per cent make no advance planning of their day to day course outline.

14. Of the 190 Vocational Agriculture teachers 73.67 per cent use the modified cross sectional method of course planning, 20.10 per cent use the cross sectional method of course planning and 5.91 per cent use the traditional method of planning their course of study. There was no significant difference between the teachers in the three-year programs and the teachers in the four-year programs.