December 10, 1955

To the Graduate Council:

I am submitting herewith a thesis written by Otis Clinton Shelby entitled "Course Building in Vocational Agriculture." I recommend that it be accepted for nine quarter hours of credit in partial fulfillment of the requirements for the degree of Master of Science, with a major in Agricultural Education.

A J Paulus
Major Professor

We have read this thesis
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Dean of the Graduate School

COURSE BUILDING IN VOCATIONAL AGRICULTURE

A THESIS

Submitted to
The Graduate Council
of
The University of Tennessee
in
Partial Fulfillment of the Requirements
for the degree of
Master of Science

---

by

Otis Clinton Shelby

December 1955

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CHAPTER I

INTRODUCTION

The Problem

The problem was to determine the proper job breakdown of productive enterprises, when each job should be taught, how much instructional time is needed for each job, and how this information could best be used to build course calendars for vocational agriculture teachers. For purposes of analysis the problem was divided into four sub-problems:

1. What is the proper job breakdown of productive enterprises?
2. When should each job be taught?
3. How much instructional time is needed for each job?
4. How can this information be used to build a course calendar?

In developing the first sub-problem, consideration was given to selecting the proper job analysis or job breakdown for each productive enterprise considered in this study. The major purpose of this sub-problem was to develop essential job analyses necessary for adequate and effective instruction in the various productive enterprises.

The second sub-problem was concerned with the time when each of these jobs should be taught. The idea was to determine the type of course organization to follow--whether to follow the traditional type of course organization in which each year is devoted to a different phase of instruction, or a modified cross-sectional plan of course organization in which a certain phase or phases of instruction, such as livestock or crops, receive central emphasis in each course.

The third sub-problem was to determine the amount of instructional time necessary to adequately teach the job.

The fourth sub-problem was concerned with how this information could be used in building a course calendar. The primary purpose was to use this information in preliminary as well as final planning to prevent instruction from being a "hit and miss" affair.

Assumptions

1. At present vocational agriculture teachers have difficulty in preparing and following a course of study.
2. Certain practices are known that if followed would increase the effectiveness of an instructional program.
3. Courses of study vary from teacher to teacher due to different students' needs, but certain principles remain the same in developing a course of study.
4. Vocational agriculture teachers spend much time and effort in developing instructional programs in their departments.
5. Vocational agriculture teachers needed to improve instructional programs and course of study to meet students' present and future needs.
6. A study was needed to guide vocational agriculture teachers of Hardin County in course building.

Need for the Study

Before the school year begins vocational agriculture teachers are faced with the problem of what jobs to teach. Agricultural educators have indicated that instruction should be based on the farming needs of each

individual student. Instruction based on student's individual farming needs further complicates the problem of what jobs to teach, because teachers do not know exactly what these individual needs are. This difficulty can be overcome somewhat by making surveys to explore the student's home farm conditions. Perhaps through the use of survey forms and much hard work, a vocational agriculture teacher may effectively determine the individual farming needs of his students. Once these needs are determined the vocational agriculture teacher is directly faced with building an effective and usable course of study. This is not a minor problem, nor one that should be dismissed with little thought or concern. Evidently many teachers have difficulty with this problem, and the need exists for a study such as this.

Teachers of vocational agriculture in Hardin County have indicated their difficulty in developing courses of study which are practical and workable for their departments. The writer hopes this study will help overcome some of these difficulties.

Limitations of the Study

1. The study is limited to vocational agriculture conditions as found in Hardin County, Tennessee.
2. The study was restricted to this county because:
   a. A more thorough study could be made by limiting the study to one county.
   b. Results found through this study will apply to other counties in west Tennessee.

c. The investigator felt that the scope of the study was sufficient to produce significant results.

d. In considering only Hardin County, all agricultural workers in the Agricultural Extension Service, Soil Conservation Service, teachers of vocational agriculture, two former assistant teachers of vocational agriculture, and fifteen selected farmers could be included in the study.

3. Interviews were based largely on estimates rather than on actual records.

4. The study considered only one year rather than a longer period of time.

Review of Related Information

An intensive review of related literature indicated that several studies have been made on developing courses of study, and several articles have been published in magazines and books.

In a special problem, Estep[1] found that it was difficult to determine the jobs to be taught until the teacher knew the practices being carried out on the student's home farm. He implied that if the teacher knew the practices being carried out on the home farm and the desires of the student it would be a forecast of the jobs to be taught. Estep also indicated a need for teaching jobs that were not being done successfully in the community. An example of this would be the case of a farmer who

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[1]Tipton C. Estep, "Relationship Between Course Content and Community Types of Farming," Non-Thesis Study, Department of Agricultural Education, The University of Tennessee, 1949.

produces a high yield of corn and a very low yield of tobacco. In such a situation the jobs in tobacco production should be taught rather than those in corn production.

Hammonds[2] emphasized the need and use of a course of study for vocational agriculture teachers. "What to teach is the most baffling problem in agricultural education," said Hammonds. He further indicated the first requirement for constructing a course of study is to have a clear conception of the purpose of that course. A course should enable the teacher to accomplish his aim or purpose, which is to train present or prospective farmers for proficiency in farming. In planning a course of study, the teacher should be guided by five major factors: (1) the purpose for which the course is to be offered--its aim, (2) the characteristics and needs of those who are to take the course, (3) the educative environment of these persons, (4) the sources of information available, and (5) the requirements or demands of the vocation to which the learning is to be put.

Phipps and Cook[3] placed emphasis on advance planning when students are utilized in developing objectives, defining problems, and developing procedures for evaluating results. For effective instruction a course outline should be made and followed based on needs, interest, and abilities of the students. If this procedure is followed the teacher can

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[2]Carsie Hammonds, Teaching Vocational Agriculture (New York: McGraw-Hill Book Company, Inc., 1950) pp. 63-64.

[3]Lloyd J. Phipps and Glenn Charles Cook, A Handbook on Teaching Vocational Agriculture (6th. ed.; Danville, Illinois: The Interstate, 1952), pp. 154-155.

anticipate the content of a course and it will probably develop through teacher-student planning. Phipps and Cook clearly pointed out that the purpose of a course outline is to help the teacher in anticipating the total task for the year and in allocating the time for various areas. They also presented steps to be followed in setting up courses of study. Following is a summary of the steps which should be most helpful to agriculture teachers in developing course content in vocational agriculture:

1. Make a list of the farm enterprises to be included in each year's instruction. Determine other essential units to include in the program, such as acquainting pupils with vocational agriculture, supervised farming, F.F.A. or N.F.A. activities, and related occupations.
2. Determine the number of days to allot to each enterprise and unit by years.
3. Divide these enterprises and units into problem areas to be taught.
4. Estimate the number of days to devote to each problem area.
5. Decide on the year and month to teach each problem area, keeping in mind the seasonal order of teaching.
6. Prepare a monthly layout of problem areas.

Garris[4] pointed out that the necessity for individual course planning by vocational agriculture teachers was due to agriculture varying

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[4]E. W. Garris, Teaching Vocational Agriculture, (New York: McGraw-Hill Book Company, Inc., 1954) pp. 115-139.

from state to state or section to section. Hence, each teacher has to design a course of study for his particular community and the students' needs for instruction. In order to be able to prepare the course of study well, a teacher must, therefore, be acquainted with local farming conditions, facts, and situations. This information may be secured by contacting various agencies and representatives of agriculture in the community, obtaining copies of studies and reports, making surveys, and contacting farmers in the community. In addition to the above procedures or methods of procuring data, Garris emphasized the use of an advisory council, composed of farmers and businessmen, to review the above facts as summarized.

Langston[5] stated the importance of flexibility in course building. It must be flexible enough to meet the changing situation in agriculture as determined by research. An outline was presented by Langston that should be helpful in course building to help form objectives, set up evaluative criteria, plan course calendars, and arrange course materials.

Jones[6] pointed out the importance of building a course of study to represent the needs and desires of the students and community. "Many new teachers fail in observing the necessity of fitting the instruction program to the needs of the individual boys," said Jones. Jones also placed emphasis on stimulating public relations by having boys take home

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[5]C. N. Langston, "A Plan for Course Building," Agricultural Education Magazine, 27:246, May 1955.

[6]Richard Jones, "Teacher-Pupil-Parent Planning in Determining Course Content," Agricultural Education Magazine, 25:62, September 1952.

for parents' approval some programs planned by teacher and pupil. The end result is a more unified and practical program, a feeling on the part of students that it is their program, a decrease in disciplinary problems, and drop-outs, and an improvement in public relations.

Beamer[7] stated that it seems in most states a rather uniform procedure to take a boy's supervised farming program and break it down into farmer jobs or study units. These jobs are arranged on a seasonal basis so as to keep study and application close together.

Wiegers[8] stated that each student should make a job calendar, which is his record of decisions he has made concerning one enterprise, for each productive enterprise in his supervised farming program. The job calendar should show the month or months each job is usually done and when the student intends to study the jobs listed. Some of the things the teacher and student should be concerned with in making job calendars are: Determine what jobs progressive farmers do in the selected productive enterprise, determine when farmers do these jobs, and then decide when to study each job. Wiegers also suggested that the study of each job should ordinarily precede the doing of that job by at least several days or weeks so that the student may make realistic precise plans for actually doing the job.

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[7]Rufus W. Beamer, "Improving Instruction Through Supervised Farming," Agricultural Education Magazine, 23:205, March 1951.

[8]George W. Wiegers, Jr., "Make a Job Calendar," Better Farming Methods, p. 20, February 1954.

Binkley[9] emphasized the need for an "Individual-Problem Work Sheet" by presenting a plan in the form of a work sheet. This was a modification of the job calendar discussed by Wiegers.

Estep[10] in a special problem indicated that the enterprises in which the majority of projects occur should be given the most time on a yearly teaching plan. He also stated that it is difficult to teach all the jobs in the field of agriculture and, therefore, they must be selected on the basis of needs of students. It was also pointed out that jobs taught seasonly were stimulating to students; therefore more interest is created in developing and carrying out the jobs.

Source of Data and Method of Procedure

Hardin County, Tennessee, was selected for this study. The investigator felt that Hardin County could be used to represent enterprises and conditions common to west Tennessee. Initial data obtained from Hardin County will permit a more thorough study to be made. These data were obtained from the Agricultural Extension Service, Soil Conservation Service, fifteen selected farmers, county veteran on-farm supervisor, vocational agriculture teachers, and two former assistant vocational agriculture teachers. Fifteen representative farmers, located in five communities

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[9]Harold R. Binkley, "Individual-Problem Days in Teaching Vocational Agriculture," Agricultural Education Magazine, 27:182, February 1955.

[10]Tipton C. Estep, "Building the Course of Study Around Individual Supervised Farm Program," Non-Thesis Study, Department of Agricultural Education, The University of Tennessee, 1949.

throughout the county, were chosen. All types of farming found in the county were reflected by these fifteen farmers. The tenure of these selected farmers was six owners and nine renters with a 14-year average farming experience, ranging from two to thirty years.

The methodology followed was to first review recent literature devoted to the subject of course building for vocational agriculture. This was followed by a discussion with teacher trainers to determine recent trends as well as recent research findings in related subjects. From this the investigator set up a list of enterprises found in Hardin County. With the assistance of Dr. A. J. Paulus, Subject Matter Specialist, Department of Agricultural Education, a list of jobs was added to the enterprises. These job analyses were derived from block teaching plans developed by teachers throughout the state under the supervision and guidance of Dr. Paulus. Several of them were done by the vocational agriculture teachers of Hardin County. The job lists were then examined and supplemented by vocational agriculture teachers in Hardin County, teacher trainers, and several professors in technical agriculture at the University of Tennessee.

Twenty-five enterprise job surveys were selected and prepared for use in collecting the data. The investigator felt the great importance of personal contact with agricultural workers for presenting the study and collecting these data. The following people were personally contacted: all vocational agriculture teachers in the county, county veteran on-farm supervisor, two former assistant vocational agriculture teachers, county agent, soil conservationist, technical aid to the soil conservationist, and fifteen farmers located in five communities

throughout the county. The study was also discussed with the county superintendent of schools, agricultural stabilization committee personnel, and other farm leaders in the county. The vocational agriculture teachers, county agent, soil conservationist, former assistant vocational agriculture teachers, and county veteran on-farm supervisor were asked to study the job analyses for each enterprise and to make suggestions or comments for changes and improvements. They were also asked to indicate the month in which they would prefer to teach each job and the amount of instructional time they would require to teach it. Fifteen farmers were asked to indicate the month or months in which they actually perform these jobs on their farms. Their replies were presented to eight professors in Technical Agriculture at The University of Tennessee for their suggestions and comments.

The data obtained were summarized and tentative conclusions reached. These tentative conclusions, plus comments and suggestions made by the investigator, are outlined in the remaining chapters of this study.

Definition of Terms

"Course building" refers to the arrangement of the course of study within the year showing the jobs to be studied each month.

"Instructional time" refers to the number of fifty-minute class periods which is common in Tennessee's school system.

A "productive enterprise" refers to the production of a crop or some type of livestock in a business venture.

An "enterprise job calendar" refers to a job analysis or breakdown of the productive enterprises showing when each job is to be done in the individual's farming program and when the job is to be studied.

"Technical people" refers to members of the research teaching and extension staffs at The University of Tennessee.

"Job analysis" refers to the breakdown of an enterprise into jobs that are complete teaching units in the production and marketing of that enterprise.

CHAPTER II

PRODUCTIVE ENTERPRISES AND JOB ANALYSIS

General

The productive enterprises in Hardin County were determined from the 1950 and 1954 census of agriculture, course calendars previously prepared by vocational agriculture teachers, and interviews with vocational agriculture teachers and other farm workers in the county. Twenty-five enterprises were found to be common in Hardin County; however, five were of only minor importance. These twenty-five enterprises were further examined to determine their importance. An array was made in accordance with the frequency in which they were reported by all farms, fifteen selected farmers, and the vocational agriculture teachers in Hardin County.

Job analyses made by the investigator from block teaching plans were discussed with teacher trainers, teachers, and technical agriculture workers. These were revised to incorporate suggestions and comments made by those interviewed.

Presentation of Findings

Table I shows crop enterprises based on preliminary data in the 1954 census of agriculture. It shows that the enterprises of major proportion were as follows: woodland, Irish potatoes, corn, cotton, all hay, and sweet potatoes.

Table II illustrates the major livestock and poultry enterprises. It shows that the major enterprises are chickens, beef cattle, dairy cattle, and hogs. However, these are not listed precisely as true enterprises but the importance of each can be interpreted.

TABLE I

KIND AND SCOPE OF CROP ENTERPRISES REPORTED IN 1954 CENSUS OF AGRICULTURE (PRELIMINARY) HARDIN COUNTY FARM CHARACTERISTICS

Enterprise	Number of Farms Reporting[a/]	Total Acres	Percent of Farms Reporting
Woodland	1,792	124,788	89.2
Irish potatoes*	1,355	61	67.5
Corn	1,324	35,366	65.9
Cotton	1,154	10,583	57.5
All hay	681	6,376	33.9
Sweet potatoes*	582	4	29.0
Lespedeza hay	431	4,569	21.5
Orchard**	373	222	18.6
Sorghum	160	2,487	8.0
Clover and timothy hay	71	561	3.5
Soybeans for oil	63	897	3.1
Small grain hay	58	442	2.9

a/In 1954, total farms for the county were 2,008.

*For 1954, does not include acreage for farms with less than 20 bushels harvested.

**For 1954, does not include data for farms reporting less than 20 fruit trees and grape vines.

TABLE II

KIND AND NUMBER OF LIVESTOCK AND POULTRY ENTERPRISES REPORTED IN 1954 CENSUS OF AGRICULTURE (PRELIMINARY) HARDIN COUNTY FARM CHARACTERISTICS

Enterprise	Number of Farms Reporting[a/]	Total Number of Animals	Percent of Farms Reporting
Chickens, 4 months old and over, on hand	1,799	69,588	89.6
Cattle and calves	1,508	9,523	75.1
Cows, including heifers that have calved	1,450	4,757	72.2
Milk cows	1,340	2,705	66.7
Hogs and pigs	1,204	14,138	60.0
Heifers and heifer calves	865	2,977	43.1
Chicken eggs sold	679	136,588 dozs.	33.8
Sows and gilt farrowing	627	2,294	31.2
Steers, bulls, and steer calves	533	1,789	26.5
Whole milk sold	89	58,517 gals.	4.4
Turkeys raised	82	885	4.1
Cream sold	15	1,960 lbs. B.F.	0.7
Sheep and lambs	9	317	0.4

a/In 1954, total farms for the county were 2,008.

From Table III it can be seen that enterprises providing the greatest returns from farm products sold are all crops, cotton, livestock and livestock products, livestock sold alive, hogs and pigs, cattle and calves sold alive, and corn. This table also shows that corn is marketed primarily through livestock.

Table IV shows enterprises produced by fifteen selected farmers in Hardin County. Two enterprises, grown by all fifteen farmers, were primarily for home consumption. All farmers reported full production of their cotton acreage allotment. Three of the fifteen farmers interviewed reported that their cotton acreage allotment was produced by tenants.

Table V shows enterprises included by six vocational agriculture teachers and two former assistant vocational agriculture teachers in their programs of work. Eight of the twenty-five enterprises were included by all teachers. Three teachers indicated that enterprises, such as okra, tomatoes, and other garden crops, were taught in conjunction with the garden enterprise and not as a separate enterprise. This substantiates the suggestion by technical horticulturists that garden crops should be taught in conjunction with such jobs as fertilizing, cultivating, etc. However, four enterprises were added which may not be considered true productive enterprises but were included because of their direct bearing on the other enterprises and since they were included in some of the teachers' program of work.

The investigator selected twenty-five enterprises which appeared to be the most important in Hardin County and broke them down into jobs. These enterprises are as follows: corn, cotton, pasture, hay, garden, swine, beef cattle, poultry, dairy, soils, soil management, small grain,

TABLE III

ENTERPRISES ARRAYED ACCORDING TO PERCENTAGE OF TOTAL FARM SALES AS TAKEN FROM 1950 CENSUS OF AGRICULTURE

Enterprise	Value of Products Sold[a] (dollars)	Percent of All Farm Products Sold
All crops	1,491,145	62.1
Cotton	1,172,003	48.8
Livestock and livestock products	825,453	34.4
All livestock sold alive	716,200	29.8
Hogs and pigs	463,351	19.3
All cattle and calves	226,700	9.4
Corn	169,168	7.0
Calves sold alive	117,960	4.9
Cattle sold alive	108,780	4.5
Forest	84,286	3.5
Poultry and poultry products	81,015	3.4
Horses and mules	24,054	1.0
Dairy	22,386	0.9
Misc. livestock and livestock products and bees	5,852	0.3
Sheep and lambs	2,095	0.1

a/Value of all farm products sold was $2,400,884.

TABLE IV

NUMBER AND PERCENT OF CROPS AND LIVESTOCK ENTERPRISES AS REPORTED BY FIFTEEN SELECTED FARMERS

Enterprise	Number of Farmers Reporting Enterprise	Percent of All Fifteen Farmers
Poultry*	15	100
Dairy*	15	100
Pasture	15	100
Garden	15	100
Irish potatoes**	15	100
Corn	14	93.3
Hay	14	93.3
Beef cattle	13	86.7
Hogs	13	86.7
Tomatoes**	13	86.7
Cotton	12	80.0
Sweet potatoes**	12	80.0
Cabbage**	11	73.3
Orchard	9	60.0
Farm woodlot	7	46.7
Small grain	6	40.0
Okra***	5	33.3
Peppers***	5	33.3
Strawberries*	4	26.7

*Primarily for home use.

**For home use only.

***For sale and home use.

TABLE V

ENTERPRISES FOR WHICH PLANNED INSTRUCTION WAS PROVIDED BY THE SIX REGULAR AND TWO FORMER ASSISTANT TEACHERS OF VOCATIONAL AGRICULTURE

Enterprise	Teachers Offering Planned Instruction			
	All Teachers		Regular Teachers	
	Number	Percent	Number	Percent
Corn	8	100	6	100
Cotton	8	100	6	100
Pasture	8	100	6	100
Hay	8	100	6	100
Garden	8	100	6	100
Swine	8	100	6	100
Beef Cattle	8	100	6	100
Poultry	8	100	6	100
Dairy	7	87.5	6	100
Soils	7	87.5	5	83.3
Soil management	7	87.5	5	83.3
Small grain	7	87.5	4	66.7
Soybeans for oil	6	75.0	5	83.3
Strawberries	6	75.0	5	83.3
Crop pest control	6	75.0	5	83.3
Orchard	6	75.0	5	83.3
Feeding livestock	5	62.5	4	66.7
Farm woodlot	4	40.0	2	33.3
Irish potatoes	4	40.0	3	50.0
Sheep	4	40.0	2	33.3
Tomatoes	3	37.5	2	33.3
Sweet potatoes	3	37.5	2	33.3
Okra	3	37.5	2	33.3
Peppers	3	37.5	2	33.3
Cabbage	1	12.5	0	0

soybeans for oil, strawberries, crop pest control, orchard, feeding livestock, Irish potatoes, sheep, tomatoes, sweet potatoes, okra, farm woodlot, peppers, and cabbage.

Job analyses are shown in chapter III, pages 21-56. They were developed from suggestions and comments made by teacher trainers, teachers, farmers, technical agricultural workers, and other agricultural workers in Hardin County. In the opinion of the investigator and others, these analyses set forth the best job breakdown now available to meet Hardin County conditions.

CHAPTER III

INSTRUCTIONAL HOURS

Discussion of Findings

Instructional time necessary to teach different jobs will vary from school to school. This is due primarily to the differences in individual student's farming needs in different localities and to the fact that some teachers emphasized certain jobs more than others. Too, some enterprises were not common to all schools in Hardin County. An example of this is peppers, which are grown only in the southeastern part of the county. Several enterprises are relatively new in Hardin County and have been produced there for only the past two to five years. These enterprises are peppers, okra, and strawberries. Table VI is presented here to provide a summary of the enterprises and their relative importance as to time required for teaching each enterprise.

No single vocational agriculture teacher taught all twenty-five enterprises. Nine of the enterprises were taught by all vocational agriculture teachers, while only one enterprise--cabbage--was not taught by any teacher. The other enterprises were included by 33.3 to 83.3 percent of the teachers. Several teachers indicated that they taught garden crops, such as cabbage, okra, and strawberries, in conjunction with other garden crops under a garden enterprise. This should indicate that instruction was given by some teachers in cabbage production even though it was not included as a separate enterprise.

All teachers included in this study teach only a portion of the jobs listed while a few teachers combine some of the jobs and teach them

TABLE VI

INSTRUCTIONAL HOURS NEEDED FOR ENTERPRISES AND PERCENT OF TOTAL HOURS NEEDED FOR ALL ENTERPRISES AS INDICATED BY SIX VOCATIONAL AGRICULTURE TEACHERS

Enterprise	Instructional Hours Needed and Percent	
	Total for Enterprise	Percent of Total for All Enterprises
Poultry	208	8.5
Beef cattle	200	8.2
Swine	194	7.9
Dairy	168	6.8
Soils	168	6.8
Cotton	147	5.9
Home garden	130	5.3
Pasture	130	5.3
Corn	122	4.9
Soil management	116	4.7
All hay	113	4.6
Strawberries	102	4.1
Home orchard	94	3.8
Soybeans for oil	90	3.6
Crop pest control	81	3.3
Feeding farm livestock	76	3.1
Small grain	70	2.8
Sheep	60	2.4
Farm woodlot	52	2.1
Okra	37	1.5
Irish potatoes	31	1.2
Sweet potatoes	31	1.2
Tomatoes	24	1.0
Peppers	23	1.0
Cabbage	0	0
TOTAL	2,468	100.0

as one unit. This arrangement was advocated by technical people in horticulture and agronomy as mentioned in chapter II. Jobs such as "fertilizing corn" probably could be combined with fertilizing cotton and other field crops as one teaching unit.

From Table VII it is evident that the poultry enterprise needed the greatest proportion of instructional time with "determining the type and scope of business" phase of this job being the most time consuming. Only eleven of the eighteen jobs listed in the poultry enterprise were taught by all teachers. Dr. O. E. Goff, Head, Department of Poultry, The University of Tennessee, made some suggestions for the improvement of job analyses of the poultry enterprise. As job analyses were not shown in chapter II, suggestions on the poultry enterprise are shown in Table VIII.

Table IX shows that "judging beef cattle" required the largest amount of instructional time, while "providing drinking water" required the least. This table also shows that the beef cattle enterprise ranks second in amount of time indicated for teaching.

Table X shows that all jobs were taught in the swine enterprise except two. This was the highest percentage of jobs taught in any of the twenty-five enterprises considered in this study. Swine enterprise ranks third in amount of time required for instructional purposes.

Under the dairy enterprise in Table XI it can be seen that "determining the type and scope of business" required the greatest amount of instructional time. This is probably due to such a small cash return from dairy products sold in Hardin County. Most of the dairying is for

TABLE VII

INSTRUCTIONAL HOURS USED IN TEACHING THE POULTRY ENTERPRISE

Job	Number of Teachers[a]	Hours		
		Total	Range	Mean
Determining the type and scope of business	6	25	2-6	4.2
Choosing breed	6	10	1-4	1.7
Procuring chicks	6	8	1-2	1.3
Brooding chicks	5	12	1-4	2.4
Producing broilers and fryers	5	10	1-4	2.0
Rearing pullets	6	11	1-4	1.8
Culling pullets and layers	6	18	1-6	3.0
Housing layers	6	11	1-4	1.8
Feeding for egg production	6	20	1-6	3.3
Gathering and holding eggs	6	9	1-2	1.5
Marketing eggs	6	12	1-4	2.0
Producing capons, turkeys, etc.	3	3	1-1	1.0
Controlling diseases*	6	15	1-4	2.5
Controlling parasites*	6	14	1-4	2.3
Marketing poultry meat	5	7	1-2	1.4
Managing the poultry enterprise	5	11	1-6	2.2
Keeping and using records	5	8	1-2	1.6
Organizing for egg marketing	1	4	4-4	4.0
Total hours		208		
Percent of total hours for all enterprises		8.4		

[a]/Represents six teachers of vocational agriculture in Hardin County.

*One teacher indicated that these jobs were taught together.

TABLE VIII

SUGGESTED JOB ANALYSES FOR THE POULTRY ENTERPRISE
BY DR. O. E. GOFF, HEAD, DEPARTMENT OF POULTRY,
THE UNIVERSITY OF TENNESSEE

Job
Background and industry opportunity
Evaluation of breeds and strains
Procuring chicks for egg and meat production
Brooding chicks
Producing broilers, fryers, and capons
Rearing pullets
Culling pullets and layers
Housing layers
Feeding for egg production and hatchability
Maintaining egg quality
Marketing eggs
Sanitation and disease control
Marketing poultry meat
Managing the poultry enterprise
Keeping and using records

TABLE IX

INSTRUCTIONAL HOURS USED IN TEACHING THE BEEF CATTLE ENTERPRISE

Job	Number of Teachers	Hours		
		Total	Range	Mean
Determining the number and scope	6	21	2-4	3.5
Procuring breeding stock	6	10	1-2	1.7
Breeding heifers and cows	6	9	1-2	1.5
Care at calving time	6	10	1-2	1.7
Feeding the breeding herd	6	19	1-9	3.2
Feeding growing stock	6	10	1-2	1.7
Providing drinking water	4	5	1-2	1.2
Providing suitable housing	5	8	1-2	1.6
Procuring feeder stock	5	8	1-2	1.6
Castrating and dehorning	6	10	1-2	1.7
Controlling diseases	6	11	1-4	1.8
Controlling parasites	6	11	1-4	1.8
Butchering for home use	5	8	1-2	1.6
Marketing beef animals	6	10	1-2	1.7
Conserving the manure	5	7	1-2	1.4
Keeping and using records	6	8	1-2	1.3
Fitting and showing	5	11	2-3	2.2
Judging beef cattle	5	24	2-12	4.8
Total hours		200		
Percent of total hours for all enterprises		8.1		

TABLE X

INSTRUCTIONAL HOURS USED IN TEACHING THE SWINE ENTERPRISE

Job	Number of Teachers	Hours		
		Total	Range	Mean
Determining the type and scope of business	6	21	2-6	3.5
Selecting breeding stock	6	16	1-4	2.6
Selecting feeder hogs	6	10	1-3	1.7
Breeding sows and gilts	6	9	1-2	1.5
Caring for the sow during gestation	6	10	1-2	1.7
Caring for the sow during farrowing	6	9	1-2	1.5
Caring for the sow and litter during suckling	6	8	1-2	1.3
Castrating the pigs	6	9	1-3	1.5
Controlling diseases	6	17	1-4	2.8
Controlling parasites	6	11	1-4	1.8
Feeding for meat production	6	15	1-6	2.5
Providing suitable shelter and equipment	6	7	1-2	1.2
Marketing hogs	6	9	1-2	1.5
Butchering and preserving pork	5	7	1-2	1.4
Simplifying labor requirements	6	13	1-4	2.2
Keeping and using records	6	8	1-2	1.3
Registering pure bred stock	6	7	1-2	1.2
Judging market hogs	5	8	1-2	1.6
Total hours		194		
Percent of total hours for all enterprises		7.9		

TABLE XI

INSTRUCTIONAL TIME USED IN TEACHING THE DAIRY ENTERPRISE

Job	Number of Teachers	Hours		
		[illegible]	[illegible]	[illegible]
Determining the type and scope of business	5	18	3.4	3.8
Procuring cows	5	8	1.2	1.6
Providing replacements	4	6	1.2	1.5
Breeding heifers and cows	6	7	1.2	1.2
Care at calving time	6	9	1.2	1.5
Providing suitable shelter	5	7	1.2	1.4
Feeding for economical milk production	5	16	1.6	3.4
Providing drinking water	4	6	1.2	1.5
Milking and caring for milk	5	8	1.3	1.6
Feeding during the dry period	6	9	1.3	1.5
Controlling diseases	5	9	1.4	1.8
Controlling parasites	5	9	1.4	1.8
Marketing dairy products	5	16	1.6	2.8
Disposing of surplus stock	4	6	1.2	1.5
Raising dairy calves	6	9	1.2	1.5
Selecting and managing the herd sire	5	7	1.2	1.4
Conserving the manure	5	7	1.2	1.4
Keeping and using records	4	9	1.4	2.2
Judging beef cattle	1	2	2.2	2.0
Total hours		168		
Percent of total hours for all enterprises		6.8		

home consumption rather than for sale due to the absence of an attractive market. Technical people placed emphasis on good breeding practices to insure milk distribution. Breeding should be done so cows would be in production during the winter months as well as for year-round production. Further suggestions made were that "feeding for economical milk production" should receive 30 to 40 percent of the total allocated time for the dairy enterprise, and "breeding heifers and cows" 15 to 20 percent.

Table XII shows that long periods of time are required to teach jobs in the soils enterprise. A professor in the Agronomy Department indicated that soils could probably be taught in conjunction with other enterprises, but some time should be reserved for the more specific jobs, such as learning the origin and names of soils. One teacher did not indicate any teaching of the soils enterprise but the investigator felt that it was an oversight by that teacher.

As can be seen in Table XIII the majority of teachers considered all the jobs of the cotton enterprise. "Controlling insects" required the largest amount of time. Technical people suggested combining the job "selecting the land" with the same job for other agronomy crops and doing it for the entire farm as it was not an individual selection but a complementary selection of enterprises. Only two teachers responded to the job "keeping records." However, from comments made by teachers to the investigator, it is felt that "record keeping" is taught with all enterprises.

From one to seven hours were spent teaching jobs in the garden enterprise. The highest average was three hours for "controlling insects and diseases." It can be seen from Table XIV that more time is spent in

TABLE XII

INSTRUCTIONAL HOURS USED IN TEACHING THE SOILS ENTERPRISE

Job	Number of Teachers	Hours		
		Total	Range	Mean
Determining origin and derivation of soils	5	24	2-10	4.8
Learning commonly used soil terms	5	21	2-6	4.2
Determining soil properties and characteristics	5	19	2-6	3.8
Studying soil profile	5	14	2-4	2.8
Naming soils as to series and type	5	25	2-10	5.0
Studying soil maps	5	11	2-3	2.2
Studying crop requirements	5	11	2-3	2.2
Matching crops to the soils on a farm	4	16	2-10	4.0
Planning a cropping system for a farm	5	13	2-5	2.6
Planning lime and fertilizer requirements for a farm	5	14	1-5	2.8
Total hours		168		
Percent of total hours for all enterprises		6.8		

TABLE XIII

INSTRUCTIONAL HOURS USED IN TEACHING THE COTTON ENTERPRISE

Job	Number of Teachers	Hours		
		Total	Range	Mean
Determining the possibilities	6	20.0	1-6	3.3
Selecting the land	6	9.0	1-2	1.5
Selecting variety and procuring seed	6	8.0	1-2	1.3
Preparing the seed bed	6	8.0	1-2	1.3
Fertilizing the crop	6	13.0	1-4	2.2
Planting the crop	6	7.0	1-2	1.2
Thinning the stand	6	6.5	.5-2	1.1
Controlling weeds	6	6.5	.5-2	1.1
Controlling insects	6	18.0	1-4	3.0
Controlling diseases	5	11.0	1-4	2.2
Harvesting	6	12.0	1-4	2.0
Ginning the crop	5	6.0	1-2	1.2
Determining the grade and staple	6	12.0	1-4	2.0
Marketing the lint and seed	6	8.0	1-2	1.3
Keeping and using records	2	2.0	1-1	1.0
Total hours		147		
Percent of total hours for all enterprises		5.9		

TABLE XIV

INSTRUCTIONAL HOURS USED IN TEACHING THE HOME GARDEN ENTERPRISE

Job	Number of Teachers	Hours		
		Total	Range	Mean
Determining the location and size	6	17	1-5	2.8
Selecting the crops to be grown	6	13	1-4	2.2
Planning the cropping program	6	8	1-2	1.3
Preparing the seed bed	6	8	1-2	1.3
Fertilizing	6	8	1-2	1.3
Controlling weeds	5	6	1-2	1.2
Controlling insects and diseases	6	18	1-4	3.0
Staking, pruning and other special practices	6	16	1-7	2.7
Irrigating	5	8	1-2	1.6
Harvesting	3	7	2-3	2.1
Preserving	3	5	1-2	1.7
Storing	4	8	1-3	2.0
Keeping and using records	4	8	1-3	2.0
Total hours		130		
Percent of total hours for all enterprises		5.3		

the production phase than in the harvesting, storing, and preserving phase. Several teachers indicated a combination of most garden crops and planned their instruction together rather than for each crop separately. This was also advocated by the technical people in horticulture as well as combining jobs such as "fertilizing" to include all similar garden crops. They felt that much time could be saved in this manner which could be utilized more effectively elsewhere. This investigator would like to suggest that this practice not be carried to the point of endangering the learning behavior of students and methods of teaching used by vocational agriculture teachers.

Table XV shows that the time spent in teaching jobs in the pasture enterprise ranged from one to six hours. "Determining the possibilities" received the largest amount of time and "controlling insects and diseases" received the smallest. Technical people stressed the importance of combining pasture and hay enterprises into one enterprise and teaching it from a composite approach.

From Table XVI it is learned that one to two hours was spent on most jobs in the corn enterprise. Teachers indicated about the same amounts of time necessary for teaching all jobs. This table shows a very uniform group from the standpoint of time required and indicates instructional hours advisable to follow in setting up course content.

One teacher did not consider soil management as a separate enterprise but taught the jobs in conjunction with other related enterprises. It can be seen in Table XVII that three jobs received most of the time

TABLE XV

INSTRUCTIONAL HOURS USED IN TEACHING THE PASTURE ENTERPRISE

Job	Number of Teachers	Hours		
		Total	Range	Mean
Determining the possibilities	5	20	2-6	4.0
Evaluating a given pasture	5	12	2-4	2.4
Locating the pasture land on a farm	6	10	1-3	1.7
Controlling weed and brush growth	6	9	1-2	1.5
Controlling insects and diseases	5	7	1-2	1.4
Utilizing excess growth	5	10	1-4	2.0
Deciding on the pasture plants to use	6	10	1-2	1.7
Fertilizing at seeding time	6	10	1-2	1.7
Seeding a pasture	5	8	1-2	1.6
Managing the grazing	5	8	1-2	1.6
Providing supplementary grazing	6	9	1-2	1.5
Deciding if, when and how to irrigate	4	8	2-2	2.0
Maintaining the productivity of a pasture	5	10	1-4	2.0
Total hours		131		
Percent of total hours for all enterprises		5.3		

TABLE XVI

INSTRUCTIONAL HOURS USED IN TEACHING THE CORN ENTERPRISE

Job	Number of Teachers	Hours		
		Total	Range	Mean
Determining possibilities	6	17	1-4	2.8
Locating the field site	6	12	1-4	2.0
Selecting and procuring the seed	6	10	1-2	1.7
Fertilizing	6	16	1-4	2.7
Preparing the seed bed	6	13	1-4	2.2
Planting the crop	6	7	1-2	1.2
Controlling weeds with cultivator and/or chemicals	6	10	1-2	1.7
Controlling insects and diseases	6	9	1-2	1.5
Harvesting the crop	6	9	1-2	1.5
Storing the crop	5	7	1-2	1.4
Disposing of the crop	4	5	1-2	1.2
Evaluating the practices used in producing the crop	5	6	1-2	1.2
Keeping and using records	1	1	1-1	1.0
Total hours		122		
Percent of total hours for all enterprises		4.7		

TABLE XVII

INSTRUCTIONAL HOURS USED IN TEACHING THE SOIL MANAGEMENT ENTERPRISE

Job	Number of Teachers	Hours		
		Total	Range	Mean
Getting acquainted with life in the soil	5	18	2-6	3.6
Determining the crop adaptation of the soil on a farm	5	23	3-6	4.6
Studying and planning a cropping system	5	21	2-10	4.2
Using mechanical water control measures	4	11	2-4	2.8
Saving and using farm manures	4	5	1-1	1.2
Adding lime and fertilizers	5	12	1-5	2.4
Maintaining organic matter in the soil	4	8	1-3	2.0
Preparing a suitable seed bed	3	4	1-2	1.3
Cultivating to control weeds	3	4	1-2	1.3
Harvesting crops with animals	3	4	1-2	1.3
Improving productivity from year to year	3	6	2-2	2.0
Total hours		116		
Percent of total hours for all enterprises		4.7		

devoted to this enterprise. These jobs are "determining the crop adaptations of the soil on a farm," "studying and planning a cropping system," and "getting acquainted with life in the soil."

Table XVIII reveals that there is a great range in amount of time used by teachers for the hay enterprise. However, this is due to the inclusion of many kinds and varieties of hay crops. Instructional hours on the average were high compared to some jobs in other enterprises. The range for average time used was from 1.3 to 2.4 hours. Technical people have commented that hay should be considered in conjunction with pasture as they have the same general use on the farm.

As shown in Table XIX the strawberry enterprise was considered a separate teaching enterprise by 83 percent of the teachers. Strawberries are a relatively new crop for market in Hardin County. One teacher indicated he would combine it with other garden crops. Another teacher indicated he would teach the number of hours he had indicated only for marketable berries, so there is a variation of thinking on the treatment of this enterprise.

As can be seen in Table XX only five of the six teachers taught the home orchard enterprise. The greatest amounts of time were spent on "pruning" and "determining possibilities" of the enterprise. As can be seen, several jobs were not considered of importance by the majority of teachers.

"Determining the amount to grow" required more teaching time than any other job under soybeans for oil production, as is shown in Table XXI. Technical people suggested the enterprise be listed as soybeans for hay

TABLE XVIII

INSTRUCTIONAL HOURS USED IN TEACHING THE HAY ENTERPRISE

Job	Number of Teachers	Hours		
		Total	Range	Mean
Determining possibilities	5	12.0	1-4	2.4
Locating the field site	5	7.0	1-2	1.4
Selecting variety and procuring seed	6	8.0	1-2	1.3
Preparing the seed bed	6	8.0	1-2	1.3
Fertilizing	6	8.0	1-2	1.3
Inoculating seed	6	10.5	.5-5	1.7
Seeding	6	11.5	.5-5	1.9
Controlling disease and insects	5	11.0	1-5	2.2
Maintaining the crop	5	7.0	1-2	1.4
Harvesting	6	12.5	.5-4	2.0
Storing	6	9.5	.5-3	1.7
Marketing	5	8.0	1-3	1.6
Total hours		113		
Percent of all hours for all enterprises		4.6		

TABLE XIX

INSTRUCTIONAL HOURS USED IN TEACHING THE STRAWBERRY ENTERPRISE

Job	Number of Teachers	Hours		
		Total	Range	Mean
Determining the amount to grow	5	15.0	1-6	3.0
Locating the field site	5	8.0	1-3	1.6
Procuring the plants	5	5.5	.5-2	1.1
Preparing the field site	5	8.0	1-3	1.6
Fertilizing the crop	4	5.5	.5-2	1.4
Setting the plants	5	6.5	.5-2	1.2
Controlling weeds	5	6.5	.5-2	1.2
Thinning the plants	4	5.0	1-2	1.2
Mulching the crop	5	7.0	1-2	1.4
Controlling insects and diseases	5	7.0	1-2	1.4
Harvesting the crop	5	8.0	1-2	1.6
Grading and marketing the fruit	4	6.0	1-2	1.5
Renovating the bed	5	6.0	1-2	1.2
Keeping and using records	5	8.0	1-2	1.6
Total hours		102		
Percent of total hours for all enterprises		4.1		

TABLE XX

INSTRUCTIONAL HOURS USED IN TEACHING THE HOME ORCHARD ENTERPRISE

Job	Number of Teachers	Hours		
		Total	Range	Mean
Determining possibilities	5	13	1-6	2.6
Selecting the site	5	7	1-2	1.4
Selecting varieties	5	7	1-2	1.4
Preparing land for planting	5	6	1-2	1.2
Setting out trees	5	8	1-2	1.6
Fertilizing	3	5	1-2	1.7
Cultivating	4	5	1-2	1.2
Selecting systems of training	4	6	1-2	1.5
Pruning	4	13	1-6	3.2
Controlling diseases	4	8	2-2	2.0
Thinning	3	4	1-2	1.3
Harvesting	3	4	1-2	1.3
Grading and packing	3	4	1-2	1.3
Marketing	3	4	1-2	1.3
Total hours		94		
Percent of total hours for all enterprises		3.8		

TABLE XXI

INSTRUCTIONAL HOURS USED IN TEACHING
THE SOYBEANS FOR OIL ENTERPRISE

Job	Number of Teachers	Hours		
		Total	Range	Mean
Determining the amount to grow	5	16.0	1-6	3.2
Locating the field site	4	11.0	1-6	2.8
Procuring the seed	5	5.5	.5-2	1.1
Preparing the seed bed	5	5.5	.5-2	1.1
Inoculating the seed	5	5.5	.5-2	1.1
Fertilizing	5	6.5	.5-2	1.3
Planting	5	5.5	.5-2	1.1
Controlling weeds	4	5.0	1-2	1.2
Controlling insects and diseases	4	7.0	1-3	1.8
Harvesting	5	6.0	1-2	1.2
Drying and storage	4	5.0	1-2	1.2
Marketing	5	5.5	.5-2	1.1
Keeping and using records	4	6.0	1-2	1.5
Total hours		90		
Percent of total hours for all enterprises		3.6		

or oil to take care of years when hay would be more profitable than beans. It can be seen that this enterprise was allocated only 3.6 percent of the total time used by teachers.

Several teachers indicated they felt crop pest control should be taught in conjunction with the affected enterprises. It can be seen in Table XXII that five teachers showed large amounts of time used in teaching jobs in crop pest control. The range was from 1.5 to 3.8 hours. One teacher definitely taught these jobs with other enterprises in his program.

Only two-thirds of the teachers felt that feeding farm livestock should be considered as a separate enterprise. As shown in Table XXIII only four teachers reacted to this part of the survey. It can be seen from this table that the jobs listed required relatively large amounts of teaching time. This would indicate the importance of these jobs in a program of work.

Table XXIV shows a wide variation of amounts of time used in teaching small grain jobs. The range of one to eight hours spent on "determining the crops and acreage" should indicate the importance of the possibilities of this enterprise in certain sections of the county. Small grain was an enterprise of minor importance in the county as shown by only 2.8 percent of the total time being allocated to this enterprise.

The sheep enterprise was considered by only one-third of the teachers, as shown in Table XXV. Several teachers indicated by comments that sheep had possibilities in Hardin County, but at present there are very few flocks in the county.

TABLE XXII

INSTRUCTIONAL HOURS USED IN TEACHING
THE CROP PEST CONTROL ENTERPRISE

Job	Number of Teachers	Hours		
		Total	Range	Mean
Getting acquainted with pest situation	5	19	2-6	3.8
Identifying the common pest and injuries	5	15	1-5	3.0
Studying pests and injuries in the field	4	11	2-5	2.8
Getting acquainted with the leading pesticides	5	8	1-2	1.6
Planning a pest control program	5	10	1-3	2.0
Selecting and procuring suitable equipment	4	6	1-2	1.5
Applying control methods	4	6	1-2	1.5
Checking the effectiveness of control measures	4	6	1-2	1.5
Total hours		81		
Percent of total hours for all enterprises		3.3		

TABLE XXIII

INSTRUCTIONAL HOURS USED IN TEACHING
THE FEEDING FARM LIVESTOCK ENTERPRISE

Job	Number of Teachers	Hours		
		Total	Range	Mean
Getting acquainted with essential feed nutrients	4	15	2-6	3.8
Determining the local feed and feeding situation	4	7	1-3	1.8
Understanding the digestive system of farm animals	4	11	2-3	2.8
Measuring the usefulness of available feeds	3	5	1-2	1.7
Determining a ration for a given animal or herd	4	7	1-2	1.8
Planning a feeding program for a given farm	4	10	1-4	2.5
Following sound husbandry practices	4	10	1-4	2.5
Fitting an animal for sale or show	3	7	1-3	2.3
Checking the worth of a feeding program	3	4	1-2	1.3
Total hours		76		
Percent of total hours for all enterprises		3.1		

TABLE XXIV

INSTRUCTIONAL HOURS USED IN TEACHING THE SMALL GRAIN ENTERPRISE

Job	Number of Teachers	Hours		
		Total	Range	Mean
Determining the crops and acreage	4	13.0	1-8	3.2
Locating the field site	3	4.0	1-2	1.3
Procuring the seed	4	5.0	1-2	1.2
Preparing the seed bed	4	5.0	1-2	1.2
Fertilizing the crop	4	5.0	1-2	1.2
Sowing the seed	4	4.5	.5-2	1.2
Handling the companion crop	4	4.5	.5-2	1.2
Using crop for winter grazing	4	4.5	.5-2	1.2
Harvesting the crop	4	4.5	.5-2	1.2
Curing and storing the crop	4	4.5	.5-2	1.2
Disposing of the crop	3	4.0	1-2	1.3
Producing certified seed	3	4.0	1-2	1.3
Keeping and using records	4	7.5	.5-4	1.9
Total hours		70		
Percent of total hours for all enterprises		2.8		

TABLE XXV

INSTRUCTIONAL HOURS USED IN TEACHING THE SHEEP ENTERPRISE

Job	Number of Teachers	Hours		
		Total	Range	Mean
Determining the type and scope of business	2	7	2-4	3.0
Selecting and procuring breeding stock	2	4	2-2	2.0
Breeding the ewes	2	4	2-2	2.0
Caring for ewes during gestation	2	4	2-2	2.0
Caring for ewes and lambs at lambing time	2	6	2-4	3.0
Caring for ewes and suckling lambs	2	3	1-2	1.5
Castrating and docking the lambs	2	4	2-2	2.0
Selecting and procuring feeder lambs	2	3	1-2	1.5
Fattening lambs and sheep for market	2	3	1-2	1.5
Controlling parasites	2	3	1-2	1.5
Controlling diseases	2	3	1-2	1.5
Shearing the flock	2	6	2-4	3.0
Marketing the wool	2	3	1-2	1.5
Marketing the mutton	2	3	1-2	1.5
Butchering for home use	1	1	1-1	1.0
Keeping and using records	1	1	1-1	1.0
Selecting rams	1	1	1-1	1.0
Determining whether to buy or grow rams	1	1	1-1	1.0
Total hours		60		
Percent of total hours for all enterprises		2.4		

Table XXVI shows that teachers do not consider farm woodlot a major enterprise in their schools. This does not agree with the value placed on this enterprise by farmers and indicates a need to reconsider the value of this enterprise in the teacher's program of work. One-half of the teachers considered some of the jobs in this enterprise, and none considered all of the jobs. Most of the jobs received one hour of instruction by one-third of the teachers.

The okra enterprise on a commercial basis found a place with only two teachers. Other teachers indicated they would teach the jobs in okra in conjunction with the garden enterprise. As can be seen in Table XXVII, okra jobs required from one-half to four hours instructional time. It can also be seen from this table that the okra enterprise received only 1.5 percent of the instructional time for all enterprises.

Table XXVIII shows an enterprise that received a very small amount of time for instructional purposes. Only one-third of the teachers considered sweet potatoes as a separate teaching enterprise. One teacher indicated a need for organizing a cooperative to market sweet potatoes. The range in time requirements was one-half to three hours for teaching jobs in the sweet potatoes enterprise.

Table XXIX indicates an enterprise in which only one-half of the teachers gave instruction as a separate enterprise. Small amounts of time were required for the Irish potato enterprise. The average time required for teaching jobs was less than one hour. Technical people, as well as one-half of the teachers, desired to teach this enterprise in conjunction with other garden crops under a garden enterprise.

TABLE XXVI

INSTRUCTIONAL HOURS USED IN TEACHING
THE FARM WOODLOT ENTERPRISE

Job	Number of Teachers	Hours		
		Total	Range	Mean
Planning the timber needs on a farm	2	5	1-4	2.5
Locating areas on a farm best suited to trees	2	2	1-1	1.0
Identifying forest trees[a/]	-	-	-	-
Measuring a stand of timber	2	5	2-3	2.5
Improving a stand of timber by partial cutting	3	5	1-2	1.7
Procuring seedlings	2	2	1-1	1.0
Setting seedlings	3	3	1-1	1.0
Thinning and pruning	2	2	1-1	1.0
Measuring growth in trees	2	3	1-2	1.5
Protecting trees from fire	2	2	1-1	1.0
Protecting trees from insects and diseases	2	3	1-2	1.5
Logging saw timber	2	2	1-1	1.0
Handling freshly sawed lumber	2	3	1-2	1.5
Marketing farm woodlot products	2	3	1-2	1.5
Selecting, cutting, and marketing pulpwood	2	3	1-2	1.5
Preserving fence posts as timbers	2	3	1-2	1.5
Using the farm woodlot for wildlife	3	3	1-1	1.0
Keeping and using records	2	3	1-2	1.5
Total hours		52		
Percent of total hours for all enterprises		2.1		

a/No teacher considered this as a teaching job.

TABLE XXVII

INSTRUCTIONAL HOURS USED IN TEACHING THE OKRA ENTERPRISE

Job	Number of Teachers	Hours		
		Total	Range	Mean
Determining amount to grow	2	7.0	3-4	3.5
Locating the field site	2	3.0	1-2	1.5
Selecting and procuring the seed	2	3.0	1-2	1.5
Planting	2	2.5	.5-2	1.1
Preparing the seed bed	2	2.5	.5-2	1.1
Fertilizing	2	3.0	1-2	1.5
Controlling weeds	2	2.5	.5-2	1.2
Controlling insects and diseases	2	2.5	.5-2	1.2
Harvesting	2	3.0	1-2	1.5
Grading and Marketing	2	5.0	2-3	2.5
Keeping and using records	2	3.0	1-2	1.5
Total hours		37		
Percent of total hours for all enterprises		1.5		

TABLE XXVIII

INSTRUCTIONAL TIME USED IN TEACHING THE SWEET POTATO ENTERPRISE

Job	Number of Teachers	Hours		
		Total	Range	Mean
Determining the amount to grow	2	5.0	2-3	2.5
Locating the field site	2	2.0	1-2	1.0
Producing the plants	2	2.5	.5-2	1.1
Preparing the field site	2	1.5	.5-1	.8
Fertilizing the crop	2	1.5	.5-1	.8
Planting the crop	2	1.5	.5-1	.8
Controlling weeds	2	2.0	1-1	1.0
Controlling insects and diseases	2	2.0	1-1	1.0
Harvesting the crop	2	3.0	1-2	1.5
Curing and storing the crop	2	4.0	2-2	2.0
Grading and marketing the crop	2	2.0	1-1	1.0
Keeping and using records	2	1.5	.5-1	.8
Organizing a local cooperative to market sweet potatoes	1	2.0	2-2	2.0
Total hours		30.5		
Percent of total hours for all enterprises		1.2		

TABLE XXIX

INSTRUCTIONAL TIME USED IN TEACHING THE IRISH POTATO ENTERPRISE

Job	Number of Teachers	Hours		
		Total	Range	Mean
Determining the amount to grow	3	4.5	5-2	1.5
Locating the field site	3	2.5	.5-1	.8
Procuring the seed	3	2.5	.5-1	.8
Preparing the seed bed	3	2.5	.5-1	.8
Fertilizing	3	2.5	.5-1	.8
Planting	3	2.5	.5-1	.8
Controlling weeds	3	2.5	.5-1	.8
Controlling insects and diseases	3	4.0	1-2	1.3
Harvesting and storing	3	3.0	1-1	1.0
Grading and marketing	2	2.5	.5-2	1.2
Keeping and using records	2	2.5	.5-2	1.2
Total hours		31.5		
Percent of total hours for all enterprises		1.2		

Table XXX shows that the pepper enterprise required very little instructional time. Only one-third of the teachers considered it a separate enterprise for teaching purposes. This enterprise received only one percent of the total time for all enterprises. It is a new enterprise, only two years old in Hardin County.

Table XXXI reveals that the same conditions apply to the tomato enterprise that apply to the pepper enterprise. Tomatoes are produced primarily for home use. This enterprise is considered an old one.

Table XXXII lists only the job analyses for the cabbage enterprise as no teacher considered it as a separate teaching unit; therefore no instructional time was required for it. It is shown here to present job analyses only.

Summary

Instructional time varied from school to school as well as from job to job. "Determining possibilities" required the most time of any job and was found most frequently throughout all enterprises. Teachers and technical people indicated the value of combining certain jobs of related enterprises for better use of time as well as to do a more effective job of teaching.

Soil conservation personnel emphasized the importance of including soil conservation jobs in the total program by integrating them into the enterprise where they would add to the program and be most effective. The need for including soil conservation jobs in a vocational program of work in Hardin County was considered of major importance by soil conservationists in the county.

TABLE XXX

INSTRUCTIONAL HOURS USED IN TEACHING THE PEPPER ENTERPRISE

Job	Number of Teachers	Hours		
		Total	Range	Mean
Determining amount to grow	2	3.5	.5-3	1.8
Locating the field site	2	1.5	.5-1	.8
Selecting and procuring seed	1	1.0	1-1	1.0
Preparing the seed bed	2	1.0	.5-.5	.5
Fertilizing	2	2.5	.5-2	1.2
Setting the plants	2	2.5	.5-2	1.2
Controlling weeds	1	0.5	.5-.5	.5
Controlling insects and diseases	1	0.5	.5-.5	.5
Harvesting	2	1.5	.5-1	.8
Grading and marketing	2	4.0	1-3	2.0
Keeping and using records	1	1.0	1-1	1.0
Making a hot bed	1	3.0	3-3	3.0
Total hours		22.5		
Percent of total hours for all enterprises		1.0		

TABLE XXXI

INSTRUCTIONAL HOURS USED IN TEACHING THE TOMATO ENTERPRISE

Job	Number of Teachers	Hours		
		Total	Range	Mean
Determining the amount to grow	2	3.0	1-2	1.5
Locating the field site	2	1.5	.5-1	.8
Procuring the plants	2	1.5	.5-1	.8
Preparing the field site	2	1.5	.5-1	.8
Fertilizing	2	1.5	.5-1	.8
Planting	2	2.0	1-1	1.0
Controlling weeds	2	1.5	.5-1	.8
Controlling insects and diseases	2	3.0	1-2	1.5
Staking	2	1.5	.5-1	.8
Pruning	2	1.5	.5-1	.8
Harvesting	2	1.5	.5-1	.8
Grading and marketing	2	1.5	.5-1	.8
Keeping and using records	2	2.5	.5-2	1.1
Total hours		24		
Percent of total hours for all enterprises		1.0		

TABLE XXXII

JOB ANALYSES FOR THE CABBAGE ENTERPRISE
NO INSTRUCTIONAL HOURS INDICATED
BY TEACHERS

Job
Determining amount to grow
Locating the field site
Procuring the plants
Preparing the seed bed
Fertilizing
Setting the plants
Controlling weeds
Controlling insects and diseases
Harvesting
Grading and marketing
Keeping and using records

The county agent placed emphasis on a job well done by allocating sufficient time for instructional purposes. Also greater results could be expected if jobs were done on a seasonal basis with instruction preceding the doing by a few days.

The average time required for most jobs was found to be one to two hours. The range was one-half to twelve hours instructional time.

Teachers did not place the same emphasis on all jobs, nor was every job considered by all teachers. This bears out the importance of planning a program based on the needs of the students and community.

CHAPTER IV

TIME DESIGNATION FOR DOING AND TEACHING JOBS

Discussion of Findings

This chapter deals with the time designation for doing and teaching jobs in the various enterprises. One very important decision that must be made by vocational agriculture teachers is when jobs should be taught. In order to determine when jobs should be taught, one must consider all the jobs from a composite approach. This is necessary in order to make selection of jobs that are more demanding of time designation than are others. The most common difficulty expressed by teachers in course building was matching the job to the correct time required for teaching the job. Several teachers indicated difficulty in balancing jobs so there would be an equal distribution of jobs each month to actually match the teaching time available.

The fifteen selected farmers were asked to indicate by month or months when they did the jobs in each enterprise. Some of the jobs were considered more important than others, and some were not considered as jobs at all by these farmers. This is shown in the following tables by the total numbers not equaling fifteen, as would be the case if all fifteen farmers indicated a specific month for doing each job. It should also be noted that many of these farmers did not indicate one month for doing a specific job but may have indicated two or even twelve months. An example of this is the job "keeping and using records" which farmers expressed as a monthly job and not as a job that could be accomplished in any given month.

Technical people were asked to comment on time designation for these various jobs. Many suggestions and helpful ideas were advanced during discussions with these people. The investigator combined the farmers' indications and the technical people's ideas and presented the results in the following tables under the heading of the "most acceptable time to do jobs." From this information a time was designated as the most effective time to teach jobs. This is also shown in the following tables. As a comparison, one other factor was presented in the following tables and that was the time teachers teach these jobs.

Table XXXIII indicates that jobs 1 through 8 and job 15 require specific teaching time. Some of the jobs in the poultry enterprise were considered of only minor importance by farmers. "Determining type and scope" was considered as a job by only two farmers. One of these two farmers was a cage egg producer, while the other was a graduate of institutional-on-farm training. The remaining thirteen farmers did not consider this poultry job as their flocks were primarily for home use. Only one of the fifteen farmers produced poultry commercially. Fourteen farmers were producing poultry primarily for home use; therefore very little emphasis was placed on marketing. This is reflected in job 11, "marketing eggs," as only ten farmers responded to this job. This table also shows that jobs 9 through 14, and jobs 16 and 17 require equal emphasis as to time designation. These jobs could be taught just as effectively in one month as the other and should be used to balance teaching time with available time in slack seasons. Four of the six teachers indicated by survey that they taught the jobs in the poultry

TABLE XXXIII. TIME DESIGNATION FOR DOING AND TEACHING THE JOBS IN POULTRY ENTERPRISE

JOBS	Any month	MOST ACCEPTABLE TIME TO DO JOB — Fifteen Farmers[a]												MOST EFFECTIVE TIME TO TEACH JOB												TIME TEACHERS TEACH JOB — Six Teachers											
		JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
1. Determining type and scope							1	2										*	**									1		2	2	1					
2. Choosing breed		1			1		1	3	8		1								*	**								1		1	3	1					
3. Procuring chicks			1			1		1	11	9	4	1							*	**								1		1	3	1					
						1			3	11	10	2								*	**								1			3	1					
										2	3	2	1							*	**								1			1	3					
								1	2	6	8	8	8						**	*									1			1	2	1	1			
										3	1										*				**	1	1	1	1			1				1		
					6	6	3	2	2	3	2	1	2	**													1	2	1		1		1					
					3	3	3					1	1				Optional										1		1				1	1	1		1
												1					Optional										2		1				1	1		1	
													1				Optional									1	2	1	2	1	1	1	2	1	2	2	1
									1								Optional												1					1			
13. Controlling diseases	4								1								Optional									1	1	2	1	2	1	1	1	2	2	2	1
14. Controlling parasites	7																Optional									1	2	1	1	2	1	1	1	2	1	2	1
15. Marketing poultry meat										1	4										**	*				1	2	1	2	2	1	1	1	1	2	1	1
16. Managing the poultry enterprise	1																Optional									2	2	2	2	3	2	2	2	3	4	2	2
17. Keeping and using records	7																Optional									1	3	1	1	3	1	1	1	3	3	1	1
18. Organizing for egg marketing																											1										

a/And University of Tennessee Specialists

enterprise on a seasonal basis, whereas the other two teachers followed the enterprise procedure. In the poultry enterprise teachers indicated they taught the jobs very close to the time found to be the most effective.

Table XXXIV exhibits a seasonal distribution for teaching jobs in the beef cattle enterprise. Five of the six teachers followed a seasonal pattern while one indicated teaching this enterprise on the enterprise basis. Technical people in Animal Husbandry stressed the importance of teaching the beef cattle jobs as closely to the actual time farmers do these jobs as possible. Emphasis was also placed on grouping closely related jobs for teaching in sequence. It was also pointed out that time for field trips should be provided for jobs in this enterprise. Several teachers indicated time for field trips on jobs, such as "castrating and dehorning" and "feeding the breeding herd," which further provides proof for using field trips in the teaching job in the beef cattle enterprise. It can be seen in Table XXXIV that farmers do not place emphasis on all jobs. More farmers responded to jobs 7, 11, 12, and 15 than some of the other jobs, such as 2, 10, and 13. This indicated, in addition to time designation, the job importance which should be considered in course building by teachers. Five of the jobs in this enterprise require no specific time designation and can be taught any month or months in the year. If grouping of jobs is desired for teaching, Table XXXIV shows that a greater proportion of the jobs could be taught most effectively in the fall months of September through December.

Table XXXV presents a rather uniform time designation by farmers in doing the jobs in the swine enterprise. Farmers tend to follow a

TABLE XXXIV. TIME DESIGNATION FOR DOING AND TEACHING THE JOBS IN THE BEEF CATTLE ENTERPRISE

JOBS	Any month	MOST ACCEPTABLE TIME TO DO JOB — Thirteen Farmers: JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	MOST EFFECTIVE TIME TO TEACH JOB: JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	TIME TEACHERS TEACH JOB — Six Teachers: JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
1. Determining the number and scope	1							1											*								1	1	1	2		2					
2. Procuring breeding stock				4	4					1	1			**											*				1	2			1	1			1	
3. Breeding heifers and cows	1	6	6								1	2	2	6								*	**	**				1				2		1			3	
4. Care at calving time	1						1	1	1	2	9	8	7					*	**													1		3		1	1	
5. Feeding the breeding herd	1				1	1	1	6	6	6						*	**										1	1	1	1	2	3	5	1	1	1	1
6. Feeding growing stock	2					1	1	3	4	4	1								*								1	1	1	2	1	1	4	1	1	1	2
7. Providing drinking water	6											1	1					Optional									1	2	1	1	2	1	2	1	1	1	1
8. Providing suitable housing					1		1	6	7	7								*	**								1	1	1	1	2	3	3	1	1	1	1
9. Procuring feeders					6	6	4							*	**													1	1	2			1					
10. Castrating and dehorning						1	5			1	2	4	2	1				**					*					1		1	1	1	1	1				
11. Controlling diseases	5										1	1						Optional									1	1	2	2	1	3	2	1	1	1	1
12. Controlling parasites	5								1	1	1	1						Optional									1	1	1	2	1	3	2	1	1	1	1
13. Butchering for home use						1	1			1								*												1	1	1	2				
14. Marketing beef animals					7	3	1	1			2	2		3		**												1	1		2	1	1		1			
15. Conserving the manure	7						1											Optional												1		1	1	2				
16. Keeping and using records	2						1											Optional									2	2	2	3	2	3	3	3	2	2	2	2
17. Fitting and showing								2								*	**											1	1	1			1				
18. Judging beef cattle																			*											1	1	1	1	1				

TABLE XXXV. TIME DESIGNATION FOR DOING AND TEACHING THE JOBS IN THE SWINE ENTERPRISE

JOBS	Any month	MOST ACCEPTABLE TIME TO DO JOB — Thirteen Farmers: JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	MOST EFFECTIVE TIME TO TEACH JOB: JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	TIME TEACHERS TEACH JOB — Six Teachers: JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
1. Determining type and scope	1																Optional									1	4	1		1								
2. Selecting breeding stock	6			1	1	5				1	1	1	5			*	**						*	**		1	2	1	1		1							
3. Selecting feeder hogs	7					1					1						Optional									1	2		1		1	1		1				
4. Breeding sows and gilts	1			7	3	5		1	1		4	4	6	*	**							*	**				2	1		1		2		1				
5. Caring for the sow during gestation		5	5	6	7	7	5		1	1	5	4	1		*	**						**					2	1		1	1	1	2				
6. Caring for the sow at farrowing time	2	5	3	1	2	1		8			1	2	7	**					*	**					*		2	1	1				3					
7. Caring for sow and litter during suckling	2	5	3	5		4	1	3	7	7	3	1	5		*	**					*	**					2	1	1				1	1				
8. Castrating the pigs	3		2	1	5	5	1		1	1	1	5	5				**						**			1	2	1		1				2	1			
9. Controlling diseases	9		1	1				1	1								Optional									2	3	1	2	2	1	1	3	1	2	1	1
10. Controlling parasites	9		2					1		1	1		1				Optional									4	2	1	3	1	1	1	1	1	2	2	1
11. Feeding for meat production	10	1	1	1		1			1		1	1					Optional									2	3	1	2	2	2	1	1	1	1	1	1
12. Providing suitable shelter and equipment	2	1							1											*					*	2	4	1	2	2	1	1	1	1	1	1	1
13. Marketing hogs	1	4					3	4			2		3						*						*		1	2	1		1			1			
14. Butchering and preserving pork						2	11	4	4	1							**	*										2		2	1							
15. Simplifying labor requirements		1								1																1	2	4	1	1	1	1	1	1	1	2	1
16. Keeping and using records						1	1																			1	1	2	2	2	2	2	1	1	1	1	1
17. Registering pure bred stock																										2	1	2	1	2	2	2	2	1	1	1	1
18. Judging market hogs																											1	2			1						

precise breeding program of producing two litters per sow per year. These sows are usually bred to farrow in late fall and early summer in order to market hogs when prices are usually highest. July was indicated as a desirable month for marketing hogs. Technical people also emphasized the importance of two litters per year with breeding time for the July market. One teacher indicated teaching these jobs on an enterprise basis while the other five definitely taught these jobs on a seasonal basis. It is revealed in Table XXXV that most jobs requiring specific time designation could be taught at two different times of the year. The reason for this is that some jobs occur twice during a given year; however, this does not indicate that the jobs must be taught at both times of occurrence. Five of the jobs required no definite time designation and could be taught effectively at any time during the school year. These jobs should be adjusted to the total program of work where they would be most effective. Teachers indicated job 1 as an August job, probably due to the need for setting up supervised farming programs early in the year. It can be seen in this table that teachers followed a uniform pattern of teaching jobs in the swine enterprise. Most of these jobs were taught during the month of August; however, several jobs may have been taught twice during the year. Jobs 15 through 18 were not considered direct jobs by farmers; therefore no time designation was indicated for these jobs. Teachers should adjust these jobs to meet the needs of their individual students.

Farmers indicated dairy production for home use rather than for marketing. All fifteen responded to the majority of jobs in this enterprise as portrayed in Table XXXVI. Two teachers followed the enterprise

TABLE XXXVI. TIME DESIGNATION FOR DOING AND TEACHING THE JOBS IN THE DAIRY ENTERPRISE

JOBS	MOST ACCEPTABLE TIME TO DO JOB — Fifteen Farmers													MOST EFFECTIVE TIME TO TEACH JOB												TIME TEACHERS TEACH JOB — Six Teachers										
	Any month	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
1. Determining the type and scope									1	2											*						2	1		1		1	2				
2. Procuring cows	4				2	4				3	2					**					*					1	2	2	1	1	1	2	2	1	1	1	1
3. Providing replacements	2			1	3	5									*	**										1	2	1	1	1	1	1	2	1	1	1	1
4. Breeding heifers and cows	1	3			1	5	2					2	4			*	**							*		1			1			2	2				
5. Care at calving time	2	1	3						2	5									*	**									3			1	1		1		
6. Providing suitable shelter					1	3	11										*	*								1	1	1	2	1	1	3	2	1	1	1	1
7. Feeding for economical milk production	11					1	4	3									Optional									1	1	1	1	2	2	2	2	1	1	1	1
8. Providing drinking water	14						1	1									Optional									1	1	1	2	1	1	2	2	1	1	1	1
9. Milking and caring for milk	14	1	1	1								1					Optional									1	2	1	1	3	1	2	2	1	1	1	1
10. Feeding during dry period	1	1	5						2	4				**						*						1	1	2	1	1	2	2	2	2	2	2	1
11. Controlling diseases	7	2	2	2	2	2	2	3	1								Optional									1	1	1	2	2	1	3	2	1	1	1	1
12. Controlling parasites		7	7			9						7					*									1	1	1	2	2	1	2	2	1	1	1	1
13. Marketing dairy products	5							1	1								Optional									1	1	2	1	2	1	2	2	1	1	1	1
14. Disposing of surplus stock	2			3	4										*											1	1	1	2	2	1	2	1	1	1	1	1
15. Raising dairy calves	8		1	1	1	2	2	2									Optional											1	1		1	1	1				
16. Selecting and managing the herd sire	1																Optional									1	2	1	1	1	2	2	1	2	1	1	1
17. Conserving the manure	14	1	1		1	1	1	1	1	1	1	1	1				Optional									1	1	1	1	1	3	1	2	2	1	1	1
18. Keeping and using records	2					6	4										Optional									2	2	2	2	3	2	2	3	3	2	2	2

procedure for teaching the dairy enterprise while the remaining four indicated teaching on a seasonal basis. Technical people stressed the importance of timely breeding for equal milk distribution, also breeding to provide sufficient dairy products during winter months when production is usually lowest. As illustrated in Table XXXVI most jobs in the dairy enterprise can be taught most effectively during the fall months; however, many jobs are not timely and could be taught at any time during the year. Teachers indicated a wide distribution of time designation for teaching dairy jobs.

As specified in Table XXXVII only two farmers responded to jobs in the soils enterprise. Both of these farmers had been exposed to instruction in soils during institutional-on-farm training. The remaining thirteen farmers indicated they were not familiar with these jobs but expressed the need for them in a farming program. Three of the five teachers followed a rather close enterprise basis for teaching the jobs in this enterprise. Technical people expressed the same idea and pointed out the value of teaching the jobs in sequence. In the opinion of the investigator, the jobs in the soil enterprise are not timely and should be adjusted into a program of work during a slack season.

As shown in Table XXXVIII jobs in the cotton enterprise were done in a precise manner by farmers. With the exception of jobs 1, 10, and 15, farmers indicated specific times for doing each job. This means that jobs in the cotton enterprise are timely and should have definite times provided for teaching these jobs. It should be noted that farmers were uniform and definite in time designation for doing jobs in the cotton

TABLE XXXVII. TIME DESIGNATION FOR DOING AND TEACHING THE JOBS IN THE SOILS ENTERPRISE

JOBS	Any month	MOST ACCEPTABLE TIME TO DO JOB — Two Farmers: JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	MOST EFFECTIVE TIME TO TEACH JOB: JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	TIME TEACHERS TEACH JOB — Five Teachers: JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
1. Determining origin and derivation of soils							1	1	1	1							Optional									1		1		1					1	1	
2. Learning commonly used soil terms	1																Optional									1			1	1					1	1	
3. Determining soil properties and characteristics																	Optional										1		1	1					1	1	
4. Studying soil profile																	Optional										1			2					1	1	
5. Naming soils as to series and type																	Optional										1			2					1	1	
6. Studying soils maps																	Optional										1			2					1		
7. Studying crop requirements	1		1	1	1					1	1	1	1				Optional										1			1	1					1	
8. Matching crops to soil on a farm	1		1	1	1												Optional															1	1			1	
9. Planning a cropping system for a farm			1	1	1	1		1	1	1	1						Optional													1			2	1		1	
10. Planning lime and fertilizer requirement	1		1	1	1	1		1	1	1	1						Optional													1			1		1	1	

TABLE XXXVIII. TIME DESIGNATION FOR DOING AND TEACHING THE JOBS IN THE COTTON ENTERPRISE

JOBS	MOST ACCEPTABLE TIME TO DO JOB (Twelve Farmers)												MOST EFFECTIVE TIME TO TEACH JOB												TIME TEACHERS TEACH JOB (Six Teachers)											
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
1. Determining the possibilities									1	1										*										1		1	4			
2. Selecting the land			5	7	8			2	1	2				**	*				*												2	3	1		
3. Selecting variety and procuring seed			3	1				6	7	9									**											1	2	2	1		
4. Preparing seed bed				1						11	9									*	**									1	1	3	1		
5. Fertilizing the crop										9	11									*	**										2	2	2		
6. Planting the cotton crop										2	12	2									**	*			1						2		3		
7. Thinning the stand										1	7	6									*	**			1						1	1	2		
8. Controlling weeds	8										11	10									*	**			1						1	1	2		
9. Controlling insects	10	7									3	11									*	**			3	1	1				1		2		2
10. Controlling diseases												1				Optional									3	1	1	1	1		1	2	1	2	2	1
11. Harvesting		1	9	9									*	**											2		1				1			1	
12. Ginning the crop		10	9	5	5								**	*												1	3							1	1	
13. Determining the grade and staple		6	7	5	2								**	*												1	3							1	
14. Marketing the lint and seed		6	7	5	4	3							**	*												2	2	1						1	
15. Keeping records																Optional									1	2	1	1	1	1	1	1	1	1	1	1

enterprise. Table XXXVIII indicates that teachers followed very closely the times when farmers do the jobs. Teachers should reconsider job 2, however, for timeliness as most farmers indicated they did this job in the fall months. Only one farmer indicated "determining possibilities" as a job. The remaining farmers indicated this job was determined by set acreage allotment for cotton in Hardin County. Teachers should be able to establish effective time designation from Table XXXVIII for teaching jobs in the cotton enterprise.

Table XXXIX portrays a very definite pattern in doing and teaching the jobs in the home garden enterprise. Most of the jobs are done in the early spring months--February through April. Jobs 4, 5, 6, 7, 10, 11, and 12 are also done in the summer months. It can be seen from this table that many of the home garden jobs could be taught in January. Three of the teachers indicated that they taught these jobs in January or February which further emphasized the most effective times for teaching these jobs. It should be pointed out that several of the remaining enterprise jobs are taught in conjunction with the jobs in the home garden enterprise.

Farmers do jobs in the pasture enterprise at two distinct times of the year. This is shown in Table XL by jobs occurring in the fall and spring months. It can be seen that the majority of farmers considered pasture jobs important in their farming program. It should be pointed out that all jobs were not responded to by these farmers. Job 2 was not considered by any farmer but from discussions with these farmers the investigator got the impression that practically every farmer does this

TABLE XXXIX. TIME DESIGNATION FOR DOING AND TEACHING THE JOBS IN THE HOME GARDEN ENTERPRISE

JOBS	MOST ACCEPTABLE TIME TO DO JOB (Fifteen Farmers)												MOST EFFECTIVE TIME TO TEACH JOB												TIME TEACHERS TEACH JOB (Six Teachers)											
	Any month	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
1. Determining the location and size								1									Optional															2	4				
2. Selecting the crops to be grown									2	13	7	5								*	**											2	4				
3. Planning the cropping program								1	7	2										**												1	4	1			
4. Preparing the seed bed			4			2		1	11	10	7			*	*					**												1	4	1			
5. Fertilizing			4			2		1	11	13	8			*						**												1	3	2			
6. Controlling weeds		5	4						12	13	10	13	10							**				*								2	2				
7. Controlling insects and diseases		6	5						7	13	13	10	12							**				*								1	2	2			
8. Staking, pruning, and other special practices											1	9	3									**										1	3	1		1	1
9. Irrigating		1										1	1									*			2							1	1				
10. Harvesting	4	6	4	4	2				2	2	8	9	9							*	**	**			1	1	1	1			1			2	1	1
11. Preserving		17	7	11	3						4	13	12									*	**		1	1	1	1			1			1	2	
12. Storing		3		1							1	2	2									*	**		1	2	1	1	1	1	1	1				
13. Keeping and using records							1	1									Optional									1					1		1			

TABLE XL. TIME DESIGNATION FOR DOING AND TEACHING THE JOBS IN THE PASTURE ENTERPRISE

JOBS	Any month	MOST ACCEPTABLE TIME TO DO JOB — Fifteen Farmers: JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	MOST EFFECTIVE TIME TO TEACH JOB: JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	TIME TEACHERS TEACH JOB — Six Teachers: JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
1. Determining the possibilities						1	1	1									*									1	1		1	1							
2. Evaluating a given pasture																	Optional										1		2		1							
3. Locating the pasture land on a farm		1	2	2	6	4	4		4	2	1	1	1			**	*			*						1	2		1					1				
4. Controlling weed and brush growth		9	7	4					1			1	9										**				2		1			1				1	
5. Utilizing excess growth	1	4								4	4	4	6							*	**						1							1	1	1	
6. Controlling insects and diseases													3											*		2	2	1	2	1	1	1	1	1	1	1	1
7. Deciding on the pasture plants to use		2	1	1	4			1	2	5				**						**						2	1		1					1			
8. Fertilizing at seeding time		4	8	2					2					*												1	2		1					1			
9. Seeding a pasture			9	8	2				3	5	5			**							*					1	1	1	1					1			
10. Managing the grazing	10			1						1																	1		2								
11. Providing supplementary grazing		2	3	2	1			1	1	1			2						*					*		1	1			1		1				1	
12. Deciding if, when and how to irrigate												1	1				Optional									1	1										1
13. Maintaining the productivity of a pasture		1							1								Optional									1	2										1
14. Keeping and using records																	Optional									1	1	1	1	1	1	1	1	1	1	2	1

job sometime during the year. Table XL also characterizes the teachers viewpoints as to times for teaching jobs in the pasture enterprise. Even though teachers were not precise in the month for teaching specific jobs, they followed very close to when farmers did the jobs. Five of the six teachers indicated that they taught pasture jobs seasonally while one teacher followed the enterprise procedure.

Table XLI displays a very close agreement as to when the corn jobs are done by farmers as well as when these jobs are taught by teachers. Two teachers taught all the jobs of the corn enterprise in March, with the remaining four teaching the majority of the jobs in the other spring months.

Table XLII exposes a considerable amount of disagreement as to when farmers do jobs and when teachers teach jobs in the soil management enterprise. Only three farmers responded to these jobs. One teacher indicated that he taught these jobs in conjunction with other related jobs. Technical people also advocated the combination of these jobs with other related jobs. The investigator feels that these jobs should be taught during slack periods when other jobs are not demanding specific time.

Table XLIII shows a wide distribution of times when farmers do jobs in the hay enterprise. This is due probably to all kinds of hay crops being included in this enterprise. Teachers on the other hand have a rather close time indication for teaching these jobs. Two of the teachers indicated that they taught all the jobs during the month of November while one teacher specified the month of May. The other three teachers followed a seasonal procedure.

Table XLIV proves that the strawberry enterprise is considered of minor importance in Hardin County and that only four farmers and five

TABLE XLI. TIME DESIGNATION FOR DOING AND TEACHING THE JOBS IN THE CORN ENTERPRISE

JOBS	MOST ACCEPTABLE TIME TO DO JOB — Fourteen Farmers													MOST EFFECTIVE TIME TO TEACH JOB												TIME TEACHERS TEACH JOB — Six Teachers											
	Any month	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
1. Determining possibilities									1	1										*									1		1	2	2			
2. Locating the field site				6	7	7			4	2	1				*					*								1			1	1	3			
3. Selecting and procuring the seed									7	10	1									**										1	1		4			
4. Fertilizing										1	7	12	7									**											2	3	1		
5. Preparing the seed bed										1	8	13	5									**											2	2	2		
6. Planting the crop											1	1	6										**										2	2	2		
7. Controlling weeds											2	12	12									**	*										2	2	2		
8. Controlling insects and diseases											1	1	1									*				1	1	1	1	1	1	1	2	4	2	1	1
9. Harvesting the crop			2	2	11	9									**	*											1		1			1	2			
10. Storing the crop				1	12	12										**											1			1		1	2			
11. Disposing of the crop	7			1	6	4										**										1	1	2	1	1	1	1	2	3	1	1	1
12. Evaluating practices used							1										Optional													1		2	2		1	
13. Keeping and using records																	Optional									1	1	1	1	1	1	1	1	1	1	1	1

TABLE XLII. TIME DESIGNATION FOR DOING AND TEACHING THE JOBS IN THE SOIL MANAGEMENT ENTERPRISE

JOBS	MOST ACCEPTABLE TIME TO DO JOB													MOST EFFECTIVE TIME TO TEACH JOB												TIME TEACHERS TEACH JOB											
	Any month	Three Farmers																								Five Teachers											
		JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
1. Getting acquainted with life in the soil	1																Optional											1		1				1	1	
2. Determining the crop adaptation of the soil								1	1								Optional												1	1					2		
3. Planning a cropping system				2	2	2		1	1	1	1	1					Optional												2		1			1		
4. Using mechanical water control measures	2	1	1	1					1	1	1	1	1				Optional									1	1		1						1	
5. Saving and using manure	2								1	1							Optional												1	1				1	1	
6. Adding lime and fertilizer				1	1	1				2	1	1	1				Optional									1			1	1				2		
7. Maintaining organic matter in the soil	1			1	2												Optional										1		1		1			1	1	
8. Preparing a suitable seed bed			1	2	2	1				2	2	1	1				Optional									1			1						1	
9. Cultivating to control weeds		1									1	2	1				Optional									1			1						1	
10. Harvesting crops with animals			1	2	1												Optional									1			1							1
11. Improving productivity from year to year	1																Optional												1			1				

TABLE XLIII. TIME DESIGNATION FOR DOING AND TEACHING THE JOBS IN THE HAY ENTERPRISE

JOBS	MOST ACCEPTABLE TIME TO DO JOB — Fourteen Farmers												MOST EFFECTIVE TIME TO TEACH JOB												TIME TEACHERS TEACH JOB — Six Teachers											
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
1. Determining possibilities			1		1			1	1							Optional													3					1	1	
2. Locating the field site				5	9	4		2	6	1					**				*										2			1		1	1	
3. Selecting variety and procuring seed								4	2										*										2		1		2		1	
4. Preparing the seed bed									8	6	4	4								**									2			1	1	1	1	
5. Fertilizing									1	2																			2			1	1	1	1	
6. Inoculating seed									1	5	4	4								**									2			1	1	1	1	
7. Seeding									1	3	1								**										2			1	1	1	1	
8. Controlling diseases and insects										1										*					1	1	1	1	3	1	1	2	1	1	2	1
9. Maintaining the crop											1										*								2			1			1	
10. Harvesting	2	12	8	4									**												1	1			2						2	
11. Storing	1	10	8	4									**													2			2						2	
12. Marketing					1	1	1	1							*											1	1		2						1	

TABLE XLIV. TIME DESIGNATION FOR DOING AND TEACHING THE JOBS IN THE STRAWBERRY ENTERPRISE

JOBS	MOST ACCEPTABLE TIME TO DO JOB — Four Farmers												MOST EFFECTIVE TIME TO TEACH JOB												TIME TEACHERS TEACH JOB — Five Teachers											
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
1. Determining the amount to grow						1	1										*	*	*	*									1		1	2	1		
2. Locating the field site						1	1	1									*	*	*										1		1	2	1		
3. Procuring the plants							1											*												2		2	1		
4. Preparing the field site							1	2											*						1							1	2	1		
5. Fertilizing the crop								2											*									1					3	1		
6. Setting the plants							1	2	1										*												1		3	1		
7. Controlling weeds	1								1	1	2	2									*	**											3	2		
8. Thinning the plants	1	1										1											*								1		2	1		
9. Mulching the crop					1	1										*											2		1			2			
10. Controlling insects and diseases								1	1										*								1					2	2		
11. Harvesting the crop										1	2	1									*	**					1					3	2		
12. Grading and marketing the fruit										1	1										*											3	1		
13. Renovating the bed	1	1																					*	*		1	1		1			2			
14. Keeping and using records							1	1											*							1			1			1	2			

teachers responded to this section of the survey; however, many farmers produced a few rows of strawberries in their gardens for home use. It should be pointed out that a market was established for strawberries in 1952 which may change the importance of this enterprise in the future. Two teachers followed the enterprise procedure in teaching the jobs in the strawberry enterprise. These two teachers designated March and April for teaching jobs in this enterprise. As designated in Table XLIV most jobs are taught in the early spring months. This follows very closely to the pattern of doing the jobs as displayed by four farmers. One teacher indicated that he did not teach this enterprise in his school.

Farmers placed very little emphasis on jobs in the home orchard enterprise as exhibited in Table XLV. This can be accounted for by farmers expressing considerable uncertainty in producing fruit in the county. It can be seen, however, that farmers were in agreement as to when jobs should be done. This should indicate specific times for teaching these jobs. There was also considerable agreement by teachers in teaching home orchard jobs as shown by this table. One teacher does not teach this enterprise in his school. Two teachers teach all jobs during January and March.

Table XLVI shows considerable agreement by farmers in doing jobs in the soybean enterprise but exhibits disagreement by teachers as to when the jobs are taught. However, the majority of the teachers teach jobs in this enterprise preceding or at times specified by farmers for doing these jobs.

TABLE XLV. TIME DESIGNATION FOR DOING AND TEACHING THE JOBS IN THE HOME ORCHARD ENTERPRISE

JOBS	MOST ACCEPTABLE TIME TO DO JOB (Nine Farmers)												MOST EFFECTIVE TIME TO TEACH JOB												TIME TEACHERS TEACH JOB (Five Teachers)											
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
1. Determining possibilities					1	3	2										*												1	1	2	1	1			
2. Selecting the site						2	2										*														4		1			
3. Selecting varieties					2	3	3										*														3		2			
4. Preparing land for planting							3	3										*												1	2		2			
5. Setting the trees								2	2										*												1		4			
6. Fertilizing							2	4	4										*												1		3			
7. Cultivating										2	2	2									*										1		2	1		
8. Selecting system of training																Optional															1	2	1			
9. Pruning					1	1	2	5									*														1	2	1			
10. Controlling diseases								1	1										*												1		1	1		
11. Thinning									1							Optional															2		1			
12. Harvesting fruit	4	4	2	1																				**							1		1	1		
13. Grading and packing	1	1																						*							1		1	1		
14. Marketing		1											*																		1		1	1		

TABLE XLVI. TIME DESIGNATION FOR DOING AND TEACHING THE JOBS IN THE SOYBEANS FOR OIL ENTERPRISE

JOBS	MOST ACCEPTABLE TIME TO DO JOB (Four Farmers)												MOST EFFECTIVE TIME TO TEACH JOB												TIME TEACHERS TEACH JOB (Five Teachers)											
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
1. Determining the amount to grow				1	2										**													1	1			2	1		
2. Locating the field site				2	2					1					*													1	1	1			1		
3. Procuring the seed								1	2	2									*	*								1	1		1		2		
4. Preparing the seed bed											2	2										*							1	1		1	2		
5. Inoculating the seed											2	2										*							1		1	1	2		
6. Fertilizing											2	2										*							1			1	2		
7. Planting											2	2										*							1			2	2		
8. Controlling weeds	2										2	2										*							1				3		
9. Controlling insects and diseases																													1			1	2		
10. Harvesting			2	2										*												1			1				3		
11. Drying and storing																										1			1				2		
12. Marketing				2											*													1	1				3		
13. Keeping and using records																Optional										1			1				2		

Only five farmers and five teachers reacted to the crop pest control enterprise even though farmers and teachers expressed the importance of this enterprise. Most farmers practice pest control measures on their farms. One teacher pointed out that he taught these jobs in conjunction with other related enterprise jobs. Table XLVII also specifies considerable disagreement by farmers and teachers in doing and teaching jobs in the crop pest control enterprise. Four teachers indicated that they taught these jobs seasonally while one teacher taught most of the jobs in the month of January.

As exhibited in Table XLVIII, farmers demonstrated that jobs were not timely in the feeding farm livestock enterprise. Five teachers were in close agreement with these farmers by teaching these jobs during slack seasons. One teacher does not teach these jobs as a separate enterprise but in conjunction with other related enterprise jobs.

Table XLIX displays very close time designation for doing and teaching jobs in the small grain enterprise by farmers and teachers. There is considerable disagreement as to importance of this enterprise by teachers. Only fifty percent of the teachers responded to this enterprise. This should indicate that small grain is not a county-wide enterprise but one that is grown in certain localities.

Sheep production in Hardin County is limited to a very few farmers. Only nine farmers were producing sheep in 1954 as reported by the 1955 census of agriculture. None of the fifteen farmers included in this study were producing sheep, as can be seen in Table L. However, fourteen

TABLE XLVII. TIME DESIGNATION FOR DOING AND TEACHING THE JOBS IN THE CROP PEST CONTROL ENTERPRISE

JOBS	MOST ACCEPTABLE TIME TO DO JOB (Five Farmers)												MOST EFFECTIVE TIME TO TEACH JOB												TIME TEACHERS TEACH JOB (Five Teachers)											
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
1. Getting acquainted with pest situation						1	1	1									*								2	1					2					
2. Identifying the common pest and injuries						1	1	1									*								2	2	2	1			1					
3. Studying pests and injuries in the field	1	1								1	1	1									*				2	2										
4. Getting acquainted with pesticides	1	1								1	1	1									*				1	2				1	1					
5. Planning a pest control program						1	1										*									2					2			1		
6. Selecting and procuring suitable equipment						1	1										*									2					2					
7. Applying control methods	1	1									1	1									*					1	1				1		1			
8. Checking effectiveness of control measures	1	1									1	1									*						2	1								

TABLE XLVIII. TIME DESIGNATION FOR DOING AND TEACHING THE JOBS IN FEEDING FARM LIVESTOCK ENTERPRISE

JOBS	Any month	MOST ACCEPTABLE TIME TO DO JOB — Five Farmers												MOST EFFECTIVE TIME TO TEACH JOB												TIME TEACHERS TEACH JOB — Six Teachers											
		JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
1. Studying essential feed nutrients	2																Optional													2	2							
2. Determining local feed situation	5																Optional													3	1							
3. Studying digestive system of animals	2																Optional													1		2						
4. Measuring value of available feeds	2																Optional													2		1						
5. Determining rations	4																Optional													2		2						
6. Planning the farm feeding program	4																Optional													2		1		1				
7. Following sound husbandry practices	2																Optional													2				2				
8. Fitting an animal for sale and show	2																Optional										1	1	1										
9. Checking the worth of a feeding program	1																Optional													1			1		1			

TABLE XLIX. TIME DESIGNATION FOR DOING AND TEACHING THE JOBS IN THE SMALL GRAIN ENTERPRISE

JOBS	MOST ACCEPTABLE TIME TO DO JOB													MOST EFFECTIVE TIME TO TEACH JOB												TIME TEACHERS TEACH JOB											
	Any month	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
				Six Farmers																								Three Teachers									
1. Determining the crops and acreage				4	4	4									**											1	3		1								
2. Locating the field site				4	4	4									**													2	1								
3. Procuring the seed				4		4									**											1	2		1								
4. Preparing the seed bed					4	6									*	*										1	2		1								
5. Fertilizing the crop					4	6									*	*										1	2		1								
6. Sowing the seed				5	7	6									**											1	2		1								
7. Handling the companion crop																**										1	1		3								
8. Using for winter grazing						5			7	8							**											1	3								
9. Harvesting the crop											5	6	6									**							1	1				1	1		
10. Curing and storing the crop													4											*					1	1				1	1		
11. Disposing of the crop	3																Optional												1		1		1				
12. Producing certified seed																	Optional									1			1		1						
13. Keeping and using records																	Optional									1			1	1	1						

TABLE L. TIME DESIGNATION FOR DOING AND TEACHING THE JOBS IN THE SHEEP ENTERPRISE

JOBS	MOST ACCEPTABLE TIME TO DO JOB (Fourteen Farmers)												MOST EFFECTIVE TIME TO TEACH JOB												TIME TEACHERS TEACH JOB (Two Teachers)											
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
1. Determining the type and scope																									1									1		
2. Selecting and procuring breeding stock																									1									1		
3. Breeding the ewes																										1								1		
4. Caring for ewes during gestation																												1						1		
5. Caring for ewes at lambing time																														1					1	
6. Caring for ewes and suckling lambs																														1					1	
7. Castrating and docking the lambs																														1					1	
8. Selecting and procuring feeders																											1								1	
9. Fattening for market																												1							1	
10. Controlling parasites																										1									1	
11. Controlling diseases																											1									
12. Shearing the flock																																		1	1	
13. Marketing the wool																																			2	
14. Marketing the mutton																																		1	1	
15. Butchering for home use																																		1		
16. Keeping and using records																																	1			
17. Selecting rams																									1											
18. Procuring rams																									1											
19. Determining possibilities				6	12	10	14																								1					

responded to the job of determining possibilities. Two of the six teachers did not teach any jobs in this enterprise. This could mean that the sheep enterprise would have to be developed before it would demand much time designation for teaching.

Only three jobs in the farm woodlot enterprise received any consideration by farmers as shown in Table LI. This enterprise also received teaching time by only one-half of the teachers. As this was a major enterprise in "number of farms producing farm woodlots," it may be that farmers and teachers should reconsider time allocation and designation for this enterprise.

The okra enterprise is only five years old in Hardin County but the past two years have been without an attractive market. This is probably the reason for no more time allocation and designation for jobs in this enterprise by farmers and teachers. As specified in Table LII most jobs are done by farmers in late spring. There is very close agreement by farmers as to when these jobs are done. Two teachers were of wide disagreement as to when the jobs should be taught. This wide disagreement by teachers was indicated by teachers expressing uncertainty of this enterprise and whether it should be taught on a possibility or established basis. This can be seen in Table LII by one teacher designating all teaching time to the month of May. Four teachers pointed out that they did not teach this enterprise in their schools.

Irish potatoes are produced primarily for home use in Hardin County. Table LIII displays very close agreement by farmers as to when to do jobs in this enterprise. Three teachers were also in close agreement as to time designation for teaching jobs in the Irish potato enterprise. One

TABLE LI. TIME DESIGNATION FOR DOING AND TEACHING THE JOBS IN THE FARM WOODLOT ENTERPRISE

JOBS	MOST ACCEPTABLE TIME TO DO JOB — Five Farmers												MOST EFFECTIVE TIME TO TEACH JOB												TIME TEACHERS TEACH JOB — Three Teachers											
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
1. Planning the timber needs																Optional									1						1					
2. Locating time areas																Optional														1	1					
3. Identifying forest trees																Optional									1											
4. Measuring a stand of timber																Optional									1			1								
5. Improving stand by partial cutting																Optional													2		1					
6. Procuring seedlings																Optional													1		1					
7. Setting seedlings																Optional														1	1	1				
8. Thinning and pruning																Optional														1	1					
9. Measuring growth in trees																Optional									1					1						
10. Protecting trees from fire	5	5	5	5	5				5	5	5	5								**							1				1					
11. Protecting trees from insects and diseases																Optional									1						1					
12. Logging saw timber	2	2	2	2	2	1	1	1	1	1													*				1				1					
13. Handling freshly sawed lumber																Optional											1				1					
14. Marketing farm woodlot products																Optional									1						1					
15. Selecting and marketing pulpwood																Optional												1			1					
16. Preserving fence post and timber								4	4										*									1			2					
17. Keeping and using records																Optional												1			1					

TABLE LII. TIME DESIGNATION FOR DOING AND TEACHING THE JOBS IN THE OKRA ENTERPRISE

JOBS	MOST ACCEPTABLE TIME TO DO JOB (Five Farmers)												MOST EFFECTIVE TIME TO TEACH JOB												TIME TEACHERS TEACH JOB (Two Teachers)											
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
1. Determining the amount to grow								1	1	4										**	**									1				1	
2. Locating the field site				1	1					4											*									1				1	
3. Selecting and procuring the seed									1	1	3									*	*									1				1	
4. Planting											5											**								1				1	
5. Preparing the seed bed										2	5										**									1				1	
6. Fertilizing										1	5										*									1				1	
7. Controlling weeds	5										5	5									**									1				1	
8. Controlling insects and diseases												1											*							1				1	
9. Harvesting	5	5	5																					**						1				1	
10. Grading and marketing	1	1	1										**																	1				1	
11. Keeping and using records																Optional														1				1	

TABLE LIII. TIME DESIGNATION FOR DOING AND TEACHING THE JOBS IN THE IRISH POTATO ENTERPRISE

JOBS	MOST ACCEPTABLE TIME TO DO JOB (Fifteen Farmers)												MOST EFFECTIVE TIME TO TEACH JOB												TIME TEACHERS TEACH JOB (Three Teachers)											
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
1. Determining the amount to grow								4	6										**											1	1	1			
2. Locating the field site								4	3										**												2	1			
3. Procuring the seed								1	6										**	*											2	1			
4. Preparing the seed bed								1	6										**	*											2	1			
5. Fertilizing								1	6	1									**	*										1	2				
6. Planting								1	5										**	*											2	1			
7. Controlling weeds									1	5	5								*	**											1	2			
8. Controlling insects and diseases										5	6	4								**												3			
9. Harvesting and storing	6																							**								1		1	1
10. Grading and marketing	1																							**								1			1
11. Keeping and using records																Optional																1			1

teacher does not teach this enterprise while two teachers teach the jobs in conjunction with other related enterprise jobs. The most effective time to teach jobs in this enterprise would be January and February which can be interpreted from Table LIII.

Two-thirds of the teachers do not teach jobs in the sweet potato enterprise. Farmers specified sweet potato production only for home use. Table LIV proves that most sweet potato jobs are done by farmers in April and May. This table also shows that teachers teach most jobs in late winter and early spring.

As shown in Table LV the tomato jobs are taught by only two teachers as a separate enterprise. Most teachers expressed teaching these jobs in conjunction with other related enterprise jobs. Thirteen farmers responded to this enterprise and indicated most production goes for home use. All jobs in this enterprise were closely followed in time designation, both in doing by farmers and teaching by teachers.

The pepper enterprise has only two-year development in Hardin County; therefore time designation will depend on the growth and progress of this enterprise. Farmers indicated, as shown in Table LVI, that most jobs are done in late spring and early summer in pepper production and marketing.

The jobs in the cabbage enterprise did not receive any teaching time as exhibited in Table LVII. Eleven farmers indicated cabbage production for home use. This should indicate that cabbage jobs should be taught probably under the garden enterprise jobs.

TABLE LIV. TIME DESIGNATION FOR DOING AND TEACHING THE JOBS IN THE SWEET POTATO ENTERPRISE

JOBS	MOST ACCEPTABLE TIME TO DO JOB (Twelve Farmers)												MOST EFFECTIVE TIME TO TEACH JOB												TIME TEACHERS TEACH JOB (Two Teachers)											
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
1. Determining the amount to grow										3	1										*									1				1		
2. Locating the field site								1		5											*										1			1		
3. Producing the plants										3	4										*											1		1		
4. Preparing the field site										3	5										*											1		1		
5. Fertilizing the crop										2	5										*												1	1		
6. Transplanting the crop										1	6										*											1		1		
7. Controlling weeds	1										6	6										*										1		1		
8. Controlling insects and diseases																Optional																1		1		
9. Harvesting the crop				6											*																	1		1		
10. Curing and storing				3	2										*																	1		1		
11. Grading and marketing															*											1								1		
12. Keeping and using records																Optional									1	1	2	1	1	1	1	1		1		
13. Organizing local marketing cooperative																																1				

TABLE LV. TIME DESIGNATION FOR DOING AND TEACHING THE JOBS IN THE TOMATO ENTERPRISE

JOBS	MOST ACCEPTABLE TIME TO DO JOB (Thirteen Farmers)												MOST EFFECTIVE TIME TO TEACH JOB												TIME TEACHERS TEACH JOB (Two Teachers)											
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
1. Determining amount to grow								2											*												1			1		
2. Locating the field site								1	1	4									*	*	*										1		1			
3. Procuring the plants								1	2	3									*	*											1		1			
4. Preparing the field site									5	1	1								**												1	1				
5. Fertilizing									1	5	2	1							**												1	1				
6. Transplanting										4	3									**											1	1				
7. Controlling weeds										1	1	1									*										1	1				
8. Controlling insects and diseases	1									2	5	5									*										1	1				
9. Staking											2											*									1	1				
10. Pruning																							*								1	1				
11. Harvesting	1	1										1											*								1	1				
12. Grading and marketing																								**							1	1				
13. Keeping and using records																Optional															1	1				

TABLE LVI. TIME DESIGNATION FOR DOING AND TEACHING THE JOBS IN THE PEPPER ENTERPRISE

JOBS	MOST ACCEPTABLE TIME TO DO JOB — Five Farmers												MOST EFFECTIVE TIME TO TEACH JOB												TIME TEACHERS TEACH JOB — Two Teachers											
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
1. Determining amount to grow								1	1	3									*	*	*							1				1			
2. Locating the field site										4	1										**							1				1			
3. Selecting and procuring seed								1	1		3											**							1						
4. Preparing the seed bed										1	4										*	*							1				1		
5. Fertilizing									1	1	3										**										1	1			
6. Planting	3										2	1									*												2			
7. Controlling weeds	3										1	1											*	**							1					
8. Controlling insects and diseases																Optional															1					
9. Harvesting	4	1																						*	1								1			
10. Grading and marketing																								*	1								1			
11. Keeping and using records																Optional									1											
12. Making a hot bed																				*												1				

TABLE LVII. TIME DESIGNATION FOR DOING AND TEACHING THE JOBS IN THE CABBAGE ENTERPRISE

JOBS	MOST ACCEPTABLE TIME TO DO JOB (Eleven Farmers)												MOST EFFECTIVE TIME TO TEACH JOB												TIME TEACHERS TEACH JOB (No Teachers)											
	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
1. Determining amount to grow							1	4											*																	
2. Locating the field site							1	5											*																	
3. Procuring and setting plants								4	1											*																
4. Preparing the seed bed								5	1											*																
5. Fertilizing								5	1											*																
6. Transplanting								4	1											*																
7. Controlling weeds									5	5	2	1									*															
8. Controlling insects and diseases									3	3	4	2									*															
9. Harvesting											5	5										*														
10. Grading and marketing											1	1										*														
11. Keeping and using records																Optional																				

Summary

There was a very close agreement as to when farmers do jobs on their farms. This is not true, however, in the case of when teachers specified jobs should be taught. From data shown in this chapter, the following things can be interpreted:

1. A majority of the jobs done by farmers showed definite clusters in certain months.
2. Many of these jobs were checked in several different months.
3. Crop jobs showed a more definite pattern by season while livestock jobs portrayed less timeliness.
4. Some jobs are optional as to time designation for doing and teaching these jobs.
5. Some jobs that are continuous and not time demanding were not checked.
6. Two teachers followed the enterprise procedure for teaching while four teachers taught on the seasonal basis.
7. Teachers followed a more seasonal pattern for teaching crop jobs than livestock jobs.
8. Only one enterprise did not receive any teaching time by teachers.

CHAPTER V

SUMMARY, IMPLICATIONS, AND SUGGESTIONS

Summary

The Problem

This study attempted to determine solutions to the following course building problems in vocational agriculture:

1. What productive enterprises are common in Hardin County.
2. What job breakdown is most suitable for these productive enterprises.
3. How much instructional time should be allocated for teaching each job.
4. What month or months should each job be taught.
5. How this information can be used in course building.

Review of Literature

In planning a course of study, the teacher should be guided by five major factors: (1) the purpose for which the course is to be offered--its aim, (2) the characteristics and needs of those who are to take the course, (3) the educative environment of these persons, (4) sources of information available, and (5) the requirements or demands of the vocation to which the learning is to be put. In addition to these five guides, there are six steps that, if followed, should be most helpful in developing course calendars in vocational agriculture. Following is a summary of these steps:

1. Make a list of the farm enterprises to be included in each year's instruction. Determine other essential units to

include in the program, such as acquainting pupils with vocational agriculture, supervised farming, F.F.A. and N.F.A. activities, and related occupations.

2. Determine the number of days to allot to each enterprise and unit by years.
3. Divide these enterprises and units into problem areas to be taught.
4. Estimate the number of days to devote to each problem area.
5. Decide on the year and month to teach each problem area, keeping in mind the seasonal order of teaching.
6. Prepare a monthly layout of problem areas.

Method of Procedure

The investigator used the following procedure in conducting this study:

1. Reviewed recent related literature.
2. Discussed problems in course building with teacher trainers.
3. Made up a list of productive enterprises.
4. Made a job breakdown of these enterprises.
5. Further examined enterprises by checking census of agriculture and talking with vocational agriculture teachers and farmers.
6. Surveys of prepared enterprises with job breakdown were presented and personally discussed with agricultural workers, fifteen selected farmers, and other interested agricultural people in Hardin County. Surveys were distributed to these people for completion and comments.

7. Interviewed eight technical people for their comments and suggestions, six vocational agriculture teachers, one soil conservationist, one county agent, two former assistant vocational agriculture teachers, and fifteen selected farmers participating in this study.

Enterprises and Job Breakdown

The most common productive enterprises found in Hardin County were corn, cotton, pasture, hay, garden, swine, beef cattle, poultry, dairy, soils, soil management, small grain, soybeans, strawberries, crop pest control, orchard, feeding livestock, Irish potatoes, sheep, tomatoes, sweet potatoes, okra, farm woodlot, pepper, and cabbage. Four of the above enterprises are not considered true productive enterprises but were included due to their direct relations with the other enterprises.

Each productive enterprise was broken down into nine or more jobs. Each of these jobs constitutes a normal teaching unit and is considered a problem within itself.

A list of these jobs was presented in chapter III.

Instructional Hours

This study indicates that time consumed by teachers in teaching jobs ranged from one-half to twelve hours. Other things found in this study are:

1. The average time required for teaching most jobs was one to two hours.
2. Teachers did not place the same emphasis on all jobs in amounts of instructional time.

3. "Determining possibilities" required the most time of any job and was found frequently throughout all enterprises.
4. Teachers teach only a portion of the jobs listed in the twenty-five enterprises.
5. Only nine of the twenty-five enterprises were taught by all teachers. The cabbage enterprise was not considered as a teaching unit by a single teacher.
6. Several teachers combine garden enterprises and teach as a garden enterprise.
7. Technical people in agronomy and horticulture advised the combination of some related jobs in similar enterprises as single teaching units.

Time to Do and Teach the Jobs

There was close agreement by farmers as to when to do jobs. Teachers expressed different opinions, however, in when to teach jobs. Evidence of this was by farmers indicating jobs being done in definite clusters in certain months and by four teachers following seasonal procedure while two teachers practiced the enterprise methods of teaching.

Some of the things shown in this study are:

1. Most jobs were designated as done by farmers over a period of several different months.
2. Crop jobs showed a more definite pattern by farmers in doing and teachers in teaching than did the livestock jobs.
3. Some jobs have optional time designation for teaching.

4. Many jobs are done monthly by farmers but were not checked as being done by farmers in this study.
5. Certain jobs require specific times for instructional purposes and should be given priority in time designation.

Implications

If the following implications are followed by vocational agriculture teachers in Hardin County, course building should be simplified as well as effective:

1. Select enterprises from students' enterprise job calendars and practices being carried out in the community.
2. Array these enterprises according to importance in teaching time.
3. Develop a list of enterprises and units to be included in each year's program. This list should be based on the farming programs of the students, the F.F.A. program of work, and the farm mechanics needs of the students.
4. Decide how much time should be allotted to each enterprise by job.
5. Specify by month when each job should be taught. The teaching time should precede by a few days the actual time of doing the job by farmers and as seasonably as possible. Certain jobs were found to be more seasonal than others; therefore the most seasonal jobs should be given priority.

6. Make a monthly layout of jobs to be taught.
7. Then organize a course of study for the total vocational agriculture program.

Following the above implications should permit a cross-sectional plan that would provide flexibility in meeting pupils' needs and interests, encourage gradation and distribution of course materials in keeping with successive levels of understanding as each boy gains maturity and experience, and make possible the organization of activities which approximates a farm-as-a-whole approach to the study of agriculture.

Suggestions

Teachers should be able to improve their effectiveness in planning course calendars by following these suggestions:

1. Carefully study the twenty-five enterprises indicated in this study, as well as any additional enterprises being produced by farmers in the community, to determine their importance in the instructional program.
2. Evaluate the job breakdown by enterprise in this study in terms of meeting students' needs and interests. These job breakdowns appear adequate for any vocational agriculture program in Hardin County but may be rearranged to better suit individual departments.
3. The information indicated in this study as the most effective time to teach jobs, which was obtained from farmers and technical people, should be sufficiently sound on which to base teaching time.

4. Instructional hours can be advantageously developed from data presented in the chapter on instructional hours.
5. Use this data as a source of suggestions, keep records of time actually used, and adjust future plans into a more effective teaching unit.
6. Offer effective guidance and assistance to students in planning individual job calendars. These job calendars should be advantageous to teachers in the following ways:
   a. Determine what jobs are to be done.
   b. Determine what jobs have already been studied.
   c. Determine current jobs to study.
   d. Determine time to study jobs.
   e. Help student to set up his program and encourage planning by the student.

Suggested Studies

1. A study to continue this project by further investigation and development of the problem as to:
   a. Enterprise importance.
   b. Job breakdown.
   c. Time designation for teaching jobs.
   d. Compiling this and additional information into a teaching plan.
2. A study to adopt these findings to other similar areas.
3. A study to evaluate the usefulness of information obtained in this study.

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APPENDICES

APPENDIX A

TO: Teachers of Vocational Agriculture in Hardin County, Tennessee

FROM: Otis Clinton Shelby

Re: Course Building in Vocational Agriculture

I am conducting a research study on Course Building in Vocational Agriculture. My objectives are to determine the proper job breakdown of productive enterprises, when each job should be taught, how much instructional time is needed for each job, and how this information can be used in course building.

Please place hours required under the month or months that each job should be done. Insert in the proper column the number of instructional hours that you would normally use to teach the job. If in your opinion any of the jobs should be re-worded please feel free to do so, also make any comments that you wish or add any jobs that have been left out.

Would you please study the enclosed sheets and return to me upon completion. I would appreciate it if you could fill out the sheets on the spot so I can finish my thesis as soon as possible. I would like to have this information available for teachers by late fall.

Yours very truly,

Otis C. Shelby
Graduate Student
University of Tennessee

APPENDIX B

SURVEY

Vocational Agriculture Teacher and Assistant
Vocational Agriculture Teacher

1. Vocational Agriculture Department used._____

   _____.
2. Years experience in teaching _____.
3. Position: Teacher_____, Assistant Teacher_____.
4. Number of years in which course calendar was prepared_____.
5. Years experience in other related agriculture positions_____.
6. What are the major problems you have encountered in preparing and using course calendars in the past?

7. What suggestions would you make in planning and following a course calendar?

APPENDIX C

FARMER SURVEY

1. Location of farm (community) in Hardin County_____

   _____.

2. Tenure status: Owner_____, Renter_____.

3. Farming experience in this community_____years, other areas of county or state_____years.

4. Type of farming_____

5. Crops and livestock grown (check)

Cotton	_____	Beef Cattle	_____
Orchard	_____	Hogs	_____
Corn	_____	Poultry, egg	_____
Hay	_____	broilers	_____
Garden	_____	Dairy	_____
Farm woodlot	_____	Sheep	_____
Okra	_____		
Peppers	_____		
Strawberries	_____		
Soybean for oil	_____		
Small grain	_____		
Pasture	_____		
Tomatoes	_____		
Irish Potatoes	_____		
Sweet Potatoes	_____		
Cabbage	_____		

6. Size of farm, total acres_____, Cropland acres_____.

7. Level of education_____.

8. Where do or did you obtain information concerning times for doing jobs on your farm?_____

9. Age of farmer_____.

10. Number of sons that have taken vocational agriculture in high school?_____.