

May 10, 1943

To the Committee on Graduate Study:

I am submitting to you a thesis written by William Ernest Robertson entitled "A Study of the Evening School Work in the Karns Community from 1927 to 1942." I recommend that it be accepted for nine quarter hours credit in partial fulfillment of the requirements for the degree of Master of Science, with a major in Agricultural Education.

W. E. Fitzgerald
Major Professor

We have read this thesis
and recommend its acceptance:

J. Bryant Kinsland
L. P. Wythe

Accepted for the Committee

W. E. Smith
Dean of the Graduate School

A STUDY OF THE EVENING SCHOOL WORK IN THE
KARNS COMMUNITY FROM 1927 TO 1942

A THESIS

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

by

William Ernest Robertson

May 1943

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CHAPTER I

INTRODUCTION

Purpose of the Study

The purpose of this study is to learn what evening school work has been done through the vocational agriculture department of the Karns High School in order to determine what improvements could be made in future evening school programs.

In order to make a thorough study of the problem, the following six parts are to be considered: (1) The communities within the Karns school area where evening classes have been taught, (2) The organization of evening schools and the basis for the selection of the courses, (3) The courses taught to the evening classes, (4) The procedures and teaching materials used when teaching the classes, (5) The people who have attended the school, and (6) The supervised farm practices conducted by members of evening classes.

Importance of the Problem

The program of the modern vocational agriculture department is based upon the principle that education is a continuous process, which should carry on through life, and that adults as well as youths may profit by systematic instruction. The evening school instruction in vocational agriculture is designed to meet the needs of the adult farmers so they may be able to increase the efficiency in some particular phase of their farming program and improve their homesteads for better living conditions.

"The effectiveness of a program of instruction in vocational agriculture depends to a large extent on: (1) State supervision of the program,

(2) The training of teachers, (3) Research, and (4) The development of adequate subject matter to be used in giving instructions."¹

The Karns High School vocational agriculture department serves as the agricultural education center for the people of the Karns consolidated school district and as a practice school for the training of teachers for vocational agriculture. The Agricultural Education Department of the University of Tennessee has used the school since 1929 as a cooperating unit. Since the Karns vocational agricultural department serves the above two-fold purpose, the school must provide an adequate place for the continuous education of the rural people and also furnish the prospective teachers with adequate subject matter to be used during their training periods.

The agriculture in Tennessee is characterized by a considerable diversity of crops and livestock. "Differences in the regional distribution of crops and livestock throughout the state give rise to areas with differing types of farming. Fifteen major type-of-farming areas, with numerous sub-areas, are recognized."² They range from the highly commercialized cotton areas to the more diversified commercial-farming areas and the self-sufficing, or small general type. There is also a difference between the small communities of each area.

¹United States Department of the Interior, Agricultural Education Organization and Administration. Office of Education, Vocational Division Bulletin 13, Revised 1939. (Washington: Government Printing Office, 1940), p. 15.

²Tennessee Agricultural Experiment Station, Types of Farming in Tennessee, Bulletin 169, p. 92.

As each community is different from the other, and the people attending classes in one community have different problems and interests from those of another community, each school must develop a program of work based upon conditions which prevail in the community. It is important that the local programs of work at Karns be studied as carefully as possible so that they may provide a foundation upon which to build adequate subject matter material to be used in giving future instruction to the members of the evening classes.

Scope of the Study

This investigation is to be a case study of the evening class work done through the vocational agriculture department of the Karns High School from 1926 through 1942.

It includes only the work done by the department with the adults of the school patronage area who were interested enough in the program to attend the classes. It does include, however, both the men and the women, whenever the women were sufficiently interested in the program to attend the class. The study shows the names of the people who have attended the class during the years for which complete rolls have been kept, and the lessons studied by them. Three lessons were selected and discussed to show the materials and procedures used by the teachers when teaching the lessons. A report of the supervised practices conducted by the members of the above three classes is included to show in a practical way the use which was made by the members of the instruction received in class.

Definition of Terms Used

The term evening school is interpreted by the Federal Authorities to mean--"provisions for instruction to farmers at hours other than those of actual farm work."³

"The national vocational education act states that vocational schools shall provide for directed or supervised practice in agriculture either on a farm provided for by the school or other farm for at least six months per year. 'Practice' is interpreted to mean the use which is made of the instruction received in class."⁴

Evening school then becomes a term used to show the type of instruction offered by the vocational agriculture department with the adult farmers rather than the hour at which the work is done. There is a tendency on the part of some vocational agriculture workers to use the term adult classes rather than evening schools when referring to the work done with adult farmers. In this paper both of the terms will refer to the schools attended by the adult farmers of the Karns community.

Supervising or directing practice is giving encouragement and assistance to individuals as they apply on the home farm the instruction received in the evening school. This supervision should not be thought of as giving orders or directing the work in a definite way, but rather the teacher and member of the class working together to get the practice improved on the farm under actual farming conditions.

³ Federal Board for Vocational Education, Agricultural Evening Schools. Bulletin 89, Revised 1930, p. 1.

⁴ Federal Board for Vocational Education, Supervised or Directed Practice in Evening Agricultural Schools. Monograph 9, October 1930, p. 1.

The term part-time schools as used in the Plans for the Administration of the Smith-Hughes Act in the State of Tennessee 1922-27 was divided into two groups: (a) with adults, and (b) with boys 14-21. The part-time class work with adults was especially designed for adult farmers, but any boy over sixteen was permitted to attend if he were managing a farm. At the present time, the term refers to the type of work done by out-of-school farm boys with the department of vocational agriculture.

Methods of Procedure and Source of Data

In order to make a complete case study of the evening school work of the Karns vocational agriculture department, all available data relating to the classes were assembled. The class roll for the first class was used to secure the names of all individuals still living in the community who had attended this class. One of the leading farmers of the community was visited to secure his personal opinions regarding every school program conducted by the vocational agriculture department. This man has lived in the community all of his life. He was principal of the Karns school for twenty-five years, during which period the vocational department was established in the high school. He also attended the first evening school. Other members of the first evening school were interviewed along with other leading citizens of the community who had attended later evening schools.

With this personal data in regard to the class, from members of the class themselves, each teacher of an evening school in agriculture was interviewed. The teacher of the first evening school, after looking over reports he had made to the state supervisor, furnished the writer additional information in regard to the first evening school and gave his personal interpretation of the above reports and records.

The local data were secured from the files of the Karna vocational department, and have been verified by people acquainted with the program. The available related literature was used to determine the reasons for establishing vocational agriculture departments in rural high schools of America. The Federal Board for Vocational Education bulletins were used to secure the accepted interpretation of terms used by teachers of vocational agriculture. The professional letters sent to all the teachers of agriculture in the state of Tennessee by the Agricultural Education Department of the University of Tennessee were used to determine the courses organized, the lessons taught, and the teaching materials used for the years 1934-35 and 1937-38.

The Smith-Hughes Act

Agricultural evening schools constitute a part of the vocational education program in agriculture promoted by the federal government with the passage of the vocational education act, or Smith-Hughes Act, in 1917. The purpose of the Smith-Hughes Act, as stated in the title, is "to provide for the promotion of vocational education; to provide for cooperation with the states in the promotion of such education in agriculture and the trades and industries; to provide for cooperation with the states in the preparation of teachers of vocational subjects; and to appropriate money and regulate its expenditure."⁵

Section 10 of this act, which provides federal aid for the promotion of vocational agricultural education, says in part "that the

⁵ Smith-Hughes Act, Congressional Record, Vol. 51, Part 10, 63rd Congress, 2nd Session, pp. 9503-9505.

controlling purpose of such education shall be to fit for useful employment, that such education shall be of less than college grade and be designed to meet the needs of persons over fourteen years of age who have entered upon or who are preparing to enter upon the work of the farm or of the farm home; that the state or local community shall provide the necessary plant and equipment determined upon by the state board; that such schools shall provide for directed or supervised practice in agriculture for at least six months of the year."⁶

The George-Deen Act, approved June 8, 1936, by The Congress of the United States, provided for the further development of vocational education in the fields already aided. This act not only provided money for "the extension of vocational education to new communities but the expansion and strengthening of programs already established in order to bring educational opportunities to all who wish to take advantage of them."⁷

History of Evening Class Work in Vocational Agriculture

The agricultural evening school is not new even to America. Sadler states that "by 1850 there were in England and Scotland 112,500 adults in attendance at evening schools."⁸ The classes met two evenings a week during the dull season of the year. The selection of the subject matter was dependent upon the needs of the farming community being served.

⁶United States Department of the Interior, Agricultural Education Organization and Administration. Office of Education, Vocational Division Bulletin 13, Revised 1939, p. 41.

⁷Ibid., p. 1

⁸Fleenor, B. H., Adult Education in Agriculture, State Board for Vocational Education, Topeka, Kansas, p. 13.

Although the agricultural evening school in America is now a part of the Federal government's national program for vocational education, we must not think that we have always had the program. The early American colonies began the use of public lands and funds for the support of educational institutions, but at times there was much opposition. Many believed the individual was responsible for the education he or his children received.

But with the development of community centers there arose the need for an equalization of school privileges. To satisfy this demand, elementary schools were provided. This led to the creation of school districts. These schools were mostly for the teaching of the three R's--yet, some of the leaders saw the need for a broader and more useful education. Franklin, in 1749, recommended a liberal course of study and even suggested that "a little gardening, planting, grafting and inoculating be taught and practiced, and now and then excursions made to neighboring plantations of the best farmers."⁹

The recognized need for the development of vocational education began with the colleges when they attempted to teach people of all ages. As this did not accomplish the desired results, the leaders began to study means of moving or developing schools where education would meet the needs of the mass of people.

In order to do this the colleges became active at the beginning of the twentieth century in developing various forms of extension work. This work led to the passage of the Smith-Lever Act in 1914. In the first report

⁹True, A. C., A History of Agricultural Education in the United States 1785-1925, p. 19.

of this committee made to the Association of Agricultural Colleges they defined the work as follows: "Extension teaching in agriculture embraces those forms of instruction in subjects having to do with improved methods in agricultural production and with the general welfare of the rural population, that are offered to the people not enrolled as resident pupils in educational institutions."¹⁰

When this work did not meet the needs of all the farm people, provisions were made in some states for the teaching of agriculture through separate agricultural schools. The first school of this kind was maintained in close connection with, and sometimes under, the state agricultural college. Other states established district secondary schools of agriculture independent of the higher institutions. Following the district secondary schools, a number of states established county agricultural high schools. With the growth of separate county agricultural high schools there developed a tendency on the part of leaders to place the teaching of agriculture in the rural high schools. The passage of the Smith-Hughes Act in 1917 enabled the states to place vocational agriculture instruction in the rural high schools.

The states eager to secure this Federal aid for the rural high schools immediately set up organizations to meet the requirements of this act. The act required each state to make a plan for the development of vocational agriculture in the rural high schools of the state.

From the Plans for the Administration of the Smith-Hughes Act in the State of Tennessee 1922-27, we find the following quoted section of the program that specifically applies to adult education as set up by the

¹⁰Ibid., p. 171.

state office for each school having a department of vocational agriculture:

"A. The plant and equipment used for the all-day classes shall be available for the use of part-time classes in giving instruction in vocational agriculture.

"B. Unit courses will be used in this type of instruction. It shall consist of not less than twelve lessons to the course. The type unit course will be similar to that given for poultry as outlined in bulletin 63 issued by the Federal Board for Vocational Education.

"C. The instruction will be in the nature of individual problem work with very careful supervision on the part of the teacher. Demonstration and laboratory work will be given during the course.

"D. The teacher of all-day classes of vocational agriculture will hold the part-time classes, and wherever part-time classes are organized his salary will be proportioned between the types of work given.

"E. Every person doing evening school work shall be required to do supervised practice and project work.

"F. Part-time class work is especially designed for adult farmers but any person over sixteen years of age may enter, if operating a farm."¹¹

We find from the above part of the plan that Tennessee wanted to encourage the teaching of vocational agriculture to the farmers of the state. We also find a plan for giving organized instruction to farmers on a part-time basis. The agriculture teacher employed to teach vocational agriculture in the local school thus accepted the state plan and used it as

¹¹Tennessee State Plan of Work to the Federal Board for Vocational Agriculture. Plans for the Administration of the Smith-Hughes Act in the State of Tennessee, 1922-1927, p. 6.

a guide in developing his own program in each local community. Since the Smith-Hughes Act was passed to help states provide organized instruction for farmers, and the state plan included the part-time work for adults in its program, it became the business of local teachers to offer instruction to adult farmers.

The first evening class taught in Tennessee by a teacher of vocational agriculture was at McLemoresville in 1920-21. This class was not reported to the state office on an official report form but a letter was written to the state supervisor describing the work. "The first course offered was on 'Terracing Farm Land' and for this work I met the farmers one hour twice a week for four weeks, making eight classroom periods. The method of instruction was both classroom and field work. In addition to the classroom teaching, two Saturdays were used for field work. At this time each member of the class was given a chance to use the terracing instrument and rod. Teams and plows were available and a few terraces were run to show how the work was done. All of the farmers who completed the course were urged to construct needed terraces on the home farms and without exception this was done. There were fourteen members of this class."¹²

Adult Classes in the Karns Community

The Vocational Agriculture Department was established in the Karns High School in the fall of 1922. The first instructor of vocational agriculture was a half time teacher, teaching in the mornings at Karns High School and in the afternoons at Farragut High School. The first evening

¹²Freeman, G. E., Vocational Agriculture in Tennessee, Thesis, University of Wisconsin, 1924, p. 78.

class at Karns High School was organized January 20, 1927. The teacher of vocational agriculture in the school at that time was born and reared on a farm about one mile south of the school. The Karns school is located in the 9th civil district of Knox County. The school service area extends from the city limits of Knoxville on the Middlebrook Pike to the Clinch River and Hickory Creek area adjoining Anderson County. This service area lies between Farragut High School on the southwest and the Powells High School area on the northeast. There are at the present time about one hundred and seventy-five high school pupils attending the school. There are ten teachers, including the principal.

The high school area (Exhibit 1) includes seven grammar schools that send their eighth grade graduates to Karns. They are: Amherst, Carpenter, Cedar Grove, Ball Camp, Karns, Hardin Valley, and Solway. These schools serve as small local community centers. This fact has a direct effect on the Karns consolidated school, as the pupils' parents consider these local school communities as their community center rather than the high school. The pupils ride to Karns on buses.

The following tables taken from the local survey will show in detail the size of the farms located in the Karns School area.

Table I shows that the average size farm consists of seventy-one and nine-tenths acres. Yet a majority of the farms are smaller than the average. Forty-one of the ninety-three farms surveyed contained less than fifty acres, and thirty-six of the ninety-three have seventy-six acres or more. This leaves only sixteen, or a little less than sixteen per cent, of the total farms within the average size group.

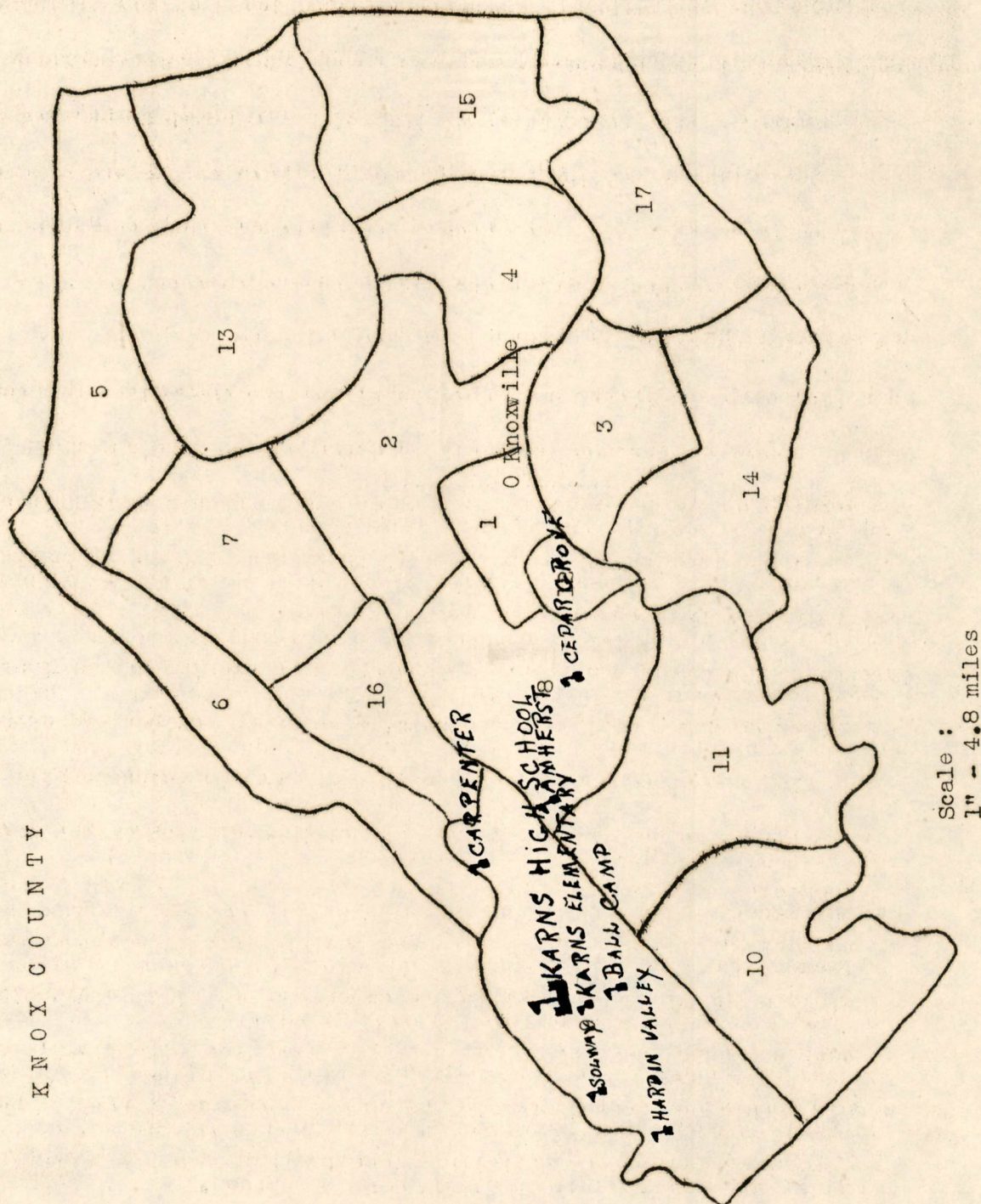


Exhibit 1. Map of Knox County showing service area of Karns High School

TABLE I
SIZE OF FARMS IN KARNS SCHOOL AREA USING THE NINETY-THREE
FARMS SURVEYED IN 1940 AS A BASIS

Number Farms	Average Size	Average
22	1 - 25	348
19	26 - 50	932
16	51 - 75	920
20	76 - 100	1,340
12	101 - 200	2,190
4	201 - above	1,056
All Farms	71.9	6,786

The farmers of the community engage in six major types farming. Table II shows that 53.8 per cent or over one-half of the farms are general, with 30.7 per cent of them dairy farms. The remaining four types represent a relatively small per cent of the total. From these facts we would expect the adult farmers to be interested in the production of general farm crops and livestock.

TABLE II
TYPES FARMING PRACTICED IN THE KARNS COMMUNITY USING THE
NINETY-THREE FARMS SURVEYED IN 1940 AS A BASIS

Type	Per Cent
General	53.8
Dairy	30.7
Part-time	7.0
Truck	3.07
Poultry	3.07
Fruit	2.5

Analysis of the Problem

The major problem is to learn what evening school work has been done through the department of vocational agriculture of the Karns High School. In order to determine the programs, procedures, and accomplishments of the evening class work it will be helpful to consider the following questions:

1. What evening school work has been done in the Karns community from 1927 to 1942?
2. How were the schools organized and what was the basis for the selection of the courses?
3. What courses have been taught?
4. What methods or procedures were used in teaching the classes?
5. Who have attended the classes?
6. What supervised practice has been done?

CHAPTER II

PRESENTATION OF DATA

Evening School Work Taught in the Karns School Area

The First Evening School

The first evening school at Karns High School was organized on January 20, 1927. The teacher, when asked why he attempted the first class, said, "It looked as if I either had to include this kind of work or quit, and I needed to work." The school principal, a man who had been connected with the school for twenty-five years, said, "The evening school was added so the department of vocational agriculture could make a better showing in the state." These two statements show that the evening class work was becoming a recognized part of the vocational agriculture teacher's work. The state department was exerting a good deal of pressure to influence teachers to add this type work to the local school program. The rating card for Departments of Vocational Agriculture, (Exhibit 2) shows one of the means formerly used by the state supervisor to secure the cooperation of the individual teachers. The rating card was in reality a score card for a department of vocational agriculture. It was divided into nine main headings.

Under I. Types of Instruction, we find allotted 80 points. "Types of instruction" was divided into three sections: (1) all day, (2) evening, and (3) day unit or part-time. The standard for a department was two all-day classes, one evening class, and one or more day unit or part-time classes. The perfect score of 40 points, 30 points, and 10 points respectively was allotted to each type class. This made an evening class count $37\frac{1}{2}\%$ or

STATE DEPARTMENT OF EDUCATION
DIVISION OF VOCATIONAL EDUCATION
NASHVILLE, TENNESSEE

17

RATING CARD FOR DEPARTMENTS OF VOCATIONAL AGRICULTURE

Name of School _____ Teacher _____
Scored by _____ Date _____
Official Score _____ Rank _____

	Standard	Perfect	Official
	Score	Score	Score
I Types of Instruction - 80			
*1. All day	2	40	
*2. Evening	1	30	
3. Day-unit or part-time		10	
II Enrollment - 150			
All types	75	150	
III Supervised Practice Program (in operation) 210			
1. No. persons doing supervised practice	75	50	
2. No. persons completing supervised practice last year	75	50	
3. No. of all day boys with supervised practice plans and records on file	40	20	
4. No. of all day boys with supervised practice records and plans of previous year on file	40	20	
5. No. all day boys following long term supervised practice program (must be typical of or developing into a recognized type of farming)	40	40	
6. No. boys owning or renting land for entire training period	40	30	
IV Preparation For and Methods of Instruction - 125			
**1. Annual teaching plan with enterprises analyzed into jobs to be taught on file		40	
**2. A comprehensive farm shop program based on community survey in operation		20	
3. Reference book on each enterprise in the community with duplicates on major enterprises		25	

	Standard	Perfect Score	Official Score
4. Bulletins filed		10	
5. Magazines in duplicate		5	
6. Individual records of farm shop work		5	
7. Three weeks professional improvement		20	
V Physical Equipment - 50			
Class room--			
1. Adequate floor space for classroom (25 sq. ft. per boy)		10	
2. Tables and chairs		5	
3. Filing cabinet with reports filed according to approved state plan		10	
4. Blackboard, cases, racks, and neatness		5	
Shop--			
1. Adequate satisfactory space for (40 sq. ft. per boy)		10	
2. Adequate tools well cared for		10	
VI Group Leadership Activities - 150			
***1. An active F. F. T. Chapter in good standing		30	
**2. Active advisory council		20	
3. Community fair or chapter exhibit at county, state or district fair		15	
4. F. F. T. members with savings accounts or other productive investments	100%	25	
5. Father-son banquet, supervised practice tour, etc.		10	
6. F.F.T. chapter represented at annual convention and summer camp		15	
7. F.F.T. chapter membership in the Farm Bureau		15	
8. Participates in all state contests		20	
VII Publicity Program - 75			
1. Writes and clips 12 local news paper articles		36	
2. A feature article published in some farm journal		15	
3. Narrative and financial report of year's work made to county board, advisory council and district supervisor on file		24	
VIII Evidence of a knowledge of his community and its needs in his program of work-160			
1. Copy of long term community program on file		25	
**2. Annual program on file		25	

	Standard	Perfect	Official
		Score	Score
3. Survey of all farms represented in organized instruction and summary on file (minimum of 50)		25	
4. A follow-up record of former students of vocational agriculture		20	
5. Percentage of former students now farming	100%	25	
6. Teacher's tenure of service in the community	10 yrs.	20	
7. A community map showing service area, and locating persons reached in organized instruction		20	

- * Any teacher having four classes will be allowed 80 points provided one of them is an evening class.
- ** Copies of all items thus marked must be sent to your District Supervisor by or before October 15 each year, or no credit will be allowed.
- *** It is in good standing when it has filed a report of the past year's activities, a copy of its objectives for the present year, a list of its present officers and paid its dues. (All of "***" due in January of each year.)

This is the new rating card for 1931, Study it carefully and see if you can improve the rating of your department.

This represents the State program of Work. I hope you will fit your community program to it as closely as possible.

--D. M. Clements
State Supervisor Voc. Agr.

over one-third of the perfect score given for all types instruction. However, even more significant to the instructor was the fact that the evening class provided an opportunity to increase his enrollment and thus rapidly raise his score, since Item II, Enrollment, includes 150 possible points. A department to be standard was expected to have 75 people enrolled in organized instruction. The average small high school at this time had about 40-50 high school boys enrolled. This left approximately 25-35 pupils short of the standard enrollment. The day unit boys were not counted as they were less than 14 years of age. The evening class could very easily bring the enrollment up to standard and add in this case from 50-70 points to the department's score.

In the third division, III. Supervised Practice Program, 1 and 2 also increased the department's total score when evening class members were included since by carrying out the supervised practice program they added thirty to forty points to the score. Totaling the score of all three divisions, the evening class would add approximately 110 to 125 points to the total score of a department. Thus the evening class could add over 10% to the department's total score since the perfect or total possible score for the whole rating card was only 1000 points. The total score made by a department was secured and shown to each teacher. Then each rating sheet was sent to the state office in Nashville. There the departments were listed with the department having the highest score placed first and the others arranged in order according to the score made. This list was published in a news letter sent to every department in the state, along with the name of the teacher of the department.

While it is true that the score cards did have considerable influence on the organization of evening schools, there were other reasons for their addition. As we noted before, the Smith-Hughes Act¹ provided for the education of people fourteen years of age and over engaged in farming.

In order to serve the adults, or people not in school, a teacher had to organize additional classes. The conscientious teacher trying to do what was expected of him began to consider ways and means of introducing this phase of adult education.

The Number of Years Evening Class Work Has Been Given

Table III shows that during fourteen school years, evening classes have been taught by the teachers of the department of vocational agriculture at the Karns High School. This table also shows that since 1927 there have been only two years in which evening class work has not been offered. This was during the years 1927-28 and 1928-29.

The Schools in which Evening Classes Have Been Held.

The classes have been held at the Karns High School ten years and at the Hardin Valley Elementary School four years. Hardin Valley is the only elementary school that has had an evening school although there are five other communities within the Karns High School service area. The Karns elementary school is located on the campus opposite the Karns High School and is not thought of as a separate community center.

¹U. S. D. I. Agricultural Education Organization and Administration. Office Education, Voc. Div. Bul. 13, Rev. 1939, p. 41.

TABLE III

EVENING CLASS WORK FOR THE KARNS SCHOOL AREA, 1927-42

Teacher of Vocational Agriculture	School Year	School Where Classes Were Held
D. B. Hendrix	1926-27	Karns High School
A. A. Johnson	1927-28	No Class
A. A. Johnson	1928-29	No Class
J. B. Kirkland	1929-30	Karns High School
J. B. Kirkland	1930-31	Karns High School
J. B. Kirkland	1931-32	Karns High School
J. B. Kirkland	1932-33	Karns High School
J. B. Kirkland	1933-34	Karns High School
J. B. Kirkland	1934-35	Karns High School
J. B. Kirkland	1935-36	Hardin Valley Elementary
W. E. Robertson	1936-37	Hardin Valley Elementary
W. E. Robertson	1937-38	Hardin Valley Elementary
W. E. Robertson	1938-39	Karns High School
W. E. Robertson	1939-40	Karns High School
W. E. Robertson	1940-41	Hardin Valley Elementary
W. E. Robertson	1941-42	Karns High School

Organization of Evening Schools

The United States Office of Education in its annual report, refers to the work done by the vocational agriculture departments with adults, as evening schools. The organization of an evening school involves the efforts made to secure enrollment and to determine the course of study. The following data show by years the methods used in securing the enrollment for the Karns evening schools, and how the courses of study for each school were selected.

When attempting to organize the first school, the teacher of vocational agriculture sent out a questionnaire to all farmers of the community to determine the number of men interested in group study. It was also used to find the course desired should the men want to attend an evening class. The questionnaire (Exhibit 3) is unique in that it was written in long hand and all copies needed were run off on a hectograph machine. The letter or questionnaire was introduced by a statement that "we are going to offer a short course in agriculture to the men of this community--free." Notice the word free at the end of the statement. This would seem to indicate that the work was new to the people and the teacher wanted to clarify the cost at the very beginning. This statement was followed by four questions with a blank space left to the right of the question for an answer to each. The next part was a statement asking each man to check the subject he would like to study, giving his first, second, and third choice. There were nine subjects listed from which the men could select. These questionnaires were given to the high school pupils, who were asked to deliver them to the adults of the community. The pupils

DEAR PATRON

we are going to offer a short course in agriculture to the men of this community. Free. Will you please answer the following questions and return to me as soon as possible?

- 1- Would you like to attend an evening class in agr? yes
- 2- Could you attend regularly? yes
- 3- How many times per week would best suit you? 2
- 4- What time of day or night would you prefer to meet? 7 P.M.
- 5- Check the subjects you would like to study, giving first, second and third choice.

- | | | |
|----------------------|------------------|-----------------|
| 1- Dairying <u>X</u> | 5- Hogs <u>X</u> | 9- Truck crops |
| 2- Hogs <u>X</u> | 6- Small grain | 1- Tobacco |
| 3- Horses | 7- Fruit | 2- Melons |
| 4- Poultry | 8- Corn | 3- Strawberries |
| | | etc. |
| | | name others. |

D. B. Hendrix.

W. B. Cobb.

were also asked to return the filled-in questionnaires to the teacher of vocational agriculture. The teacher of agriculture used the returned questionnaires and made a summary (Exhibit 4) to determine the number of people interested and the enterprises they wanted to study. There were evidently six filled in and returned, as this number was used in the summary. Six copies of the questionnaires were also found in the files.

Exhibit 4 shows that the six men answering the questionnaire indicated they would like to attend an evening class and could attend regularly. Five preferred to meet twice a week, while the sixth wanted to meet one time per week. They all preferred the evening from six to eight o'clock. The next point of interest is that four of the six wanted to study hogs as their first choice, yet the evening class was on dairying. When explaining this point the first teacher said, "we did just as we pleased. If we wanted to change the lesson we did so even after the class started." But usually the lessons were selected week by week. One man gave his choice for six of the enterprises listed. He filled in the form for the enterprises showing the order in which he would be interested in studying them. All of the enterprises received at least one vote. The small grain enterprise would not have been chosen if only three choices had been selected.

After this class there were no evening classes held at Karns until 1929. In July, 1929, the Karns High School vocational department was drawn into closer cooperation with the Agricultural Education Department of the University of Tennessee for the purpose of training prospective teachers, there being a verbal understanding to this effect between the Knox County Board of Education and the Staff of the Department of

Would Like to Come	Could Attend Regularly	Times Per Week	Time of Day	Dairy	Hogs	Poultry	Hays	Small Grain	Small Fruits	Truck Crops				
										Melons	Potatoes	Tomatoes	Strawberries	General
1	1	2	7 to 8 p.m.	1	1	1								
1	1	2 or 3	6 p.m.				2			1				1
1	1	1	7 Sat. p.m.	2	1	4	5	6	3		1	1		
1	1	2	Mon. & Thurs.			1			1	1			1	
1	1	2	7 Thurs.	1	1		1							
-	-	-	Mon., Thurs. & Sat.	1	1		1							
1	1	2	7 Sat.			3			2					1

Exhibit 4. Summary sheet as compiled from questionnaires returned to vocational teacher in regard to an evening class for 1926-27

Agricultural Education. At this time a new teacher of vocational agriculture was selected for the high school. He assumed the duties in July, 1929, and also organized the evening school for that year.

The Agricultural Education Department of the University of Tennessee was especially interested in evening class work being added to the high school vocational agriculture program as the department sent the new teacher a letter (dated November 6, 1929) urging him to attempt the work and to follow suggestions in an outline made by the district supervisor of vocational agriculture for West Tennessee. The supervisor was formerly a teacher of vocational agriculture at the Clarksburg High School and had taught evening classes there. His program was very successful and so his suggestions were carefully considered.

This supervisor made a trip to East Tennessee to help organize evening classes in three of the vocational departments of the schools in Knox County. Karns was one of the schools. As the supervisor assisted in the work of organizing the class and since many of his suggestions for doing the work were followed, the complete list of recommendations to the teachers is given below:

- "1. Meet with the advisory council and talk to individual community leaders and decide what to teach.

- "2. Make a general survey of the units to be taught.

- "3. Collect and chart valuable experimental data.

- "4. Make a thorough study of the units to be taught.

- "5. Mail an outline of the course set up in question form, similar to our outline on dairy or soils, and send to every farmer and business man in the community about November 13.

"6. Send a circular letter along with this outline giving each farmer a personal invitation to come to the first meeting.

"7. Talk it in all-day classes, announce at chapel, talk it to the community leaders and urge them to get farmers to come."

The above statements suggest a definite plan of action. The supervisor wanted the teacher to go to work and do something in order to develop an evening school program. The following five points are just as definite, but are listed to advise the teacher on what not to do.

"The following are some don'ts that all should bear in mind:

"1. Don't tell farmers how many meetings you expect to have.

"2. Don't tell them that they will be expected to do improved practices.

"3. Don't tell them that you want to teach them how to farm.

"4. Don't leave the impression that this is to be a social meeting.

"5. When talking to individual farmers don't try to give them information about how to farm."

The above five statements seem to indicate the supervisor was afraid that most of the agriculture teachers talked too much, so he listed the facts he wanted them to tell.

"The following six points are things you should tell the farmer:

"1. This is to be a big farmers' meeting and the biggest and best opportunity that has ever come to that community.

"2. That this meeting is not to be just for pastime but we mean business.

"3. That every hour will be spent in talking about how to make more money farming.

"4. That they will be expected to ask questions and give their experiences.

"5. That we don't know all about farming but want them to give suggestions.

"6. That when farmers ask questions as you go around to visit them tell them to please bring that question to the farmers' school."

The teacher began the work of organizing the 1929-30 class by calling together members of the advisory committee. The advisory committee consisted of three leading farmers living within the school area who were public spirited and interested in the development of their communities. They discussed the possibilities of an evening class for the Karns community with the vocational agriculture teacher and decided that the work would be of value and suggested that the teacher include the work in the department's program. The teacher wanted to be sure that enough people for a class would attend such a program if it were offered, so he made personal visits to key farmers of the community to find out whether they would attend the class and if so what they would like to study. These key farmers were evidently interested in attending a class for adults and while they expressed opinions regarding the content of the course they allowed the teacher to assume the responsibility for its selection. The teachers of agriculture in Tennessee, for many years, had been using a farm survey to secure facts regarding the farming situation of a given community. A teacher usually made a survey of fifty farms located within his school area, and a summary of the fifty farms surveyed was considered a fair cross-section of the farming done by the farmers of the area.

This complete farm survey blank (Exhibit 5) was used by the teacher to determine the important types of farming within the Karns school area, and the most important enterprises. Using the opinions of the advisory committee and the leading farmers, the survey summary, and the supervisor's suggestions, the teacher decided to offer a course on "Dairying."

The people of the school area were encouraged to attend the meetings in several ways. The West Tennessee supervisor's suggestion 5, "mail an outline of the course set up in question form to every farmer" was followed, as a printed leaflet (Exhibit 6) was prepared and sent to prospective members of this class. The leaflet gives a rather complete outline of the course. It shows that there were to be three big dairy schools in Knox County. The Ritta and Farragut Schools were to have an evening class for their farmers along with the one to be held at Karns. The leaflet also advances the idea that the dairy business will keep farmers out of debt. If a farmer wanted to find out how the dairy business could keep him out of debt, all he had to do was to attend the vocational agriculture evening classes and find out. The subject for each of the twelve lessons was listed and also a group of questions that were to be answered at each class session. The teacher for each lesson was given and the date and hour of the first lesson at each school.

In addition to the printed leaflets, announcements of the evening class meetings were made at the regular chapel programs of the schools, church gatherings, and other meeting places within the communities. The teacher planning the program for the class said, "Every time I got up to make an announcement the school people laughed, as they knew I was going

arm No.....

Type of Farming.....

(Dairy, Trucking, Cotton
Fruit, etc.)

FARM SURVEY BLANK*

31

DEPARTMENT OF AGRICULTURAL EDUCATION
COLLEGE OF AGRICULTURE, UNIVERSITY OF TENNESSEE
IN CO-OPERATION WITH

THE TENNESSEE STATE BOARD FOR VOCATIONAL EDUCATION

Name of Operator..... Date.....

Post Office..... County.....

Local School..... Railroad Station (or other main shipping

point)..... Distance from main shipping point.....

USES OF LAND

Number of acres in farm† that are owned by the operator

Rented from someone else..... Total.....

Number of acres planted to field crops during current year.....

Number of acres in tillable pasture..... Untillable..... Total.....

Number of acres in orchards, truck gardens, home gardens, etc.....

Number of acres in woodland..... Number of acres not used.....

LIVE STOCK

	Total Number	Breeds	Number Pure-bred	Number Registered	Number not Pure-bred	Amount and Date Sold Selling Price
Horses						
Mules		XXX	XXX	XXX	XXX	
Jacks and Jennets						
Beef Cattle						
Dairy Cattle						
Hogs						
Sheep						
Poultry			XXX	XXX	XXX	
Bees %						

*Should usually be taken for each last preceding completed crop, or crop nearly enough completed for one to obtain fairly accurate estimates of yields.

†The number of acres actually farmed from one center.

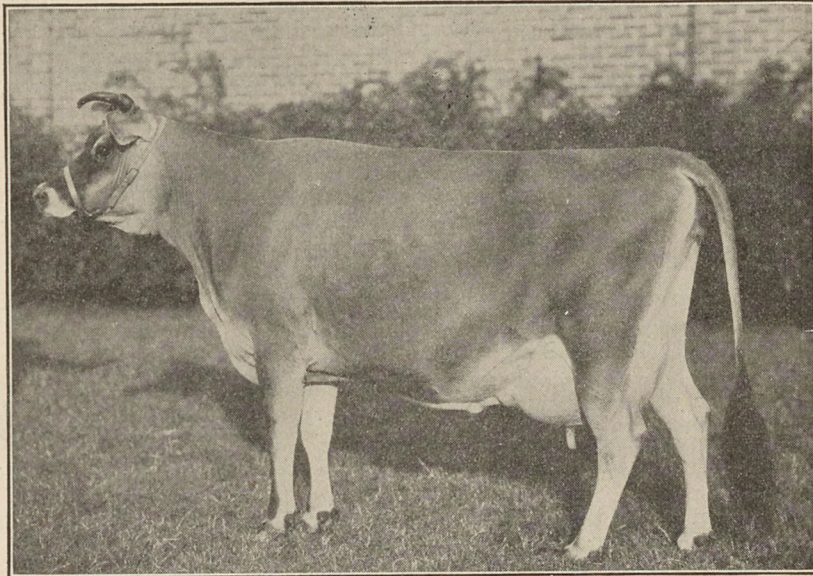
% Number of colonies.

Form 1.

Exhibit 5

LOOK, FARMERS!

LET DAIRY COWS KEEP YOU OUT OF DEBT



LET HER DO THE WORK

HOW CAN SHE DO IT?

Read the inside of this folder
---It Will Tell You How!

THREE BIG DAIRY SCHOOLS IN KNOX COUNTY

There will be three big dairy schools in Knox County beginning the 18th of November. They will start at the following places and on the following dates:

RITTA SCHOOL.....MONDAY, NOVEMBER 18, 1929
Meet at.....7:00 o'clock P. M.

KARNS HIGH SCHOOL.....TUESDAY, NOVEMBER 19, 1929
Meet at.....7:00 o'clock P. M.

FARRAGUT HIGH SCHOOL.....THURSDAY, NOV. 21, 1929
Meet at.....7:00 o'clock P. M.

HOW TO MAKE MONEY FROM COWS will be the text of every discussion and at every one of the meetings.

WE WILL DISCUSS THE FOLLOWING Questions and Many Others:—

LESSON ONE

SUBJECT—"Will the Dairy Business Pay in Future Years?" Discussion led by Frate Bull and your local Agricultural Teacher.

QUESTIONS TO BE ANSWERED

1. Will the price of dairy products continue to stay up during the next few years?
2. What was the price of creamery butter from 1910 to 1928?
3. What was the average price of cream for the same period?
4. How do these compare with present prices?
5. Is the demand for dairy products increasing or decreasing?
6. What percent of the dairy products consumed in the United States are shipped from other countries?
7. What effect is high priced beef and veal having on the increase of the dairy cows?
8. What advantages other than the sale of dairy products are there to dairying?
9. How does dairying improve the soil?
10. How does it keep farmers from going into debt?
11. How does it raise the standard of education in the community?
12. How does it cause a farmer to get more for his labor?
13. Why will cows pay even if dairy products are not so high in price?

LESSON TWO

SUBJECT—"Will the cows that farmers own in the community pay a reasonable profit?" Discussion led by Frate Bull and your local Agricultural Teacher.

QUESTIONS TO BE ANSWERED

1. How can you tell whether or not a cow will pay a profit?
2. What do you mean by butter fat?
3. How does a milk plant or cream station determine what a can of milk or cream is worth?
4. How can farmers in the community get their cows tested for butter fat?
5. How would you take a sample of milk for having it tested?
6. How do you test milk for butter fat?
7. Where could farmers in the community get record sheets?
8. What would cream from the average cow in the community sell for?
9. About how much profit would there be left after paying for the feed for this cow?

LESSON THREE

SUBJECT—"How to know and doctor some of the common diseases and ailments of cattle". Discussion led by A. L. Rubin.

QUESTIONS TO BE ANSWERED

1. What are some of the common diseases and ailments of cattle?
2. How can you tell when a cow has milk fever?
3. How would you treat a cow for milk fever?
4. How can you tell when a cow has afterbirth trouble?
5. How would you treat her for this?
6. How can you tell when a cow has indigestion or impaction?
7. What would you do for this?
8. What would you do with a calf with scours?
9. What about a cow with scours?
10. How can you cure sore teats?
11. What would you do for a cow when her udder cakes?
12. How can you tell when a cow has tuberculosis?

LESSON FOUR

SUBJECT—"How to manage the dairy cows to make them pay the most profit". Discussion led by J. B. Kirkland.

QUESTIONS TO BE ANSWERED

1. Would it pay to feed cows when they are running on a good pasture?
2. What and how much would you feed them?
3. How long should a cow stay dry?
4. What time of the year should a cow come fresh?
5. Why do you think a cow should come fresh in the fall?
6. How would you care for your cows at calving time?
7. Why is it so necessary that cows be watered and salted regularly?
8. How would you manage about watering your cows when the ponds are frozen over?

9. What kind and how much feed would you feed a dry cow?
10. Does it pay to feed a cow stock powders?
11. What would you do with a cow with the hollow horn and hollow tail?

LESSON FIVE

SUBJECT—"Housing the dairy herd". Discussion led by J. W. Brimm.

QUESTIONS TO BE ANSWERED

1. What must be considered in selecting the site for a dairy barn?
2. What is necessary to meet local requirements for a dairy barn?
3. Can the old barn be economically remodeled?
4. How much space is necessary for each cow?
5. Can the deep stall method be used to advantage?
6. What is the best method of lighting and ventilating the barn?
7. What is the best material to use for the floor?
8. Where should the feed room be located?
9. What type of manger is most convenient and economical?
10. How should I dispose of the manure and litter?

LESSON SIX

SUBJECT—"What kind and how much feed would it pay farmers in this community to feed?" Discussion led by A. L. Rubin.

QUESTIONS TO BE ANSWERED

1. What is meant by concentrate and roughage feeds?
2. Why is it so necessary to feed both concentrates and roughage?
3. Give us a rule for the amount of concentrates and roughage to feed?
4. What is meant by a balanced ration?
5. Why is it important that a cow be fed a balanced ration?
6. What feeds would farmers in this community need to feed for the most profit?
7. Which of these could they grow?
8. Which would they have to buy?
9. Would it pay to buy ready mixed or unmixed feeds?
10. What are the advantages of buying feed co-operatively?

LESSON SEVEN

SUBJECT—"What dairy feeds should farmers in this community grow and how is the best way to grow them?" Discussion led by J. N. Haddox.

QUESTIONS TO BE ANSWERED

1. What dairy feed crops should farmers in this community grow?
2. Which of these will grow in this community?
3. Which will make the biggest yield?
4. Which can be produced at the least cost per ton?
5. Which will fit into our farming system the better?
6. Which will improve the soil the most?
7. Considering the above answers what crops would it pay farmers in this community to grow for dairy feed? (This question is to be discussed by the farmers.)
8. How many acres should each farmer grow?

LESSON EIGHT

SUBJECT—"What fertilizers are needed for growing the dairy feed crops?" Discussion led by J. B. Kirkland.

QUESTIONS TO BE ANSWERED

1. What fertilizers are used in the community for growing dairy feed crops?
2. What other fertilizers would it pay to use on these crops?
3. How much fertilizer should one use per acre for best results?
4. Will it pay to buy and mix fertilizers at home?
5. Where can fertilizer be bought?
6. How much lime should be used per acre?
7. Where can lime be bought?
8. When and how may lime be applied?
9. How often should lime be applied?
10. How should manure be cared for, for best results?

LESSON NINE

SUBJECT—"Why it is so important that farmers in the community improve their cows, and how is the best way to do it?" Discussion led by J. W. Brimm.

QUESTIONS TO BE ANSWERED

1. Would it pay farmers in this community to buy high priced registered cows or improve the ones they have?
2. What's the cheapest and best way to improve cows that farmers own?
3. Would it pay farmers in this community to organize a co-operative bull association?
4. What breed of bull would you advise?
5. Why is it so important to get a bull with tested dams?
6. What would a good bull cost?
7. How could we manage to pay for one?
8. How much would one stock in a bull be worth?
9. Where could we find the bull?
10. If we were to go into this association how would we manage about some man to keep the bull?

LESSON TEN

SUBJECT—"What kind and how much pasture should each farmer in the community have?" Discussion led by C. A. Willson, Dean of College of Agriculture, University of Tennessee.

QUESTIONS TO BE ANSWERED

1. What kind of land would make the best pasture?
2. What grasses and clovers should be sown in the pasture?
3. How many acres does each farmer need?
4. How and when should these grasses be seeded?
5. Would it pay to fertilize the pasture?
6. What kind and how much fertilizer would you recommend?
7. Why would it pay to lime pasture land?
8. How much lime would we need to put on an acre; what would it cost?
9. How and when would you apply this lime?
10. How is the best way to provide water and shade in the pasture?

LESSON ELEVEN

SUBJECT—"Which will pay the best—to sell whole milk; cream; or milk for cheese? How should milk and cream be cared for to make it sell for the highest price?" Discussion led by G. N. Toby, Dairy Specialist for the University of Tennessee, Division of Agricultural Extension.

QUESTIONS TO BE ANSWERED

1. Would it pay the farmers in this community to sell cream, whole milk, or milk for cheese?
2. What are the advantages and disadvantages to the cream business?
3. What are the advantages and disadvantages to whole milk business?
4. Why does it pay to take proper care of milk and cream?
5. What causes poor quality milk and cream?
6. What can farmers in this community do to improve the quality of the milk and cream?

LESSON TWELVE

SUBJECT—"A general review of the important points, about dairying and a good time and lots to eat. We propose that this meeting be a big banquet to the fathers and sons of the community." Speaker, Mr. C. A. Hutton, Dairy Specialist of the University of Tennessee Division of Agricultural Extension.

WE WANT YOU TO HELP US TALK

We insist that you come to each and every meeting prepared to give any valuable experiences that you have had in the dairy business. Load yourself with questions and shoot them at us. If we can't answer them we can tell you who can. We don't know it all and you can help us by talking from time to time. Let's put all of our experience and knowledge together and make this the greatest thing that has ever been in your community.

WHO ARE WE?

- C. A. Willson—Dean of College of Agriculture, University of Tennessee.
 G. N. Tobey—Dairy Specialist Division of Extension, University of Tenn.
 C. A. Hutton—Dairy Specialist Division of Extension, University of Tenn.
 J. N. Haddox—Owner and operator of Haddox Dairy Farm.
 Frate Bull—District Supervisor of Vocational Agriculture, Nashville, Tenn.
 A. L. Rubin—Teacher of Agriculture, Central High School.
 J. W. Brimm—Teacher of Agriculture, Farragut High School.
 J. B. Kirkland—Teacher of Agriculture, Karns High School.

YOU OWE IT TO YOUR SCHOOL, COMMUNITY, AND COUNTY

This is an effort to build up your school, your community and your county. This cannot be done without your co-operation. It is your duty as a citizen of Knox County to get behind this thing and attend these meetings. Come on and help make your county one of the best in the state.

to remind them of the evening class." Large posters were made announcing the class and were exhibited at public places where they would attract attention.

The first meeting of the 1929-30 evening school was held at the Karns High School on Tuesday, November 19, 1929, at 7:00 p.m. At this meeting, the people present elected officers for the class, thus making an official group organization. These officers included a chairman, vice-chairman, and secretary. A treasurer was not elected, as the group did not expect to handle money. The man elected chairman, at this meeting appointed a membership committee to serve for the duration of the school to encourage other people to attend the classes which were to follow. The teacher of agriculture and the senior students of the Agricultural Education Department of the University of Tennessee visited prospective members and invited them to attend regularly.

When a person already enrolled was absent from a class, either the teacher, a member of the membership committee or the University of Tennessee students went to see him and encouraged him to be present at the next meeting. The personal visits were used each week for the duration of the course to recruit new members and maintain attendance.

The classes for the 1930-31, and 1931-32 years were organized, and the courses selected in much the same manner as the 1929-30 class. The teacher secured the opinions of the advisory committee and leading farmers in regard to the possibilities of having an evening class at Karns, the course to teach, and when to start the class. The courses were selected and the lessons planned for the entire evening school before the date of the first meeting. The class was advertised or given publicity by means

of public announcements, posters, and a membership committee appointed at the first class meetings. The teacher of agriculture made personal visits to prospective members and to members in order to boost the attendance at all meetings.

The evening class of 1931-32 requested as a class the lessons to be taught the following school year 1932-33. This is the first time records show one class sufficiently interested in this kind of work to ask for a definite course for study. This class asked for a series of lessons on "marketing farm products."

In order to determine the enterprises to include in these lessons, a survey form, (Exhibit 7) was made to secure accurate marketing practices. One hundred fifty-seven farms were surveyed in the summer of 1932 in five communities of Knox County, including, of course, the Karns community.

Exhibit 7 shows the questions asked on the marketing practice of a livestock enterprise and a crop enterprise. The first question was to find out the importance of the enterprise on the farm and the second to determine the seasonal marketing practice, while the third would give a fair indication of production practices being used by individual farmers. The fourth question under the crop and fifth under livestock were designed to show the result of the marketing practices followed.

FARM MARKETING PRACTICES SURVEY BLANK

Name of farmer _____ Mail address _____
Acres owned _____ Rented _____ Cropped _____
Woods _____ Waste _____ Total _____

Local Hog Marketing Practices

1. Average number of hogs sold from farm _____
2. Months of largest hog sale _____
3. Average weight of hogs when sold _____
4. Average age of hogs when sold _____
5. Average price per 100 lbs. 1931-32 _____

Local Tobacco Marketing Practice

1. Average acreage per farm reporting _____
2. Month in which bulk of crop is sold _____
3. Average production per acre _____
4. Average price per pound received _____

The above are illustrations of the marketing survey used on 157 farms for all important enterprises on the farm. A livestock and crop enterprise being included.

Exhibit 7

While the survey forms are here included for only two enterprises, similar questions were asked about every important enterprise in the community. These surveys were summarized, and the practices found that needed to be improved were used as a basis for selecting lessons for the class.

The methods used in the selection of the course and its content, securing enrollment, and means of advertising the class to the public were the same for the years 1933-34, and 1934-35, as those previously discussed for the years 1930-32.

There were two significant changes made in the organization of the evening school during the years 1935-37. The first and most important change was the manner in which the courses and lessons for study were selected. The group at the first meeting of the 1935-36 class selected the course and the lessons they wanted to study. The other change was the method of getting the people to attend the class. A member of a previous evening class and a driver of a large school bus offered to use his bus to transport people to the evening class. He made regular runs to the school where the class was held, taking every one on his route who wanted to go. This furnished a means of transportation for many people who thought it was too far to walk. The same methods with the above exceptions were used as in previous classes.

The advisory committee in 1938-39 assisted the teacher in selecting the course of study. The members met with the teacher in the agriculture room and suggested the course and the lesson to include. The members for the class were recruited in much the same manner as in previous years, when the teacher made personal visits to prospective

members before the first meeting of the class and during the time the class was in progress. Announcements were made at public gatherings and posters were distributed where they would be seen. In 1939-40, the teacher visited key farmers to determine the course to be taught. They thought that they would like to make a study of the poultry enterprise.

A complete poultry enterprise survey (Exhibit 8) was made by the teacher to determine the problems with which farmers were confronted and what practices were being followed by them. This is the first complete enterprise survey used to date at Karns as a basis for selecting lesson to include in the evening school. The survey included seventeen major items and covered all practical questions regarding the poultry enterprise.

The majority of the survey questions were concerned with specific practices, while Item 16 asked the farmer to state the major problems as he saw them confronting a poultryman, and Item 17 asked for any other comments he might wish to make regarding the poultry enterprise or the lessons he thought should be taught at the school.

This survey was summarized by the teacher of vocational agriculture. The present practices were listed for each job. The situation in the community was graphically illustrated in a chart form and used when teaching each job.

The prospective members of the class were visited by the teacher as he was preparing the above survey. They were invited at this time to attend the class. The same means of getting people to attend the evening class were used as in previous years, such as public announcements, posters, and personal visitation.

FORM FOR POULTRY SURVEY

38

Name of Farmer _____ Mail Address _____ Community _____
 Acres owned _____ Rented _____ Cropped _____ Woods _____ Waste _____ Total _____
 Ages of children on farm. Boys _____ Girls _____
 Production practices for year _____

1. Breeds _____

2. No. hens on farm, January 1 _____ June 1 _____ Ave. for year _____

Pure breeds, January 1 _____ June 1 _____ Ave. for year _____

Mixed, January 1 _____ June 1 _____ Ave. for year _____

3. Housing, Dimensions _____ Type of roof (shed or gable) _____

Exposure (direction) _____ Sq. ft. of windows or open space _____

Floor material _____ Dropping boards (Yes or No) _____

4. Equipment, Roosts (level or sloping) _____

Number of nests, In house _____ Outside _____

Feed hoppers, Type _____ No. feet of eating space _____

Watering equipment _____

5. Egg Production - Average number of eggs gathered per day during: High months

(Feb., March, April & May) _____ Low months (Oct. Nov., Dec., &

Jan.) _____ Medium months (June, July, Aug., & Sept.) _____

Average per hen per year _____

6. Feeding layers, Hands or hopper _____

Mash mixture _____

Months fed _____ Amount per day _____

Grain _____ Amount per day _____

Green feed, kind _____ Seasons _____

7. Insect control _____

Kind _____

Control used _____

8. Disease control _____

Kind _____

Control used _____

The Hardin Valley Community Club asked the Karns teacher of agriculture to teach an evening class in that community in 1940-41. They wanted a course on farm management and the lessons to include a program of work as set up by the club. They also assumed the responsibility of securing enrollment.

The teacher, when organizing the class in 1941-42, visited key farmers of the community to find out what course they wanted to study. The first meeting was called, and at this time the group again elected officers and assisted the teacher in the selection of the lessons. The teacher assumed the responsibility of mailing a postal card to every member each week reminding him of the date and time of the class meeting and the lesson for the meeting.

A brief summary of the above data shows that personal visitation by the teacher of vocational agriculture to the prospective members was by far the most commonly used method of recruiting membership for the classes. This method was used thirteen out of the fourteen times there has been an evening class. The date for the opening meetings and the regular meeting hour for the classes were kept before the people of the community by announcements made at the public schools and churches of the community and by a display of posters in the country stores and other convenient public places. In 1929-30 a leaflet was prepared and mailed to the prospective members two weeks in advance of the first class, urging them to attend the evening school. The members of the class at the first meeting agreed to help keep a satisfactory enrollment by appointing three people to a membership committee. The duty of the committee was to give publicity to the class.

The courses for the fourteen schools have been selected by the advisory committee, key farmers, the survey summary data, questionnaire summary, the Hardin Valley Community Club, members present at the first meeting of the class, and a combination of the above methods. During the first seven years beginning in 1926-27 and including the 1934-35 school, the courses were selected and all the lessons were planned before the first meeting.

This method of planning the course was changed in 1935-36. The evening class group met at the school and, with the agriculture teacher leading the discussion, the members present at the first meeting selected the course and the lessons they wanted to study. This method of selecting the courses and the lessons was used from 1935-36 through the 1937-38 schools. In 1938-39 the course was selected by the advisory committee before the first meeting of the class, but the class was asked at the first meeting to select the lessons for the course. In other words, if a member wanted to study a special lesson he was allowed to make a request for it at this time. The courses for the 1939-40 through the 1941-42 class were selected by a combination of the above methods. The advisory committee helped to select the courses in 1939-40, but the lessons were selected on the basis of a survey summary. In 1940-41 the Hardin Valley Community Club asked for an evening school with the course based on a previously prepared program of work, whereas in 1941-42 the teacher and the group selected the lessons.

The course and lessons were planned before the first meeting for the first seven evening schools, while the group selected the course and the lessons for the next three schools, and a combination of both were used for the last four schools.

Courses Taught in Evening Schools

Subjects of Courses Taught

The selection of the subject for each course is usually the job of the teacher of agriculture. He tries to select a subject which will be an appropriate title for the course. There have been fourteen evening schools taught in the Karns patronage area since the work was begun. Table IV shows that four of these courses were called Farm Management. Three of the others were listed under titles of (1) Farm Organization (1931-32), (2) Reorganization of Farm Business (1933-34), and (3) Dairy Farm Improvement (1939-40) and could have been called Farm Management very easily. Two of the courses were called Soil Improvement, while one was called Soil Conservation. One course was called Livestock Improvement. This makes eleven of the fourteen courses deal with general farm problems. Two of the courses were on Dairying, while one was on Poultry.

Since Table IV shows that seven of the fourteen courses dealt with farm management problems, it was necessary for the writer to analyze the courses into lessons or jobs in order to show what the farmers had really studied.

TABLE IV
COURSES TAUGHT BY THE KARNS VOCATIONAL AGRICULTURE
DEPARTMENT TO EVENING SCHOOL CLASSES

School Year	School	Subject of Course
1926-27	Karns	Dairy
1929-30	Karns	Dairy
1930-31	Karns	Soil improvement
1931-32	Karns	Farm organization
1932-33	Karns	Farm management
1933-34	Karns	Reorganization of farm business
1934-35	Karns	Farm management
1935-36	Hardin Valley	Soil improvement
1936-37	Hardin Valley	Soil conservation
1937-38	Hardin Valley	Livestock improvement
1938-39	Karns	Dairy farm improvement
1939-40	Karns	Poultry management
1940-41	Hardin Valley	Farm management
1941-42	Karns	1. Farm management 2. Farm machinery repair

Analysis of Farm Management Courses into Lessons Taught by Years

Upon analyzing the farm management courses, it is shown in Table V that most of the lessons were taught only one time during the period. However, ten of the lessons were taught more than one time in the evening schools. The following four lessons were taught at Karns two years and at Hardin Valley one year: (1) It will pay farmers to grow sufficient pastures for livestock; (2) Reforesting farm lands; (3) Cooperating with AAA production program; and (4) Growing soil improving crops. There were six lessons taught twice to the evening schools, but the lessons were taught one time at Karns and one time at Hardin Valley, so the same group would not be studying the same lessons two years in succession. Even though there were the above four duplications, the farm management courses were studied from a different point of view each year.

In 1931-32 the lessons were studied with production of food and feed for home use in mind, while in 1932-33 the central idea was the marketing of farm products to the best advantage. The lessons during the years 1933-34 and 1934-35 dealt with the immediate needs of the depression years, as they studied cooperating with the new AAA program and continued the production-for-home-use idea, as well as ways of meeting their financial obligations.

In 1938 special emphasis was placed on the economical production of milk for a cash crop, and the management of the farming program in such a way as to conserve the fertility of the soil. The lessons for 1940-41 included general production practices and another study on how farmers may plan their farm programs to conform to the AAA program. The prices of farm products were so much better at this time that farmers

TABLE V

ANALYSIS OF FARM MANAGEMENT COURSES INTO LESSONS TAUGHT BY SCHOOL YEARS

Lessons	Karns 1931-32	Karns 1932-33	Karns 1933-34	Karns 1934-35	Karns 1938-39	Hardin Valley 1940-41	Karns 1941-42
1. It will pay farmers to grow corn needed for livestock on the farm	X						
2. It will pay farmers to grow sufficient small grain for the livestock on the farm	X					X	
3. It will pay farmers to grow sufficient hay for livestock on the farm	X						
4. It will pay farmers to grow sufficient pastures for livestock on the farm	X				X	X	
5. It will pay farmers to produce dairy products for home use	X						
6. It will pay farmers to produce pork for home use	X						
7. It will pay farmers to grow fruit for home use	X						
8. What fruits can be profitably grown in home orchard	X						
9. It will pay farmers to grow sufficient vegetables for home use	X						
10. Marketing hogs		X				X	
11. Marketing tobacco		X					
12. Marketing sheep		X					
13. Marketing Irish potatoes		X					
14. Marketing milk		X				X	
15. Growing soil improving crops			X	X		X	

TABLE V (Continued)
ANALYSIS OF FARM MANAGEMENT COURSES INTO LESSONS TAUGHT BY SCHOOL YEARS

Lessons	Karns 1931-32	Karns 1932-33	Karns 1933-34	Karns 1934-35	Karns 1938-39	Hardin Valley 1940-41	Karns 1941-42
16. Reforesting farm lands			x		x	x	
17. Producing replacements for work stock			x				
18. Cooperating with AAA production program			x	x		x	
19. Using certified seed				x		x	
20. Buying commercial fertilizers				x			
21. Reducing cost of producing milk				x	x		
22. Studying farm taxes				x			
23. Using farm credit				x			
24. Feeding dairy cows					x		
25. Determining what cropping system to use on farm to conserve soil					x		x
26. Landscaping home farm, school, and church grounds						x	
27. Keeping farm records						x	
28. Utilizing barnyard manures						x	
29. Determining soil series in Karns community							x
30. Determining areas for cultivated crops, pastures and trees							x
31. Determining kind and amount of livestock to keep							x

wanted to produce large quantities of marketable products. They also wanted to earn the maximum AAA payments for a soil conservation program. One lesson added here, number 26, Landscaping the Farm Home, School, and Church Grounds, shows the needs and desires of farm people. With more money to spend, they wanted to learn how to improve their surroundings.

The 1941-42 program was built around a complete farm reorganization plan based on the soil series of the farms. The Tennessee Valley Authority had completed mapping the soils of Knox County and farmers were interested in learning what series were found on their farms with the use of soil maps. This farm management course was to enable them to learn more about the soils on their farms, and to plan a farming program based upon the soil series, soil adaptations of crops to the series, and cropping systems suitable to their individual farms.

Analysis of Soil Courses into Lessons Taught by School Years

The following analysis of the three soil courses will show the lessons taught during the years 1930-31, 1935-36, and 1936-37. Table VI shows that four of the same lessons were taught to all three of the classes. Two of the lessons were taught two out of the three years. This leaves nine lessons taught one time during the soil course. The class of 1930-31 was taught at Karns, while the classes taught during the years 1935-36, and 1936-37 were both taught at Hardin Valley. The people at Hardin Valley who attended the course both years studied practically the same course and four of the same lessons two years in succession.

TABLE VI

ANALYSIS OF SOIL COURSES INTO LESSONS TAUGHT BY SCHOOL YEARS

Lessons				
	:	:	Hardin	Hardin
	: Karns	: Valley	: Valley	
	:1930-31	:1935-36	:1936-37	
1. Why would it pay farmers of this community to improve their soil	x			
2. Will it pay farmers of the community to terrace their land	x			x
3. Determining the importance of livestock and manure in a soil improving program	x	x		
4. How does crop rotation improve the soil	x	x		x
5. Should green crops be turned under, fed or sold	x			
6. What are the more economical green manure crops to grow	x			
7. Will the use of lime on the farms net the farmers a profit	x	x		x
8. Will the use of commercial fertilizers pay	x	x		x
9. How pastures may aid in a soil improvement program	x	x		x
10. What are the best ways to control weeds and grasses	x			
11. General review about important points discussed	x			
12. Seeding legumes for hay		x		
13. Strip cropping				x
14. Reclaiming farm land				x
15. Utilizing farm land				x

Analysis of Dairy Course into Lessons Taught by School Years

There were two dairy courses taught to the evening schools and both were held at the Karns school. The analysis does not show the order in which the lessons were taught to the classes, but rather the lessons taught during each dairy course and whether or not the same lesson was taught to both the 1926-27 class, and the 1929-30 class. Table VII shows that seven of the lessons were the same for both classes.

TABLE VII

ANALYSIS OF DAIRY COURSES TAUGHT INTO LESSONS BY SCHOOL YEARS

Lessons	Years	
	1926-27	1929-30
1. Feeding dairy cows	x	x
2. Milking cows	x	
3. Caring for milk	x	
4. Selecting cows	x	x
5. Raising calves	x	
6. Housing dairy animals	x	x
7. Dehorning and castrating dairy animals	x	
8. Breeding dairy animals	x	x
9. Handling manure	x	
10. Combatting diseases of dairy animals	x	x
11. Caring for dairy bull	x	
12. Marketing dairy products	x	x
13. Spraying to control flies	x	
14. General review	x	x
15. Will the dairy business pay in future years		x
16. Will the cows farmers own pay a reasonable profit		x
17. How to manage the dairy cows to make them pay a profit	x	
18. What fertilizers are needed for growing dairy feed crops	x	
19. Why is it so important that farmers improve their cows	x	
20. What kind and how much pasture should each farmer have	x	

There were seven lessons taught at the first class in 1926-27 that were not included in the second class during 1929-30. The principal difference noted in the two courses was the addition of lessons dealing with the economic aspects of dairy production to the 1929-30 course. Number 15, "Will the dairy business pay in future years?" is a good example of the different approach in the second course as compared with that in the first series which deals primarily with production practices.

Analysis of Poultry Course into Lessons Taught

The course taught in 1939-40 at Karns was the only poultry management course given at any of the evening schools. Table VIII shows a complete analysis of the course into lessons taught. The jobs were selected that were found to be in need of improvement on the farms of the prospective members of the class.

TABLE VIII

ANALYSIS OF POULTRY COURSE INTO LESSONS TAUGHT (1939-40)

-
1. Determining the present poultry situation and needs in the Karns community.
 2. Determining the kind of housing quarters and equipment that are adequate for profitable and economical management of the farm flock.
 3. Determining how to properly feed the laying flock; what feeds and feeding practices to follow to produce eggs most economically.
 4. Determining when and how to pick out the hens that are not laying enough eggs to keep in the flock, and what to do with them after culling them.
 5. Determining what diseases and parasites of poultry we should be able to recognize, prevent and attempt to control.
 6. Determining what records to keep and how to keep them to ascertain the returns from the farm flock and what practices to change in order that the returns may be increased.
 7. Determining the kind and age breeding stock to use and what breeding practices to use to produce eggs of highest quality for hatching purposes.
 8. Determining the number of chicks to raise for the coming year, how and when to procure them.
 9. Determining what brooding practices to use in order to raise chicks most economically.
 10. Determining what management systems to use in order to produce cockerels profitably.
 11. Determining what practices to follow to develop pullets for fall and winter production.
 12. Determining what quality products to market, when and where to market them.
-

Analysis of Livestock Improvement Course into Lessons Taught

The analysis of this livestock improvement course shows that the lessons included seven different enterprises. Table IX shows that the first ten lessons were based strictly on livestock enterprises, while the eleventh and twelfth lessons were on home orchard, and gardens.

TABLE IX

THE ANALYSIS OF LIVESTOCK IMPROVEMENT COURSE INTO LESSONS (1937-38)

-
-
1. Improving the dairy herd by use of better breeding stock.
 2. Feeding dairy cows.
 3. Producing work stock replacements.
 4. Managing the mare and colt.
 5. Reducing the cost of keeping work stock.
 6. Improving beef cattle by use of better breeding stock.
 7. Feeding beef cattle.
 8. Improving hogs by use of better breeding stock.
 9. Feeding and care of the sow and litter.
 10. Improving the poultry flock by use of better breeding stock.
 11. Pruning and spraying for economical apple production.
 12. Controlling diseases and insect pests on truck crops.
-
-

It is of interest to note that the lessons on home orchard and home garden enterprises were included in the series of lessons on a livestock improvement course. These lessons were taught at the conclusion of the above course because of the interest and felt needs of the group.

The courses were all analyzed on the basis of farm jobs. The subject of the lessons for the 1929-30 and the 1930-31 course were stated in problem form. The lessons for the 1931-32 course were listed as topical statements. The lessons for all the other courses were listed as farm jobs and appeared as statements of jobs on the lesson plans. The lesson units

shown in the 1941-42 course were especially lengthy. It required as much as four one-and-one-half hour periods to teach lesson two of the course for that year. The average time required to teach an evening class lesson is from one to two hours.

Procedures and Teaching Materials Used When Teaching Evening Classes

"Good teaching must result in pupil activity. Good teaching always arouses an emotional response on the part of the learner. The ways in which a teacher secures these emotional responses constitute his methods of teaching."²

Since evening school work is designed for adult farmers, the procedures used should be adapted to their characteristics and needs. It must be remembered that these men have had a large amount of practical experience gained from many years of farming. "Their most important needs from an educational standpoint consist in: (1) new information as to farm conditions and farm practices resulting from experimentation, use of new machinery, market demands, and facilities; (2) instruction in certain management jobs, and, in some cases, in certain operative skills; and (3) opportunity to discuss their common problems and pool their experiences under the direction of a competent group leader."³

With these ideas in mind, a teacher will have to choose his teaching procedures to meet the needs of the group assembled for teaching.

²Federal Board for Vocational Education, Methods of Teaching as Applied to Vocational Education in Agriculture, Bulletin 103, revised 1930, p. 64.

³Federal Board for Vocational Education, Methods of Organizing and Conducting Evening Schools, Bul. 89, Revised 1930, p. 9.

"The informing procedure is ordinarily the least effective as it does not take into consideration the experience of the group."⁴ The instructing process should be used when there is a clear need for it to show new data, and when the farmers themselves express a desire for it.

When dealing with managerial situations with adult farmers, the most commonly used procedure is the conference.⁵ The teacher in this case is a leader of discussion, rather than an individual regarded as an expert or an authority.

To determine the methods that have been used to teach the evening class lessons in the Karns community, three lesson plans have been selected for study--a plan used in 1926-27, the one used in 1937-38, and one used in 1941-42. The lesson plans were made by the teachers as they prepared themselves to teach the lessons. Professor Hollis L. Caswell and Doak S. Campbell, in a jointly published study, say, "The selection and organization of teacher activities involve a plan of action. A plan of action is merely a proposed series of activities, so related that the individual may reasonably expect they will result in the desired outcomes."⁶ The plans made for the above three lessons will show the proposed series of activities, or the proposed plan of action the teachers expected to use.

⁴ Federal Board for Vocational Education, loc. cit.

⁵ "Conference is an educational procedure consisting of informal but systematic discussion carried on by experienced persons under the direction of a leader." Federal Board for Vocational Education, Bulletin 147, p. 1.

⁶ H. L. Caswell and D. S. Campbell, Curriculum Development, p. 336.

For the Class of 1926-27

The written preparation made for the teaching of this first evening class included only the analysis of the dairy enterprise previously shown in Table IX, and a list of references the teacher expected to use. Since there were no written plans for the teaching of each lesson, the writer interviewed the teacher of the first class and members of the class to determine the procedure used. The teacher said, "We did not know much about evening classes, and I was trying to get ready for anything. We selected a job for study and talked about how the job should be done." The analysis also shows that the teacher expected to teach the lessons from the "farm job"⁷ basis. Dr. C. H. Lane, chief of the Agricultural Education Service, in a report issued by the Federal Board for Vocational Education in 1928, said, "One of the most outstanding developments in vocational agriculture has been the organization of teaching on the basis of farm jobs instead of on the topical information basis."⁸

From talking with men who attended the class, it is apparent that the meetings were general with no prepared data for study. The men discussed the jobs as they came up for consideration, with the teacher leading the discussion.

⁷ "A job is here considered to be what a farmer needs to do to accomplish a specific piece of work, the completion of which involves the performance of one or more activities which are closely related and can be recognized as being distinct from those of any other job." Federal Board for Vocational Education, Analyzing a Poultry Enterprise, Bulletin 75, p. 1.

⁸ Federal Board for Vocational Education, Vocational Education in Agriculture, 1917-1927, Bulletin 134, p. 23.

For the Class of 1937-38

Advance lesson plans were made for the livestock improvement course taught to the evening class in 1937-38. There were in the files of the Karns vocational agriculture department a complete lesson plan for the teaching of each lesson in the course of study. Since the same procedure was used in teaching each lesson only the plans for lesson one will be presented here. The materials used are shown because they are needed to enable one better to understand the procedure proposed in the plan.

The first part of the plan, page 57, included a statement of the job and the major problem for the consideration of the class. These statements are followed by a list of the present practices which are improvable on the farms in the school area. With these present practices listed, the objectives for the lesson were set up. These objectives, page 57, included the attitudes and practices for farmers to adopt. Data were then collected, page 59, which the teacher thought would be suitable to use in helping the members of the class reach conclusions regarding the practices confronting them. The next part of the plan included the procedure the teacher expected to use, page 57.

The lesson was introduced to the group by stating the job and problem to be studied. The members of the class were then led to tell how they had been doing the first practice listed. Experimental data relating to this practice were shown the class to supplement their own experiences. The class was led in a discussion of the data presented and asked to draw conclusion regarding how the practice should be carried out on their farms. The teacher then attempted to lead the members of the

class to make a statement as to what changes could and should be made in the practice on their home farm.

A similar procedure was used in dealing with each practice. The teacher, at the end of the lesson, reviewed with the members of the class the practices that could be improved on their home farms. The secretary of the class was asked to make a list of the practices which the members expected to improve and to show opposite the listed practice, the names of the members who expected to improve it.



LIVESTOCK IMPROVEMENT

Lesson 1

Improving the dairy herd by use of better breeding stock.

Problem: Determining the kind of breeding stock to select and the practices to follow to improve the herd through breeding.

Present practices (Improvable):

1. Farmers are milking cows that do not make a profit over feed cost.
2. Farmers select cows on type of animal only.
3. Farmers milk cows that are poor individuals.
4. Farmers breed cows to bulls that lower the production of the dam's daughter.
5. Farmers select bulls regardless of pedigree.
6. Farmers buy purebred bulls without studying pedigree.
7. Farmers milk cows without keeping records of production.

Objectives (Attitudes and practices for farmers to adopt.):

1. To get farmers to cull all cows that produce less than 4000 lbs. of milk per year.
2. To get farmers to use type, pedigree, and production as the means of animal selection.
3. To get farmers to select dairy type animals.
4. To get farmers to select bulls with desirable pedigrees from proven sires.
5. To get farmers to raise heifers that will produce more milk and butterfat than their dams.
6. To get farmers to use pedigrees when selecting a herd bull.
7. To get farmers to keep production records of their cows.

Procedures in teaching the lesson:

1. Introduce the lesson to the group by stating the job and problem to be studied.
2. Ask farmers what is the minimum amount of milk a cow should produce in order to remain in the herd.
3. Ask farmers the comparative value of the highest and lowest producing cow in the herd.
4. Present Chart I, "Relation of Milk Production to Income Above Feed Cost."
5. Lead farmers in discussion of data presented on Chart I.
6. Lead farmers to draw conclusions regarding the relation of milk production to income above feed cost.
7. Lead farmers to decide which cows in their own herds they should keep.

8. Ask farmers what points they consider when selecting dairy cows.
9. Present Chart 2, "Points in Selecting the Dairy Cow."
10. Lead farmers in discussion of data presented on Chart 2.
11. Show pictures that compare type and general appearance of good and poor cows. (Film Strip--Series 121).
12. Lead farmers to reach conclusions regarding the points to consider in selecting cows.
13. Ask farmers how much increase in milk and butterfat they have received from use of good bulls in their herds.
14. Present Chart 3 "Improvements that may be expected from the use of carefully selected purebred sires."
15. Lead farmers in discussion of data presented on Chart 3.
16. Lead farmers to reach conclusions regarding the value of good bulls for increasing the production of daughters over their dams.
17. Ask farmers what they consider the difference between a poor and a very good pedigree.
18. Present Chart 4, "Pedigree Scored Poor."
19. Lead farmers in discussion of data presented on Chart 6.
20. Present Chart 5, "Pedigree scored very good."
21. Lead farmers in discussion of data presented on Chart 5.
22. Lead farmers to reach conclusions regarding the differences between a poor and a very good pedigree.
23. Ask farmers how many dairymen in the community use a proven sire.
24. Present Chart 6, "What a Proven Sire Can Do."
25. Lead farmers in discussion of data presented on Chart 6.
26. Lead farmers to reach conclusion regarding the value of a proven sire.
27. Review with farmers the practices that are improvable.
28. Ask farmers what practices they think they can improve on their home farm as a result of this lesson.
29. Have secretary list the names of the farmers who expect to carry out the various improved practices.

Practices for Farmers to Adopt

1. Keep for breeding the cows with annual milk production of 4,000 lbs. or above.
2. Consider pedigree when selecting bull calf.
3. Select only bulls from proven sires.

RELATION OF MILK PRODUCTION TO INCOME ABOVE FEED COST, FEED COST
PER 100 POUNDS MILK AND PER POUND BUTTERFAT

HERDS TESTED IN TENNESSEE DAIRY HERD IMPROVEMENT ASSOCIATIONS

Number of Cows	Pounds of Milk	Pounds of Fat	Total Cost of Feed	Income Above Feed Cost	Feed Cost Per Cwt. Milk	Feed Cost Per lb. Fat
505	3083	160	\$44.84	\$45.32	\$ 1.45	\$.28
899	4015	206	50.12	67.15	1.24	.24
834	4963	249	56.76	83.70	1.14	.23
376	5914	291	62.20	99.69	1.05	.21
137	6872	337	69.82	129.33	1.01	.21
Average All Cows	4469	225	53.40	74.22	1.19	

Lesson 1
Chart 1

D.H.I.A. Report, C. A. Hutton
Mimeographed Circular 8970,
U. T. Agr. Ext. Ser.,
April 5, 1937

SELECTION OF DAIRY ANIMALS

1. Type
2. Production Records
3. Pedigree
4. Type production, and pedigree

Lesson 1
Chart 2

McDowell and Field, Dairy Enterprise
p. 331

SELECTING DAIRY COWS

Lesson 1

U.S.D.A. Film Strip, Series 121
(40 frames)

WHY IMPROVEMENTS MAY BE EXPECTED FROM THE
USE OF CAREFULLY SELECTED SIRES

	<u>Milk</u>	<u>Fat</u>
Daughters	7607	300
Dams	4695	179
Daughter's gain	2912	121
" " in per cent	62	67.6

Lesson 1
Chart 3

McDowell and Field, Dairy Enterprise, p. 204

PEDIGREE SCORED POOR

Hartog Lad
Colanthus
His sire is by a
brother to
Dixie Col Hartog
5 y fat 865 lbs.
milk 24,822 "

Burford Colanthus Hartog
Brother to:

Hartog Mercena Abbe
fat $3\frac{1}{2}$ y 754#
milk 20,886#

Valley Brook Grace 2^D

Male
Born 4/18/27

Vida Princess
Pride
Her sire is from
a sister to:
Woodland Banostine
DeKol
fat 305^D 955
milk 19,498

Burford Colanthus
Hartog
same as above

Vida Pride
by a brother to
Topsy Spofford
fat 7 days 24#
milk 497#

Lesson 1
Chart 4

N. J. Ext. Bul. 82, p. 8.

PEDIGREE SCORED VERY GOOD

Jemima Riverside
 Boast Ormsby DAD
 1 Gold medal sire
 18 A.R. Daughters
 1 with 800# fat
 9 from 480-750 fat

Winterthur Bess
 Ormsby Boast
 Gold medal sire
 31 A.R. Daughters
 7-800# fat
 15 - 480 - 750 fat
 LL enroc Johanna
 Rue Alice
 fat 365 D 6y 944
 milk 23,173

Male

Winterthur Ormsby
 Segis Dango
 fat 365 D 6y-611#
 milk 17,145#
 fat 365 D 2y 522#
 milk 14,833#

King of the Ormsbys
 Gold medal sire
 118 A.R. Daughters
 10-800# fat
 85-490 to 799 fat
 35 A. R. Sons

Winterthur Inka
 Prilly Segis Bango
 fat 305 D 2y 572#
 milk 15,707#

Lesson 1
 Chart 5

N. J. Ext. Bul. 82, p. 9

WHAT A PROVEN SIRE CAN DO

1. If properly handled and exercised so that his breeding powers are conserved a bull will live 15 years.
2. After he is a proven sire at $7\frac{1}{2}$ years of age he can sire 150 fine heifer calves.
3. If used in a herd of reasonably good cows capable of producing 200-250 lbs. of fat yearly he should be able to increase the production of the daughters over their dams about 50 lbs. of fat.
4. The daughters would then earn \$17 more profit per year than their dams.
5. This means an increased profit of \$85 for each daughter. (5 years)
6. Such a bull in seven years as a proven sire would have added \$12,750 profit by his offsprings over what they would have returned had they been no better than their dams.
7. If used in a purebred herd the bull should have a still greater value.

15

14

13

12

11

10

9

8

7 A Proven Sire

(First lot start third lactation.

6 (Second lot start second lactation.

(Third lot start first lactation.

5 (First lot start second lactation.

(Second lot start first lactation.

4 First lot of heifers freshen

3

2 First lot of calves dropped.

1

For the Class of 1941-42

The lesson plans for the farm management course taught in 1941-42 were planned and written before the date set for the teaching of the lesson. The course of study was divided into eight lessons and has been previously shown in Table V. A complete lesson plan will be shown, because it will be easier to follow the procedure used with all of the materials available. Lesson two, "Determining the soil series, slope and degree of erosion on the farms of the members enrolled in Karns evening school," has been selected for a detailed study of the procedure used in teaching the lesson, as it conforms to the procedure used in teaching the course. The farm of a member of the class was chosen as a case farm. The farm selected was well known to each member of the class, and a study of the farm was used to illustrate data under discussion. The farm was known as the Butler farm, and the term, "Butler farm" will refer to the case farm used by the teacher while preparing the plan and teaching this lesson.

The plan was divided into three major parts: (1) Problems for consideration, (2) Procedures, and (3) Teaching materials. The first part, problems for consideration, page 66, included all of the problems or questions the members of the class would need to consider or solve before they could reach a practical conclusion regarding the lesson to be studied. The problems were divided into small units so that every member of the class would understand them.

The second part, procedures, page 66, listed in order each step the teacher expected to use. The lesson was begun with a brief review of the previous lesson which dealt with the soil series occurring in the

community. Mimeographed sheets, page 68, showing the characteristics of the more common soil series found in the Karns area were distributed to every member of the class. The sheets were placed in the hands of every person present at this meeting to prevent the possible embarrassment of a member. The members of the class were asked to name the series studied in the preceding lesson and if possible include the identifying characteristics of each series named.

Following the above review, the class was ready to study the next lesson. The teacher called to the attention of the class the problems for consideration and led them to study and solve them in the order listed. A soils map, page 71, of the Butler farm was distributed to the members present and they were asked to locate and color differently each series shown on the map. The teacher supervised the group while this was done. After members of the class had completed the series map of the Butler farm, they were given soil maps of their own farm and asked to color in the series found. The areas were easily distinguished on the colored maps, and each member was asked to calculate the acreage each series occupied on his farm. A chart showing this data calculated for the Butler farm is on page 72. The teacher supervised the members as they made the calculations, assisting the members who needed or wanted help.

The teacher led the class to develop a chart, page 73, showing the acreage of each soil series on the farms, the total acreage of each soil series on all the farms of the members, and the number of farms having the series. This was done to show the relative importance of each soil series found.

A soils map of a farm shows the soil series, slope classification, and the degrees of erosion. The slope classification was introduced and the members were taught the symbols used for each slope classification and the color legend from data presented on a chart, page 74. The members were led to estimate the per cent slope found on a farm by the use of a simple device, a diagram of which is shown on page 74. The same procedure was used as the class studied the slope and the degrees of erosion present on the Butler farm and on their own farms. The lesson was concluded with a summary, showing the relationship between soil series, slope, and degree of erosion on the Butler farm. At the close of this meeting the members of the class decided to meet at the Butler farm for a morning session in order to examine the soils in their natural setting. This meeting was held and the members walked over the entire farm and examined all soil series found on the farm.

The third part, teaching material, pages 68-80, includes all of the material the teacher thought he would need in order to teach the lesson. There were enough maps of the Butler farm for each member of the class to have four. Other material included soil maps of each member's farm, soil maps of the Butler farm showing series, slope, and degree of erosion in colors, data shown in chart form to present new information, and the summary sheets showing the total acreage of each soil series, total acreage on each slope, and the total acreage of each degree of erosion occurring on the farms of class members. The soil maps of each member's farm are not shown, since the one for the Butler farm will suffice to show procedure used. The following is the complete plan for lesson two:

FARM MANAGEMENT

Lesson 2

Farmers' Job: Determining the soil series, slope and degree of erosion on the farms of the members enrolled in Karns evening school.

A. Problems for consideration:

1. What soil series occur on Mr. Butler's farm?
2. Where is each located on Mr. Butler's farm?
3. What per cent of the farm does each soil series occupy?
4. What soil series occur on the farms of the enrolled class members?
5. Where are these soil series located on the farms of enrolled class members?
6. What is the approximate total acreage of each soil series on the individual farms of the class members?
7. What per cent slopes are found on the various areas of Mr. Butler's farm?
8. Where are these located on Mr. Butler's farm?
9. What acreage does each per cent slope occupy on Mr. Butler's farm and what percentage is this of his total acreage?
10. What percent slope is found on the various areas of the individual farms of the class members?
11. Where are they located?
12. What acreage does each occupy on the individual farms of the class members?
13. What degree of erosion does Mr. Butler have on his farm?
14. Where are they found on his farm?
15. What degree of erosion are found on the individual farms?
16. Summarize lesson.

B. Procedures:

1. Review characteristics of soil series found in the community.
2. Have farmers recall and name the ones in preceding lesson.
3. Write soil series and number on the board as farmers give them.
4. Illustrate on 3' x 3' map the hatching in of each series.
5. Distribute 8 $\frac{1}{2}$ " x 11" maps of the Butler farm to each member and supervise hatching of soil series of that farm.
6. Hatch in the soil series on large 3' x 3' map immediately before farmers.
7. Lead farmers to estimate acreages of each soil series on Butler's farm.
8. Give actual acreage of same.

9. Develop problem four by handing a soil map of his own farm to each member present.
10. Present uniform legends for the major soil series named all at the same time and have class members proceed to cross-hatch in the series on their home farm with the aid of supervision.
11. Pass out "grids" and have members calculate the acreage of each series occupies on their farms.
12. Develop a chart:
 - a. By having each member report the acreage of each series on his farm.
 - b. Find the percentage each series occupies of the total acreage on all farms of members present.
13. Present charts showing slope classifications, symbols and legends.
14. Use same procedure as 4, through 13, this time in relation to slope. (Use a new map.)
15. Use same procedure as 4 through 13, this time in relation to erosion. (Use a new map.)
16. Take a field trip to Butler farm to study soils in their natural setting.

CHARACTERISTICS OF THE MORE COMMON SOIL SERIES FOUND IN THE KARNS COMMUNITY

Soil Series & No.	Parent Material	Dominant Relief	Topographic Position	Drainage Ext.&Int.	Surface Soil	Subsoil
Lehew	Interbedded sand & shale	Hilly to steep	Ridges and knolls	Very rapid Rapid	Dark brown friable fine sandstone 6-8"	Pinkish brown friable shaly loam 20-36"
Upshur	Tilted calcareous shale	Hilly steep	Ridges and hilly slopes	Very rapid Rapid	Brown friable silt loam 5-7"	Dull red firm silty clay loam 18-22"
Armuchee	Interbedded lime and shale	Hilly steep	Ridges and hilly slopes	Very rapid Rapid	Brown friable silt loam 5-7"	Reddish yellow firm silty clay loam 16-20"
Sequoia 46	Interbedded lime and shale	Undulating to rolling	Valley slopes	Rapid Slow	Light brown friable silt loam 4-6"	Yellowish brown firm silty clay loam 14-20"
Greendale 30	Local Colluvium from Clarksville and Fullerton	Level to gentle sloping	Footslopes	Rapid Moderate	Light grayish brown mellow silt loam 7-10"	Light brownish yellow friable silt loam 20-25"
Choto	Limestone and acid shale Recent stream	Undulating to rolling	Valley slopes	Rapid Rapid	Brown friable silt loam 5-8"	Reddish brown, firm silty clay loam 20-30"
Melvin 18	deposit mostly limestone material Recent stream	Nearly level	First bottom	Slow Very slow	Young soil. Gray or light brownish gray silt loam 6-12"	Mottled gray compact silty clay loam 6-12"
Lindside 52	deposit from limestone residuum Recent stream	Nearly level	First bottom	Slow Slow	Brown to grayish brown silt loam 10-18"	Mottled light gray to yellow silty clay 10-18" + Yellowish-brown silt loam with layers of fine sandy loam 20-30" +
Huntington 39	deposit from limestone residuum	Nearly level	First bottom	Slow Rapid	Brown mellow silt loam 20-30"	

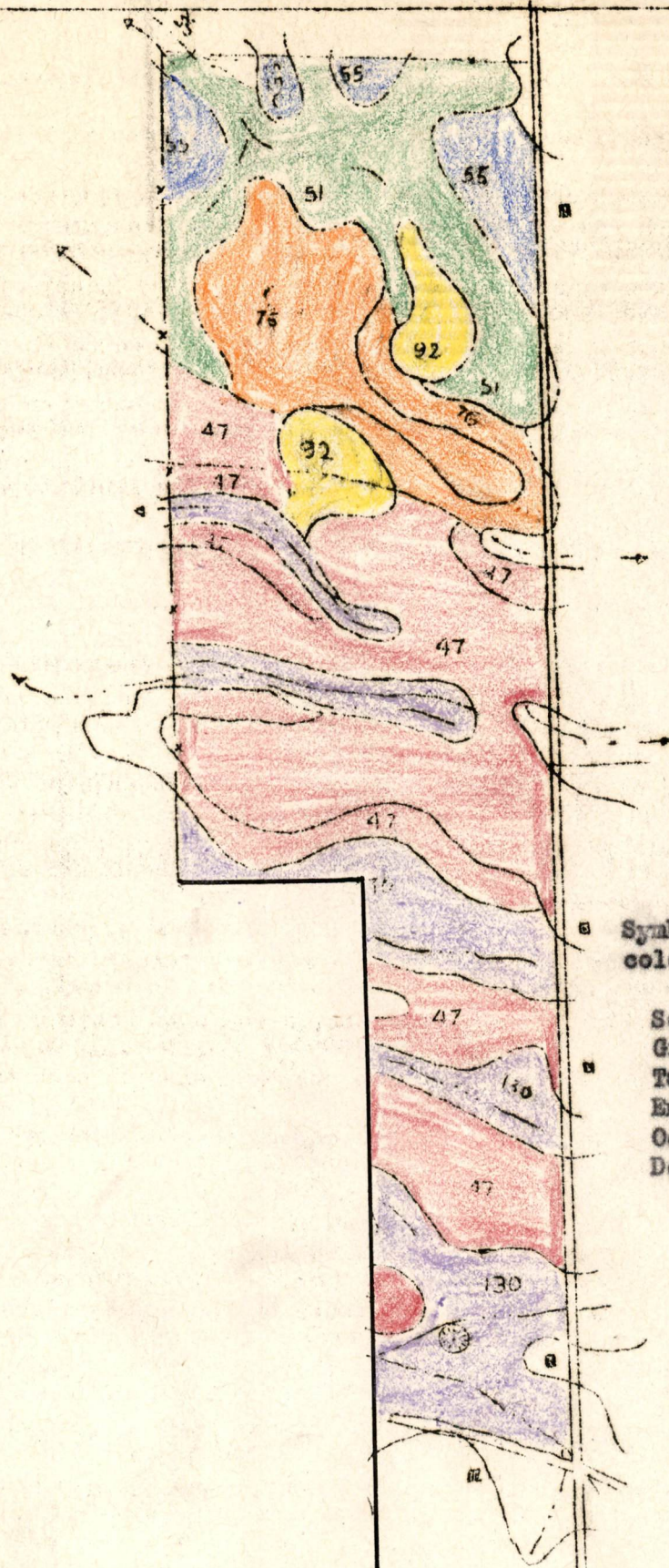
CHARACTERISTICS OF THE MORE COMMON SOIL SERIES FOUND IN THE KARNS COMMUNITY (Continued)

Soil Series & No.	Parent Material	Dominant Relief	Topographic Position	Drainage Ext. & Int.	Surface Soil	Subsoil
Abernathy 35	Limestone material	Nearly level Depressional	Depressions or sinks	Very slow Rapid	Reddish brown mellow silt loam 18-30"	Reddish brown friable silt loam 10-20"
Emory 51	Limestone material	Undulating Colluvium	Mild foot slopes	Rapid Very rapid	Reddish brown mellow silt loam 18-22"	Light brown friable silt loam 10-20"
Decatur 32	Pure limestone	Undulating to rolling	Upland valley slopes	Rapid Very rapid	Dark brown mellow silt loam, 10-16"	Dark red firm silty clay loam, 36-60"
Dewey 33	Limestone some chert	Undulating to rolling	Upland valley slopes	Rapid Rapid	Light brown friable silt loam, 10-12"	Brownish red firm silty clay loam, 40-50"
Fullerton 43	Limestone Mod. chert	Rolling to hilly	Ridges and ridge slopes	Very rapid Rapid	Grayish-brown friable cherty silt loam, 3-6"	Light red friable silty clay 20-36"
Clarksville	Limestone much chert	Rolling to hilly	Ridges and ridge slopes	Very rapid Very rapid	Gray friable cherty silt loam 7-9"	Yellow firm cherty silty clay loam 24-30"
Monteville	Tilted acid shales	Hilly to steep	Ridges and knolls	Very rapid Moderate	Grayish-yellow friable silt loam 4-8"	Yellow firm silty clay loam 4-18"
Talbott 76	Tilted clayey limestone	Rolling	Mild slopes	Rapid Slow	Grayish brown silt loam to clay loam. Friable 4-8"	Yellowish-red silty clay loam compact 12-24"
Guthrie silt loam 17	Limestone & Chert (alluvial)	Nearly level (depressional)	Depressions or sinks	Very slow Very slow	Light gray to rust brown friable silt loam 6-8"	Gray mottled with rust-brown or yellow, silty clay or heavy clay friable or tough 10-18"

CHARACTERISTICS OF THE MORE COMMON SOIL SERIES FOUND IN THE KARMS COMMUNITY (Continued)

Soil Series & No.	Parent Material	Dominant Relief	Topographic Position	Drainage Ext.&Int.	Surface Soil	Subsoil
Etowah 45	Limestone (alluvial)	Nearly level to undulating	Young terraces or second bottoms	Rapid	Grayish-brown friable silt loam 8-12"	Reddish to yellowish brown firm clay faintly splotted with gray and yellow 18-32"
Leadvale 144	Acid shales and sandstones	Undulating (footslopes)	Young terraces or second	Rapid	Grayish-yellow silt loam, firm friable 10-14"	Yellow-mottled silty clay slightly compact 10-18"
Ooltewah 92	Limestone	Nearly level (depressional)	Depressions sinks and swales	Very slow	Brown or gray-brown silt loam mellow 14-18"	Distinctly grayish splotted silty clay loam. Firm, slightly friable
Waynesboro 57	Sandstone and shale residuum	Undulating and rolling	High or old terraces	Very rapid	Light brown or reddish brown, fine sandy loam to clay loam 6-10"	Light red to dull red moderately friable--firm 3-3 1/2'
Holston 67 & 68	Sandstones and shale residuum	Undulating and rolling	High or old terraces and occasionally low terraces or second bottoms	Rapid	Light brown or grayish-yellow friable 6-10"	Yellow or bright yellow. Sandy clay to silty clay loam Firm but friable 10-24"
Sequatchie 163	Sandstones, shales and limestone residuum	Undulating	High or old terraces and occasionally low terraces or second bottoms	Moderate	Brown to light brown sandy loam or loam, friable 8-15"	Light brown to reddish brown Friable 15-25"

Data from Tennessee Agricultural Extension Service Special Circular 129



Symbols to use when coloring in the series:

Sequicia	-	Red
Greendale	-	Purple
Talbot	-	Orange
Emory	-	Green
Ooltewah	-	Yellow
Decatur	-	Blue

E. H Butler

SOILS

TOTAL ACREAGE OF EACH SERIES ON BUTLER FARM

Series	Number	Acreage	Per Cent of Total
Sequoia	47	40.8	38.5
Greendale	130	21.2	20.0
Talbott	76	16.0	15.2
Emory	51	17.4	16.5
Decatur	55	7.2	6.8
Ooletewah	92	3.2	3.0
		105.8	100.0

Acreage of Sequoia ÷ total farm acreage = percentage of farm made up of this soil series.

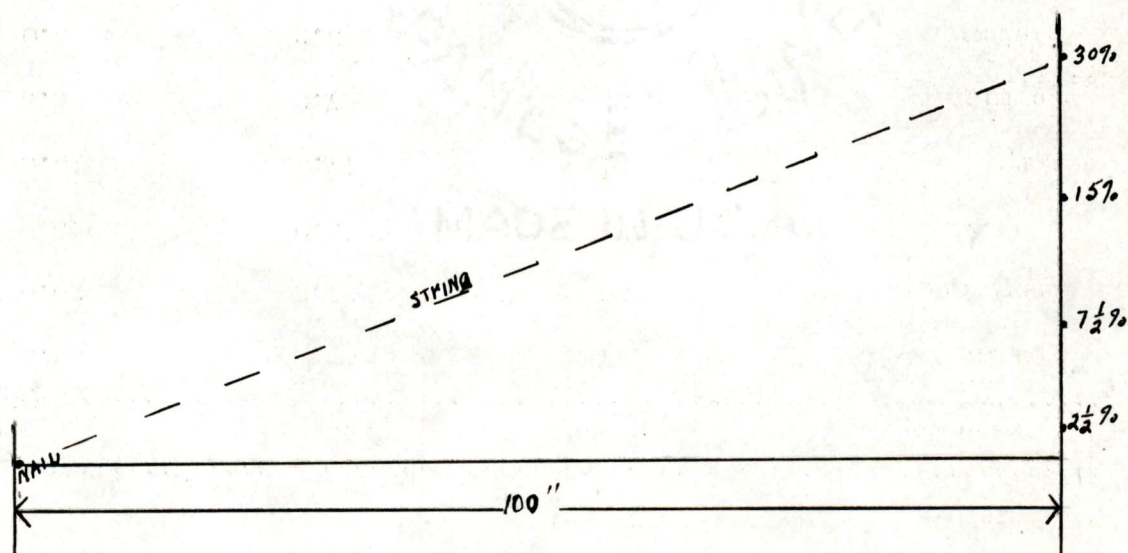
ACREAGE OF EACH SOIL SERIES ON FARMS OF CLASS MEMBERS

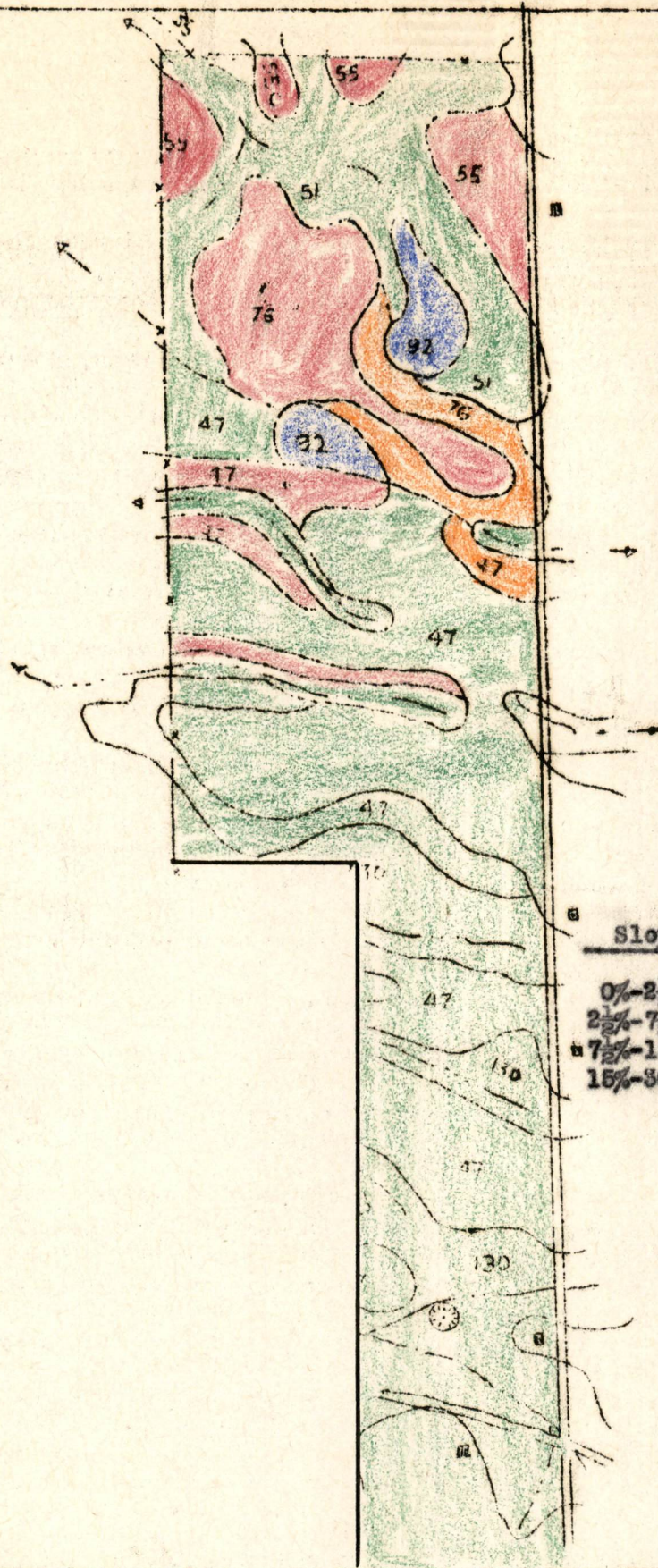
Farmer	47	30-130	76	51	92	55	42	18	144	67 & 68	163	57	5-2"	16	2			19	52	53
															4-2'	S. Gullied land	S. Gullied- land			
															land-shale (limestone)	land-shale (limestone)	land	Armuchee	Lindside	Dewey
Elmer Butler	40.8	21.2	16.0	17.4	3.2	7.2														
W. A. Asbury	29.4	27.9						4.2										6.2		
Collier	36.9						13.2	14.0							4.9			2.1		
Cap Giffin		14.9											6.3						4.2	
Joe Hendrix		5.4					1.1									v		3.8		
J. B. Hendrix	10.2	9.6																		
L. Hendrix		4.5		.8	1.9															1.7
J. C. F. Herrell				1.6			6.3	2.3		.5									2.8	
Cleo Hendrix	5.6	13.9						2.7							5.2				.8	
F. Jarnigan				2.3											4.2			5.3		
Joe Loy	15.9	2.0		3.8			10.0	9.5		7.2			4.5		1.8					
M. W. McGown				8.2							4.8				5.2		6.3		4.3	3.1
W. M. Reynolds	8.3	3.3					3.3								.7			2.5	2.1	
L. Padgett	13.9	6.5					3.4		11.9									7.2	8.2	
R. H. Pennell	30.2	27.9		9.3			10.9	14.9				1.4		3.3				6.8		
U. L. Smathers				5.5														3.7		
J. E. Whitson	28.9	6.3						4.8							6.6			3.7	5.0	
Miss Hazel Williams																				
Total acreage of the soil series	220.1	146.4	16.0	48.9	5.1	7.2	48.2	52.4	11.9	7.7	4.8	1.4	10.8	3.3	28.6	6.3	41.3	27.4	4.8	
No. of farms having this series	10	12	1	8	2	1	7	7	1	2	1	1	2	1	7	1	1	9	8	2
% of total acreage this soil series makes up															3.2	.7	4.6	3.1	.5	

SLOPE CLASSIFICATION, SYMBOLS, AND LEGENDS

Slope Classification	Symbol	Legend
0% - $2\frac{1}{2}\%$	A	Blue
$2\frac{1}{2}\%$ - $7\frac{1}{2}\%$	B	Green
$7\frac{1}{2}\%$ - 15%	C	Red
15% - 30%	D	Orange
30% - 60%	E	Yellow
60% - Upward	F	Purple

ESTIMATING THE SLOPE FOUND ON A FARM





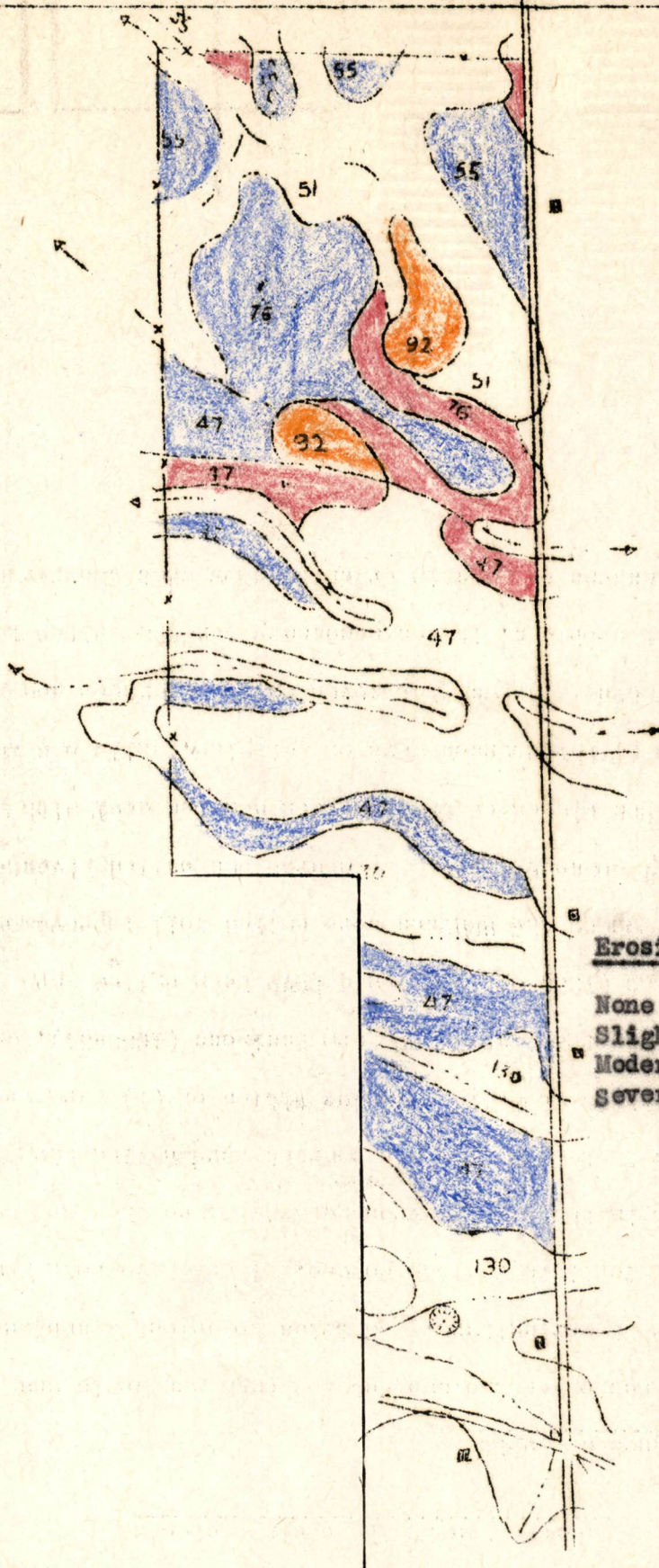
Slope	Symbol	Legend
0% - 2½%	A	Blue
2½% - 7½%	B	Green
7½% - 15%	C	Red
15% - 30%	D	Orange

E. H. Butler

SOILS

NUMBER OF ACRES AND THE PER CENT OF TOTAL FARM ACREAGE OCCURRING ON THE
VARIOUS SLOPES OF FARMS OF KARNS EVENING SCHOOL MEMBERS

Farmer	Slope						Per Cent of Total Farm Acreage Having					
	A	B	C	D	E	F	A	B	C	D	E	F
E. H. Butler	1.7	59.1	42.4	2.7			1.6	55.2	40.3	2.9		
W. M. Reynolds	2.4	3.7	12.2	2.5			11.5	17.8	58.7	12.0		
Cleo Hendrix	2.2	22.3	5.4	5.2			6.3	63.5	15.4	14.8		
M. W. McCown	4.4	27.9					13.6	86.4				
Joe Loy	17.3	32.8	10.1	6.0			26.1	49.5	15.3	9.1		
J. E. Whitson	6.7	19.2	9.0	11.1			14.6	41.7	19.6	24.1		
R. H. Pemell	14.9	67.8	25.9	7.7	8.7		11.9	54.2	20.7	6.2	7.0	
W. A. Asbury	5.7	36.1	17.3	11.2	13.2		6.8	43.2	21.7	13.4	15.1	
Cap Giffin	4.0	24.3	8.6				10.8	65.0	23.6			
J. B. Hendrix		14.8	4.6					76.3	23.7			
LeRoy Hendrix	1.5	7.4	5.5	4.0			8.2	40.2	29.9	21.7		
J. C. F. Herrell	5.0	4.6	3.3				38.8	35.6	25.6			
V. L. Smathers		7.9	1.4	3.6	6.9			40.3	7.1	17.4	35.2	
Joe Hendrix		4.8	4.4	3.7	7.9			23.1	21.2	17.8	38.0	
Frank Jarnagin		3.6	1.7	3.4	7.3			22.6	10.6	21.3	45.6	
W. H. Collier	25.1	52.1	16.0	7.4			25.0	51.8	15.9	7.4		
L. Padgett	11.8	18.1	14.0	12.5	12.3		17.2	26.4	20.4	18.2	16.1	



<u>Erosion</u>	<u>Symbol</u>	<u>Legend</u>
None	o	Orange
Slight	n	White
Moderate	n	Blue
Severe	p	Red

E. H. Butler

SOILS

Degrees of Erosion

Erosion Symbols:

m--Slight erosion

n--Moderate erosion

p--Severe erosion

1. Slight erosion shows in a field when plowing and the plow runs in subsoil only once in a while.

2. Moderate erosion shows when the plow turns up subsoil in places over the field.

3. Severe erosion shows when the plow turns subsoil most of the time and the top soil has been washed away.

W. Roberts

T. V. A.

Series on the Butler Farm by Slope Areas

<u>A Slope</u>	<u>B Slope</u>	<u>C Slope</u>	<u>D Slope</u>
0-2 $\frac{1}{2}$	2 $\frac{1}{2}$ -7 $\frac{1}{2}$	7 $\frac{1}{2}$ -15	15-30
Ooltewah	Greendale	Sequoia	Talbott
	Sequoia	Decatur	Sequoia
	Emory	Talbott	

NUMBER OF ACRES OF EACH DEGREE OF EROSION AND THE PER CENT OF TOTAL FARM ACREAGE
OF EACH DEGREE OF EROSION ON FARMS OF KARNS EVENING SCHOOL MEMBERS

Name of Farmer	Total Acreage of Each Farm	Number of Acres of Each Degree of Erosion			Per Cent of Acreage of Each Degree of Erosion			
		None	M	N	None	M	N	P
Elmer Butler	103.4	43.0		53.2				7.2
W. A. Asbury	83.8	39.7		24.1				20.0
W. H. Collier	91.1	48.7		25.9				16.8
Cap Giffin	37.4	18.4		12.0				7.0
Joe Hendrix	21.0	12.9		1.2				6.9
J. B. Hendrix	15.6	10.5		8.4				
Leroy Hendrix	18.0	6.2		7.8				4.0
Cleo Hendrix	34.3	13.8	8.4	1.1		24	4	11.0
J. C. P. Herrell	12.5	6.4		6.1				
Frank Jarnagin	17.2	7.3	1.4	3.5		8	20	5.0
Joe Loy	66.0	29.8	18.9	7.4		29	11	9.9
M. W. McCown	26.1	12.1		14.0			54	
W. M. McReynolds	20.5	6.1		10.9			53	
L. Padgett	67.4	38.5		18.4			25	3.5
R. H. Pennell	125.5	56.2	24.1	24.5		19	19	10.5
V. L. Smathers	20	12.4		1.2			6	20.7
J. E. Whitson	46.9	13.6		16.8			36	6.4
Hazel Williams	146.7	56.0		46.3			32	16.5
W. Richardson	89.1	7.9	12.0	48.4		13	54	44.4
Total	1036.1	439.5	64.8	331.2		6	32	20.8
					42			200.6

RELATIONSHIP BETWEEN SOIL SERIES, SLOPE AND DEGREE
OF EROSION ON THE BUTLER FARM

Soil Series	Degrees of Erosion by Slope Areas			
	A	B	C	D
Ooltewah				
Emory				
Greendale		m		
Sequoia		n	np	p
Decatur			n	p
Talbott			n	p

There was little similarity between the procedure and teaching materials planned for the first evening class in 1926-27, and the class of 1937-38. Table IX shows that the 1926-27 dairy course was analyzed into jobs. The records do not show a written lesson plan, nor the procedure the teacher used when teaching the lesson. However, members of the first class say the teacher stated the lesson and led the group in a discussion on how the job should be done.

There were complete written plans made for the 1937-38 class. A copy of the present practices, objectives for the lessons, procedure to be used while teaching the class, and experimental data was prepared before the date set for the lesson. The members were encouraged by the teacher to give their experiences regarding the practices under consideration and to evaluate their experiences. This information was supplemented with the previously prepared experimental data on the practice. Using the experiences of the group and the facts secured from the experimental data, the teacher encouraged the members to draw practical conclusions on how the practices should be carried out on their own farms. The teacher then asked the members to list the practices which they would try to improve on their farms as a result of the lesson.

The lesson plans for the 1941-42 class were written in advance of the date set for the class meeting. The plan included a statement of the job, problems for consideration, procedures, and the teaching materials to be used while teaching the lesson. The procedure used when securing a statement of experiences in regard to the problems of the members present, the presentation of the experimental data and the group discussions were

similar to those used in the 1937-38 class. Two procedures, which had not been previously used, were added to this lesson plan. The members worked on their own problems under the supervision of the teacher. A field trip to the Butler farm was made to supplement the classroom instruction. This is the first time records show an evening class using either the supervised study or the field trip.

Enrollment of Classes

Number of Evening School Students Enrolled by Years

As previously stated, the Smith-Hughes Act, under section ten, stated in effect that vocational agricultural education is for persons over fourteen years of age. Teachers have interpreted this in several different ways. Table X shows that in 1926-27 boys were included as members of the evening class group. The teacher at that time evidently encouraged the high school boys doing all-day work to attend the evening classes.

The all-day boys, however, have not been enrolled at any time since then even though some have attended evening classes. Women were enrolled in the class of 1929-30. There were five women attending at least three meetings during the course. It is interesting to note that following this class the women did not attend for five years. Since 1935-36 there has been at least one in every class. In 1936-37 there were fourteen. This is the largest number of women regularly enrolled in any class.

The records do not show why the unusually large enrollment of women for this particular class. The subject of the course taught was "Soil Conservation," and the evening school was taught in the Hardin

Valley elementary school. The women may have been especially interested in the lessons taught or they may have had special invitations to attend with their husbands, brothers or sons.

TABLE X

NUMBER OF EVENING SCHOOL STUDENTS ENROLLED BY YEARS*

School Year	Men	Women	Boys	Total
1926-27	21	0	16	37
1929-30	57	5	0	62
1930-31	50	0	0	50
1931-32	38	0	0	38
1932-33	31	0	0	31
1933-34	28	0	0	28
1934-35	26	0	0	26
1935-36	40	3	0	43
1936-37	41	14	0	55
1937-38	45	2	0	47
1938-39	46	1	0	47
1939-40	28	7	0	35
1940-41	32	6	0	39
1941-42	24	1	0	25

* Any person attending three or more meetings is considered a member of the class.

Names of Members Attending the Classes for the Years 1926-27, 1937-38, 1939-40, 1940-41, and 1941-42

The complete class rolls are available for the school years 1926-27, 1937-38, 1939-40, 1940-41, and 1941-42. The writer of this thesis thought it would be interesting to see definitely who had attended the classes. Exhibit 8 is a list of men and boys attending the 1926-27 class. Exhibits 9, 10, 11, and 12 show the complete rolls for the years 1937-38, 1939-40, 1940-41, and 1941-42 respectively. There is not a single person who has attended all of the evening classes held by the vocational agriculture department. Table III shows that the 1926-27, 1939-40, and 1941-42 classes were held at Karns, while the 1937-38, and 1940-41 classes were held at Hardin Valley.

Men

1. Andes, J. A.
2. Bird, D. R.
3. Butler, J. A.
4. Collier, W. H.
5. Collier, C. H.
6. Cobb, W. B.
7. Chance, F. S.
8. Hendrix, C. T.
9. Hendrix, J. B.
10. Hodges, U. G.
11. Herrell, J. C. F.
12. Herrell, Poe
13. Jones, J. C.
14. McNew, A. S.
15. McNew, Clayton
16. McReynolds, W. M.
17. Nickels, Jim
18. Padgett, Leonard
19. Rutherford, Loyd
20. Stafford, J. J.
21. Walters, I. H.

Boys

1. Andes, Ben
2. Andes, Howard
3. Ammons, John
4. Bond, Floyd
5. Bond, Wilson
6. Bay, Sam
7. Butler, Wilbur
8. Calloway, Croat
9. Hendrix, Reynard
10. Hendrix, Roy
11. Jones, Robert
12. Roark, Ben
13. Stafford, Reed
14. Walker, Virgil
15. Walker, Boyd
16. Walker, Freeman

Exhibit 9. Members attending the evening class in 1926-27 at Karns

Men

1. Aycock, Haywood
2. Aycock, Leon
3. Ball, Major
4. Bracket, George
5. Bryant, Dewey
6. Brock, John
7. Christian, William
8. Coley, George
9. Dunekin, J. S.
10. Fain, Buford
11. Fleenor, Jack
12. Goins, Clifford
13. Gallaher, J. H.
14. Gallaher, J. A.
15. Gallaher, J. R.
16. Gallaher, M. M.
17. Guinn, Frank
18. Guinn, Loness
19. Guinn, Ralph
20. Guinn, J. L.
21. Hays, Willie
22. Harvey, Albert
23. Jones, J. J.

Women

1. Hardin, Mrs. Geo.
2. Walker, Mrs. W. P.
24. Jones, W. K.
25. Kerr, C. C.
26. Kerr, Alva
27. Kerr, Lawrence
28. Kollock, F. R.
29. Lynch, Walter
30. Lovelace, J. R.
31. Lovelace, Wm.
32. Leath, Arthur
33. Leath, Robert
34. Pitts, Kim
35. Robbins, C. C.
36. Stafford, J. J.
37. Stafford, Wm.
38. Stafford, C. E.
39. Stimmett, W. M.
40. Shinpaugh, Hodge
41. Snyder, Harold
42. Tharp, W. H.
43. Walker, Clarence
44. Walker, W. P.
45. Williams, J. B.

Men

1. Ammons, J. H.
2. Bacon, R. N.
3. Butler, Elmer
4. Collier, C. H.
5. Collier, W. H.
6. Griffith
7. Goin, Clifford
8. Gose, O. G.
9. Hickey, Grant
10. Hickey, Ronald
11. Hendrix, J. B.
12. Herrell, J. C. F.
13. Jensen, W. L.
14. Kelley, Herbert
15. Lynch, Walter
16. McCown, M. W.
17. McCown, A. J.
18. McReynolds, W. M.
19. Mays, J. A.
20. Ogg, Leonard
21. Pennell, R. H.
22. Phillips, W. M.
23. Parker, Silas

Women

24. Smelser, Oscar
 25. Smelser, O. L.
 26. Walters, J. H.
 27. Walker, Virgil
 28. Walker, Freeman
1. Ammons, Miss
 2. Collier, Mrs. W. H.
 3. Griffith
 4. Garrison, Miss Nelle
 5. Herrell, Mrs. J. C. F.
 6. Harvey, Mrs. Geo.
 7. McCown, Mrs. M. W.

Men

1. Aycock, Haywood
2. Aycock, Leon
3. Ball, D. J.
4. Ball, Major
5. Bryant, A. J.
6. Brown, Woodrow
7. Davis, Hugh
8. Gallaher, M. M.
9. Gallaher, J. R.
10. Gallaher, J. A.
11. Hendrix, O. W.
12. Hendrix, Tom
13. Hays, Willie
14. Jones, J. J.
15. Jones, W. K.
16. Kollock, C. R.
17. Lee, Ralph
18. Miller, Roy
19. Miller, Geo.
20. Peak, Clyde
21. Rice, Fred
22. Rice, Wayne
23. Stafford, C. E.

Women

1. Ball, Mrs. D. J.
2. Brown, Mrs. Woodrow
3. Gallaher, Mrs. Roy
4. Gallaher, Sara
5. Hardin, Mrs. Geo.
6. Walker, Mrs. W. P.
24. Stafford, J. J.
25. Steel, Theodore
26. Walker, W. P.
27. Walker, Clarence
28. Yarnell, J. E.
29. Leath, Arthur
30. Pitts, Kim
31. Stafford, Wm.
32. Robbins, C. C.

Exhibit 12. Members attending the evening class in 1940-41
at Hardin Valley

MenWomen

- | | |
|-----------------------|-------------------------|
| 1. Asbury, W. A. | 1. Williams, Miss Hazel |
| 2. Butler, E. H. | |
| 3. Bridges, Claude | |
| 4. Cates, H. J. | |
| 5. Collier, W. H. | |
| 6. Collier, Chas. | |
| 7. Dyer, Jim | |
| 8. Griffin, Cap | |
| 9. Hendrix, J. B. | |
| 10. Hendrix, Clev. | |
| 11. Hendrix, LeRoy | |
| 12. Herrell, J. C. F. | |
| 13. Jarnigan, Frank | |
| 14. Loy, Joe | |
| 15. Lynch, Walter | |
| 16. Mays, N. H. | |
| 17. McReynolds, W. M. | |
| 18. McCown, M. W. | |
| 19. McCown, A. J. | |
| 20. McNew, A. S. | |
| 21. Pennell, R. H. | |
| 22. Padgett, Leonard | |
| 23. Richardson, Wiley | |
| 24. Whitson, J. E. | |

Men or Women Attending the Classes By Years

The names of the people attending the classes during the five years complete rolls were available has been shown. Yet, there was the possibility that the same people had attended the classes every year even though the class had been held in two different schools.

Table XI shows that five men have been members of the class each time it was held at Karns and none of the five attended the class when it was held at Hardin Valley. This same table also shows ten men and two women were members of both classes held at Hardin Valley. The members attending the two classes at Hardin Valley did not attend the classes when they were held at Karns during either of the years complete class rolls were available.

TABLE XI

MEN AND WOMEN ATTENDING EVENING CLASSES BY YEARS

Karns 1926-27	Hardin Valley 1937-38	Karns 1939-40	Hardin Valley 1940-41	Karns 1941-42
Collier, W. H.	Aycock, Haywood	Collier, W. H.	Aycock, Haywood	Collier, W. H.
Collier, Chas.	Ball, Major	Collier, Chas.	Ball, Major	Collier, Chas.
Hendrix, Joe B.	Gallaher, J. A.	Hendrix, J. B.	Gallaher, J. A.	Hendrix, J. B.
Herrell, J. C. F.	Gallaher, J. R.	Herrell, J. C. F.	Gallaher, M. M.	Herrell, J. C. F.
McReynolds, W. M.	Gallaher, M. M.	McReynolds, W. M.	Gallaher, J. R.	McReynolds, Wm.
	Hardin, Mrs. Geo.		Hardin, Mrs. Geo.	
	Jones, J. J.		Jones, J. J.	
	Jones, W. K.		Jones, W. K.	
	Kollock, F. R.		Kollock, F. R.	
	Stafford, C. E.		Stafford, C. E.	
	Walker, W. P.		Walker, W. P.	
	Walker, Mrs. W. P.		Walker, Mrs. W. P.	

Supervised Farm Practices Conducted by Evening Class School Members

The Smith-Hughes Act provides for directed or supervised practice in agriculture, either on a farm provided for by the school or other farm for at least six months of the year. It is expected that a member of an evening class be encouraged to adopt the new or improved practices either while receiving the instruction in the evening school or soon thereafter. In order to determine what improved practices have been carried out by the members of the Karns evening classes, the practices resulting from the lessons taught during 1926-27, 1937-38, and 1941-42 will be considered. The practices for these three years were selected because they represent the same years used to show the complete course of study and lesson plans used by the teacher. The supervised practices resulting from the work done these three years should give a fair sample of the way practices are being carried out as a result of evening class work in the Karns community.

Supervised Farm Practices Conducted by Members of the 1926-27 Evening Class

The records do not show that the farmers conducted supervised practices as a result of this class. The state supervisor of vocational agriculture required the teacher to file a report of the class. The following data is a copy of the preliminary project report for evening classes in 1926-27 sent to the supervisor.

PRELIMINARY PROJECT REPORT EVENING CLASSES 1926-27

Name of Community in Which Evening Classes are Held	:	Number	:	Name of Project	:	Scope	
						Acres	Animals
Karns	:	30 adults 20 boys	:	Dairy	:		150

No complete records being kept.

Total number projects _____

Number people carrying projects _____

Name of school _____ Teacher _____

The report shows that the projects involved only dairy animals, with one hundred and fifty animals being included. There were no complete records being kept regarding the improved practices being conducted by members of the evening class.

Supervised Farm Practices Conducted by Members of the 1937-38 Evening Class

In order to secure the complete list of improved practices proposed by members of the 1937-38 class, mimeographed sheets (Exhibit 14) listing the practices taught during the evening class, were given to every member of the class at the last meeting. The practices were listed by enterprises taught, and represent the practice farmers concluded should be adopted as each lesson was taught. Each member was asked to place a check mark opposite the practice he had actually carried out or proposed to use on his home farm. A blank space opposite each practice was provided in order to make it possible for the member filling

LIST OF IMPROVED PRACTICES FOR THE FARM

Using & Breeding Work Mares	Acres or Animals	Breeding & Management of Dairy Cows	Acres or Animals
1. Work one or more brood mares on farm		1. Keeping for breeding the cows with annual milk production of 4000# or above	
2. Grow one or more colts for work stock replacement		2. Consider pedigree when selecting bull calf	
3. Breed mares to a good jack		3. Select only bulls from proven sires	
4. Breed mares when 3-4 years old		4. Breed all cows to pure breed bulls	
5. Rest mares before breeding		5. Feed 1# grain to 3# milk during winter	
6. Plan farm work for more uniform use of work stock throughout the year		6. Grow legume hay for roughage	
7. Work animal under 7 years of age		<u>Breeding & Management of Beef Cattle</u>	
8. Provide a grain mixture consisting of not more than $\frac{1}{2}$ corn for work mares		1. Use pure bred bull on all cows	
9. Feed work animals according to the kind of work being done		2. Select beef type cows for the breeding herd	
A. Feed 1 $\frac{1}{2}$ # grain to each 100# live weight		3. Consider pedigree when buying a bull	
B. Feed 1 $\frac{1}{2}$ # hay to each 100# live weight		4. Feed beef type steers and heifers for market	
C. Feed three times per day		5. Sell feeders at 2 years of age	
1. Morning 1/3 grain--small amount hay		6. Add 1-2 lbs. protein supplement to cheap roughage when wintering	
2. Noon 1/3 grain--no hay		7. Finish on corn silage and C. S. meal	
3. Night 1/3 grain--remainder hay		<u>Breeding & Management of Swine</u>	
D. Idle day feed 70% usual grain		1. Breed sows to pure bred boars	
10. Keep entrances to mares' stable clear			
11. Work carefully the bred mare until foaling time			

Breeding & Management of Swine (Continued)	Acres or Animals	Controlling Insects & Garden Pests	Acres or Animals
. Cross-breed swine		1. Turn under trash in garden in fall	
. Breed gilts at 9 months of age		2. Rotate crop in garden	
. Select gilts from large thrifty litters		3. Thoroughly clean up and destroy all refuse near garden	
<u>Breeding & Management of Poultry</u>		4. Control Mexican Bean Beetle with alerce cryolite 1 $\frac{1}{2}$ to 50 gal. water or 3 tablespoonfuls to 1 gal. water	
. Keep hens that produce 160 eggs or more per year		5. Control lice with nicotine sulphate or kerosene emulsion	
. Breed from hens that mature early		6. Control common eating insects with arsenate of lead	
. Breed from hens that are non-broody			
. Breed from hens that are laying in September and October			
. Use pure bred roosters			
<u>Pruning & Spraying Apples</u>			
. Prune apple trees from December to February			
. Spray apple trees with dormant spray			
. Apply pink bud spray: Use 2 $\frac{1}{2}$ gal. of 32° baume lime sulphur, 100 gal. water, 1 pt. 40% nicotine sulphate			
. Apply calyx spray: same as above, add 3# arsenate of lead, leave out nicotine sulphate			
. Apply first cover spray: 4-8-100 bordeaux, 3# arsenate of lead			
. Apply second cover spray: same as above			

in the form to report accurate intentions or accomplishments. This form did not take the place of the practices listed by the secretary at the close of each lesson, but rather helped to supplement the list kept by the secretary. The improved practices were definite in meaning so that each member of the class would know the practice or practices he was attempting to improve or had improved. The point was also made clear that in order to include a practice it had to be a new practice to the farm, and not one he had been carrying out for several years. A person could try every practice or only one, depending on his or her own conclusion reached as a result of the evening class instruction. After checking each practice improved, the members were asked to turn the form in to the teacher of vocational agriculture.

A summary of the improved practices carried out by members of the 1937-38 class is shown in the evening class report to the state supervisor for that year, page 98. This report includes the twenty-three improved practices that were carried out by thirty-six different individual members of the class. It also shows the total number of units completed by the members of the class for each improved practice. The twenty-three improved practices include from one to five improved practices for each enterprise taught.

The first eight improved practices, page 98, deal with the improvement of the work stock situations on the farms, while the ninth through the twelfth, are practices that are to improve the dairy enterprises. The remaining practices refer to other significant enterprises taught during the evening class. The first column under the heading "Scope of Improved Practices" refers to the number of units completed

on each kind of improved practice while the second column shows the number of persons completing each kind of improved practice.

For example, there were twenty different individual members of the class who decided that it would be good business for them to include a total of forty-five brood mares on their farms yet there were only seven of them interested in growing thirteen animals for work stock replacement purposes. Thus a person would select for improvement those practices he decided needed improving on his own farm. The report includes every practice the farmers decided to improve as a result of the evening class instruction.

EVENING CLASS REPORT FOR 1937-38

Kind of Improved Practice	Scope of Improved Practice	
	Number Persons	
	Number Units Completed	Completing Improved Practice
1. Work brood mares on farm	45	20
2. Grow work stock replacements	13	7
3. Purchase cooperatively one good jack	1	36
4. Purchase cooperatively one registered stallion	1	1
5. Breed mares to jack	45	20
6. Breed mares to stallion	10	5
7. Work animals under 7 years of age	5	5
8. Provide feed--one-half corn for work mares	11	6
9. Use for breeding only cows producing 4000 lbs. milk or above	30	5
10. Consider pedigree when buying bull calves	3	3
11. Select only bulls from proven sires	2	2
12. Breed all cows to purebred bulls	143	17
13. Select beef type cows for breeding beef herd	31	3
14. Feed beef type steers for market	63	5
15. Finish beef animals on cottonseed meal and silage	24	2
16. Breed sows to purebred boars	31	19
17. Select breeding gilts from large litters	5	3
Cross breed sows	13	11
18. Keep hens that produce 160 or more eggs per year		
19. Use purebred roosters	38	7
20. Prune apple trees from December to February	5 Acres	6
21. Spray apple trees with dormant spray	4 Acres	5
22. Control Mexican bean beetle with cryolite	11½ Acres	36
23. Control lice on truck crops with nicotine sulphate	1 Acre	1

Number people enrolled in improved practice not counting any one twice--36

Supervised Farm Practices Conducted by Members of the 1941-42 Evening Class

There were only four kinds of improved practices shown as a result of the 1941-42 evening class, page 100. This can be accounted for by the fact that only five of the eight lessons planned were taught during the course, as some of the lessons required as many as four class periods to teach. The four improved practices were based on managerial jobs. In order to complete the first practice a member of the class had to learn the soil series, slope, and degree of erosion on his own farm. There were twenty-four persons completing this practice and the total acreages on their farms included in the practice was 1442 acres of land. The second practice was dependent upon the first. Before a member could determine the areas on his farm to use for cultivated crops, pastures, and trees he would have to understand the series, slope, and erosion present. There were only twenty-two members completing this practice. The third practice continues to consider the farm as a unit and to carry out this practice the farmer must plan the cropping system according to the cultivated crop land, pasture, and woodland available on the farm. Eighteen members of the class made the above plans for their farms. With the crops and cropping system planned, thirteen members calculated the amount of livestock for which the farms would efficiently provide feed. Although the individuality of the class members was present in each practice as each member made the plans for his own farm, he had to keep in mind the type of farming he wanted to do as well as the kind of farm he had to work with.

EVENING CLASS REPORT FOR 1941-42

Kind of Improved Practice	:	Scope of	:	Number
	:	Improved	:	Persons
	:	Practice	:	Completing
1. Determining soil series, slope and erosion on the farm		1442 Acres		24
2. Determining areas on each farm to be used for cultivated crops, pastures, and trees		1378 Acres		22
3. Determining crops and cropping systems for each farm				18
4. Determining kind and amount of livestock to keep on the farm to most efficiently use the feed produced				13

The members of the 1926-27 class may have decided to adopt improved practices on their farms as a result of their evening class study but the records do not show the teacher's having made any attempt to encourage the members in improving definite practices or of their having done so. The teachers of the 1937-38 and the 1941-42 class encouraged the members of the classes to adopt definite improved practices. The reports made to the state supervisor of agricultural education seem to show that the members of the class actually used the improved practice in their farming program.

CHAPTER III

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

This study was made for the purpose of determining the evening school work that has been done by the Karns vocational agriculture department. The investigation was confined to the work done by one rural high school through its vocational agriculture department from the establishment of a vocational agriculture department in the school through the accomplishments of the last evening class. The historical beginnings of the evening schools were briefly given in order to show the reasons for establishing the vocational agriculture department in the rural high school and why the teacher of vocational agriculture included adult evening classes in his local program of work.

A major portion of the data for this study was secured from the rather complete files of the department of vocational agriculture at the Karns school. The remainder of the local data were secured from people of the Karns school area who had lived there throughout the development of the vocational evening class program, members of the different classes themselves, the Department of Agricultural Education of the University of Tennessee and former teachers of vocational agriculture of the Karns school.

The Karns High School vocational agriculture department included evening class work in its community program for the first time during the school year 1926-27. The adult program was new to both the teacher of vocational agriculture and the people of the school area. The state

supervisor of vocational agriculture in Tennessee had to exert a good deal of pressure on the teacher to secure the addition of the work to the department's program. The department of vocational agriculture has included evening classes in its program fourteen years since 1926-27. There have been only two years since that time in which there has not been a class taught. The classes have been held at the Karns school ten years out of the fourteen and at the Hardin Valley Elementary School the remaining four years.

The most important method used when organizing evening schools was the personal farm visits, made by the teacher of vocational agriculture to the key farmers of the community. Other methods of organizing evening classes included the sending of questionnaires, printed leaflets, and postal cards to prospective members of the class. In one instance the Hardin Valley Community Club requested the teacher of vocational agriculture to teach an evening class at the Hardin Valley Elementary School.

In a majority of the cases the advisory committee, and the key farmers have helped the vocational teacher to decide tentatively the courses that should be included in the adult class program. Farm surveys have also been used to help determine the course of study. The complete farm survey was used by one teacher to determine the types of farming practiced in the community, and the course was based on the leading type as shown by the survey summary. The second survey was more of a questionnaire, but it was used to find out which enterprise the farmers wanted to study. The courses were selected by the members present at the first meeting for the 1935-38 classes. When this procedure was followed, every

person expecting to become a member of the class had an opportunity to help select the course. The last four schools were organized by the use of a combination of the above methods. This combination occurred when the advisory committee and the teacher selected the course, and a survey was made to determine the content of the course, or when the advisory committee helped to select the course and the members present at the first meeting selected the course content.

There has been one course of study taught to the adult classes each year. Farm management has been the subject of the course more than any other, having been used seven times. Soil improvement has been taught to three of the classes, and dairying has been taught twice, while poultry and livestock improvement have been taught one time each. Even though the same subject of the course has been used in successive years, the problems and data were different and were presented in such a way that the point of view was different from the one preceding it. This may be illustrated by comparing the lesson taught to the farm management courses of 1931-32 and 1932-33. In 1931-32 the lessons were studied with the production of food and feed for home use as the predominating idea, while in 1932-33 the central idea was the marketing of farm products to the best advantage. The lessons were organized for teaching on the basis of farm jobs. The jobs were developed into lesson plans for the teacher to use as a guide while teaching the classes.

The teacher of the first evening school evidently attempted to use the conference procedure, as the meetings consisted of informal discussions carried on by experienced men under the direction of the leader. The conference procedure has been used in a modified form by all the

teachers since that time.

Beginning with the 1929-30 class the conference procedure has not been strictly adhered to, as the teachers have provided experimental data for class study, so the members of the class would have facts regarding the problem under consideration, as well as their own experiences and needs, to guide them while arriving at sound conclusions. The supervised study and the field trip were added to the procedures already in use during the 1941-42 class. The members were provided materials to work with and asked to participate by doing part of the work themselves. When the field trip was used, the members were taken to the Butler farm to study the soils in their natural settings.

Men, women and boys have attended the evening classes at the Karns school. The boys were enrolled and considered members of only one class, the first one in 1926-27. Since that time only adults have been regularly enrolled. The men have made up a majority of the enrollment, although a few women have attended the class regularly. The average number of men attending the evening classes was thirty-six. A person had to attend three or more meetings in order to become a member of the class.

Five men living in the Karns community have been members of all three evening schools taught at the Karns High School during the years complete rolls were kept. Twelve persons have been members of the Hardin Valley evening school both times complete rolls were kept at the school. The five men who were members of the school when held at Karns were not enrolled at the school when it was held at Hardin Valley. The

twelve persons who were members of the class at Hardin Valley both times records were available, were not enrolled at either of the Karns evening schools.

The members of every school since 1929-30 were encouraged to take the ideas presented in the class to their homes and put them into practice. The practices in most cases were based on jobs that needed improving on the home farms of members. As a result of this effort, members conducted improved practices on the home farms.

Conclusions

1. The fact that one evening school has been conducted each year by the department of vocational agriculture since 1929 seems to show that evening school work has become a definite part of the program of the vocational agriculture department at the Karns High School.

2. The most commonly used method of organizing the evening schools seems to be for the advisory committee and the teacher of agriculture to make the selection of the course in advance of the first meeting of the class. There is a tendency to organize courses to include a cross section of several enterprises rather than to include a complete study of a single enterprise.

3. When the courses are based upon specific enterprises or specific phases of one or more enterprises the survey may be used for determining the lessons to teach.

4. The most commonly used method of recruiting membership for the schools has been the personal visitation of the teacher of agriculture to the prospective members within the school area. Any effective form of advertising seems to help keep people interested.

5. The conference procedure, in which the members' experiences are drawn out and evaluated, and supplemented with experimental data regarding the problems under consideration, is the most commonly used procedure.

6. The women attend the schools only when the course deals with enterprises in which they are interested.

7. The reports to the state supervisor seem to show that the members put improved practices into operation as an outgrowth of evening school instruction.

Recommendations

1. While this study has shown that evening schools have been taught at the Karns High School and the Hardin Valley Elementary School, the data seem to indicate that these two schools alone are not enough to reach the people of the area. It is, therefore, recommended that additional evening schools be organized in the other community centers of the Karns patronage area.

2. The teacher of agriculture should continue to visit prospective members for the evening schools and supplement the personal visits with public announcements, a display of posters in the rural stores, and any other appropriate means of advertising the school; so that the people with problems in the field of agriculture being covered by the evening school, could know about the work and participate in the program.

3. The teacher and an advisory committee, composed of one member from each community center within the Karns High School patronage area, should formulate a long time program of work for the entire area served

by the vocational agriculture department. Then, the phases of the long time program which can be efficiently dealt with through the evening schools should be incorporated in the annual program for evening schools for each community center. Surveys of the home farm situations, the principle enterprises or specific phases of the principle enterprises in the community, will aid in planning and revising the local program for each school.

4. There should be an evening school in operation in each community center with the schedule arranged so that the evening classes will meet for intensive study during the members' slack work periods and at monthly intervals throughout the year. This would make evening school instruction available to more people of the patronage area.

5. The evening school program at the Karns High School built around the development of a plan for the farm as a unit should be continued. Such a program of instruction would lead farmers to consider such factors as soils, crop and livestock adaptations, and the economic soundness of the farming program.

6. The members of the class should be led to recognize the practices on their farms which should be improved, and the teacher should insist on farmers enrolling for improved practices at the end of each class period, during supervisory visits to the members' farms, and at the last meeting of the school.

MADE IN U.S.A.

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