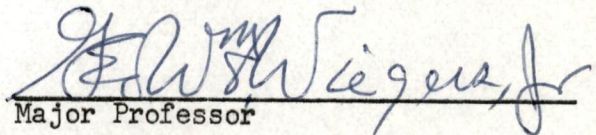


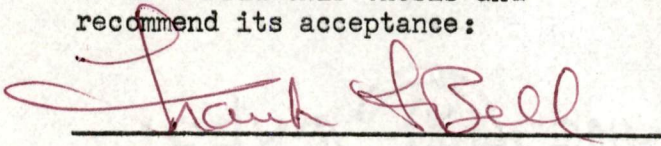
August 9, 1962

To the Graduate Council:

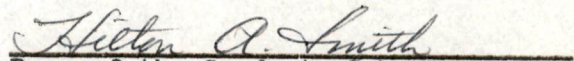
I am submitting herewith a thesis written by Benjamin Brown Draper entitled "A Study of the Use Made of Resource Personnel by Teachers of Vocational Agriculture." I recommend that it be accepted for nine quarter hours of credit in partial fulfillment of the requirements for the degree of Master of Science, with a major in Agricultural Education.


Major Professor

We have read this thesis and
recommend its acceptance:




Accepted for the Council:


Dean of the Graduate School

A STUDY OF THE USE MADE OF RESOURCE PERSONNEL
BY TEACHERS OF VOCATIONAL AGRICULTURE

A Thesis
Presented to
the Graduate Council of
The University of Tennessee

In Partial Fulfillment
of the Requirements for the Degree
Master of Science

by
Benjamin Brown Draper
August 1962

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33

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CHAPTER I

THE PROBLEM AND ITS DEFINITION

I. PURPOSE

The purpose of the study was to determine the use made of resource personnel by teachers of vocational agriculture in teaching high school students and adults.

It was the aim of this study to obtain answers to the following questions: (1) What agencies or persons were used? (2) How frequently was each agency or person used in selected areas of instruction in agriculture in teaching high school students? (3) How frequently was each agency or person used in each area of instruction in teaching adults? (4) How many hours was each agency or person used in each area of instruction in teaching high school students? (5) How many hours was each agency or person used in each area of instruction in teaching adults?

II. LIMITATIONS OF THE STUDY

The study was limited to the Tennessee vocational agricultural teachers' working year, July 1, 1960 to June 30, 1961. The information used in the study was taken from questionnaires returned by fifty-eight Tennessee teachers of vocational agriculture.

III. DEFINITION OF TERMS

Resource personnel. The term is used to designate available individuals whose training and experiences qualified them to give

valuable assistance to the teacher of vocational agriculture in conducting his program.

Vocational agriculture. This term refers to systematic instruction in agriculture of less than college grade conducted in public high schools for high school youth (grades nine through twelve), who are interested in, and can profit from, vocational instruction in agriculture. Instruction is also provided for out-of-school youth and adults who are already engaged in or plan to engage in some agricultural work.

High school students. This term refers to persons regularly enrolled in classes in vocational agriculture in grades nine through twelve of our public secondary schools.

Adults. Those individuals enrolled in a course in vocational agriculture conducted by the high school vocational agricultural teacher, and designed to meet the needs of persons working in agriculture.

Young farmers. Young men enrolled in a course in vocational agriculture conducted by the high school teacher of vocational agriculture, and designed to meet the needs of those who are becoming established in farming and/or preparing for work in agriculturally related occupations.

College with agriculture. A term used to describe a college with a department of agriculture.

University with agriculture. A term used to describe a university with a college of agriculture.

Experiment station. The term refers to land, buildings and equipment maintained and operated by the State and/or United States Department of Agriculture where scientific experiments are conducted in the field of agriculture.

Urban area. Refers to an area of, or near, a city or town.

Rural area. A term used to designate an area distant from a city or town where conditions are different from conditions in the city.

IV. NEED FOR STUDY

Many jobs formerly completed on the farm are now being done off the farm in occupations related to farming. Farming has become a highly specialized, competitive business. To farm successfully, the farmer must keep abreast with current information related to all areas of his operation.

The teacher of agriculture is not able to offer all of the help the farmer needs because of the amount of information now available as well as the rapid progress being made in scientific agriculture. During the past few years the writer had increased his use of resource personnel. He was impressed by the number of resource agencies and persons qualified to help him with his teaching program, and was greatly pleased with their willingness to render him any possible assistance. Many teachers of vocational agriculture, however, have been slow to use resource personnel in teaching all-day boys and adults.

Some teachers feel that the use of resource personnel is an acknowledgement of their inability to fulfill the requirements of their

profession. Some do not know of the availability of resource persons and agencies. The use of resource personnel by teachers of vocational agriculture would better enable them to prepare young men for farming and work in related fields, and to give greater assistance to those now engaged in such occupations.

This study could encourage those teachers not now using resource personnel to include the use of resource persons in their teaching by acquainting them with the resource persons available, and how they have been used by other teachers of vocational agriculture in Tennessee to improve their teaching programs.

V. METHOD OF PROCEDURE

The writer checked vocational bulletins, "Summaries of Studies in Agricultural Education," to review investigations relative to the use of resource personnel by vocational agricultural teachers in their programs. Other literature was reviewed and notes were made showing the author, source, date and content.

A questionnaire was prepared in order to gather information for this study. During the time the writer was preparing the questionnaire, he had it checked by graduate students, Extension personnel, teacher educators and other persons qualified to help him. A copy of the questionnaire was mailed to every third teacher in a list of all the Tennessee teachers of vocational agriculture.

Tables related to the questionnaire were made and the information was tabulated. The information contained in the tables is discussed in Chapter II.

In Chapter III, the writer summarizes the information resulting from the study and makes recommendations regarding the use of resource personnel by teachers of vocational agriculture.

VI. RELATED STUDIES

In 1962, Downs,¹ in discussing the need for the use of resource personnel, pointed out the fact that agriculture is big, complex and ever changing; and that teachers of vocational agriculture cannot hope to keep up with current information on plant breeding, fertilizer responses, livestock nutrition, soil analysis, weed and insect control and other problem areas without using resource personnel in their teaching programs. He emphasized the fact that the success of their use depends upon the teacher's ability to organize and supervise the work of special teachers.

Wiegers,² in 1959, called attention to the change that had taken place in teaching requirements since the Smith-Hughes Act was passed. He stated that at the time the Act was passed teachers, supervisors and directors of agricultural education were considered specialists who had the necessary knowledge and skill to deal with current agricultural problems. He further stated that the situation had changed with the changes in agriculture. Now it was impossible for any one person to

¹Elvin Downs, "Meeting the Challenge of Change," The Agricultural Education Magazine, 34:267, June 1962.

²George W. Wiegers, Jr., "An Analysis of the Legislative Basis for Vocational Agriculture Courses and Classes," (Knoxville: The University of Tennessee College of Education, 1959), p. 25.

keep up with the new developments in agricultural science, business and technology. Agricultural education leaders could no longer be expected to serve as specialists in the different fields of agriculture.

Bonner,³ in 1953, surveyed Alabama vocational agricultural teachers and found that nonschool agencies used by teachers included (1) federal and state agencies, (2) commercial agencies, and (3) public relations agencies. Twenty different agencies were reported as being used by the teachers in their teaching programs. More teachers of vocational agriculture reported using the Soil Conservation Service than any other agency included in the survey, and the study showed that the Extension Service was used a greater number of times than other agencies listed. Teachers rated superior tended to make greater use of nonschool agencies than teachers rated either average or fair. No significant difference was found in the use of nonschool agencies by teachers according to experience. The study showed that in all groupings the teachers tended to make greater use of agencies directly related to agricultural activities than with other agencies. The major use of agencies were by demonstrations, movies and field trips.

In a study made by Puette,⁴ in 1956, of the assistance received

³Henry L. Bonner, "The Relationship of the Use of Non-School Agencies to Experience and Success of Teachers in Teaching Vocational Agriculture in Alabama." Summaries of Studies in Agricultural Education, Supplement 7 (Washington: Government Printing Office, 1953), p. 8.

⁴C. A. Puette, "A Study of the Assistance Received from Certain Agricultural Agencies in Teaching Vocational Agriculture in South Carolina from July 1, 1953 to June 30, 1954." Summaries of Studies in Agricultural Education, Supplement 11 (Washington: Government Printing Office, 1956), p. 63.

from five agricultural agencies by teachers of vocational agriculture in South Carolina, it was found that the teachers ranked them in the following order according to their value: (1) State Forestry Commission, (2) Soil Conservation Service, (3) Agricultural Extension Service, (4) Agricultural Stabilization and Conservation Service, and (5) Production Credit Association.

The average number of times per year representatives of these agencies were used by the teachers was reported as follows: State Forestry Commission, 4.6 times; Soil Conservation Service 4.5 times; Extension Service, 3.7 times; and Production Credit Association 1.7 times. Publications available from these services were rated of more value than were personal visits of representatives. Materials supplied by the State Forestry Commission and the Soil Conservation Service were rated slightly higher in teaching value than materials from other agencies.

Clark and Starr,⁵ in 1959, gave as reasons for using resource persons the fact that they could bring to a class new authority, new interest, new information, and a new point of view. Among the people they considered good resource persons were town, county, state, or federal government employees, hobbyists, travelers, clergymen, and foreigners.

⁵Leonard H. Clark and Irving S. Starr, Secondary School Teaching Methods (New York: The Macmillan Company, 1959), 175 pp.

In 1956, Myers⁶ stressed the importance of the vocational agricultural teacher cooperating with such agencies as the Agricultural Extension Service, the Soil Conservation Service and the Farmers Home Administration as he reworks his facts, figures and terminology in order to keep step with the technological, economic and social changes affecting the farmer. Other agencies mentioned with whom farmers might cooperate were the commercial and industrial organizations who supply the farm power; manufacture the farm implements; process the meats and other farm produce; purchase the grain; supply the building materials; and merchandise the commercial feeds, fertilizers and chemicals.

Juergenson,⁷ in 1955, suggested that vocational agricultural teachers use experts and specialists to present specific programs in which young farmers were interested. He also recommended the use of representatives of commercial firms as well as the use of local progressive farmers.

He stated that experiment stations and the facilities of private industry might, in some cases, be used. He mentioned the fact that there were several significant "off-the-farm" factors to be considered by young men getting established in farming, and he named some resource people not connected with any official agency who might help in that regard. He said that people in banking, insurance, farm law and income

⁶Vincent J. Myers, "How Do You Cooperate With Other Agencies," The Agricultural Education Magazine, 28:160, January 1956.

⁷Elwood M. Juergenson, "Programs for Young Farmers," The Agricultural Education Magazine, 28:110, November 1955.

tax might form the nucleus of profitable discussion on these subjects.

In 1953, Peabody,⁸ in naming resource people who might help the vocational agricultural teacher organize and conduct a well-rounded program, included state supervisors, teacher trainers, local school superintendents and principals, local farmers and fellow teachers.

Schroeder,⁹ in 1954, advocated the use of local resource people by the vocational agricultural teacher in evaluating his adult program. Some people mentioned who might help were businessmen, people from other agricultural agencies, other teachers in the school, school administrators, school board members, state supervisory staff, college or university education staff, and members of the local advisory committee.

In 1948, Snyder¹⁰ stated that a study made in Pennsylvania showed that of seventy-three vocational agricultural teachers offering instruction in insurance in their courses of study, 41 per cent used outside persons such as lawyers and insurance agents to help them with their instructional programs.

⁸Fred Peabody, "Assistance for the Vocational Agriculture Teacher," The Agricultural Education Magazine, 25:183, February 1953.

⁹W. P. Schroeder, "Evaluation Practices for Adult Education in Vocational Agriculture," The Agricultural Education Magazine, 27:134, December 1954.

¹⁰Fred C. Snyder, "Teaching Insurance Information in Vocational Agriculture," The Agricultural Education Magazine, 21:42, August 1948.

Ekstrom and McClelland,¹¹ in 1952, stated that there were some situations when certain types of technical information needed to be explained by the telling process. They said it is then that specialists such as the county agricultural agent, Extension men, or the local veterinarian might be brought before the class. They further stated that many teachers had used outside specialists to an advantage by having them sit with the members of a class and contribute to the discussion from time to time as consultants.

In 1960, Deyoe¹² called attention to the fact that teachers and others responsible for vocational education were faced constantly with the challenge to keep pace with rapid changes in agriculture. He cited a study made in Illinois to determine what adjustments were being made by selected vocational agricultural departments.

In the study, data were secured from thirty departments. Teachers reported various sources and methods helpful to making adjustments. About one-half indicated the use of local advisory groups and individual types of self-improvement activities. Other sources and methods mentioned frequently were commercial sources, local farmers, Vocational Agricultural Service (University of Illinois), and Division of Agricultural Education (University of Illinois).

¹¹George F. Ekstrom and John B. McClelland, Adult Education in Vocational Agriculture (Danville, Illinois: The Interstate Printers and Publishers, 1952), p. 88.

¹²George P. Deyoe, "Adjusting Local Programs to Changes in Agriculture," The Agricultural Education Magazine, 33:82, October 1960.

The importance of using the Soil Conservation Service as a resource agency in teaching conservation was stressed by Hibbs¹³ in 1950. He also pointed out the desirability of calling upon other agencies for assistance as it was needed.

In 1956, Lovell¹⁴ told how he had used an advisory council to help him with his teaching program. The ways the council had helped as listed by him were (1) to organize the teaching program, (2) to make land-use plan for school farm, (3) to obtain outside help on school project, (4) by making recommendations to the school board, (5) by writing letters on behalf of Agricultural Leadership Award, (6) by setting up chapter awards and serving as judges for same, and (7) by making suggestions regarding the purchase of farm equipment.

Some writers have suggested the use of resource personnel in the field of occupational guidance. In 1959, Byram¹⁵ had this to say:

During the orientation unit, or in a unit taught to advanced classes or to the first-year class later in the first year, students are often asked to make a study of one or more occupations in which they think they might be interested. Interviews of workers sometimes are made by students in this connection, whether with the class or on their own. Representatives of occupations in which several students are interested also could be brought to the class to serve as resource persons in class discussion or they could be visited by the class.

¹³Clyde W. Hibbs, "Let's Teach Conservation," The Agricultural Education Magazine, 23:32, August 1950.

¹⁴Sam Lovell, "An Advisory Council Gets Results," The Agricultural Education Magazine, 28:163, January 1956.

¹⁵Harold M. Byram, Guidance in Agricultural Education (Danville, Illinois: The Interstate Printers and Publishers, 1959), p. 81.

Cutler,¹⁶ in 1960, explained how one teacher had used resource persons in training students for occupations in agricultural business and agricultural service. He told how, with the help of an advisory council, made up of representatives of agri-business and agri-service fields common to the area, and the school superintendent, "workerships" were developed for qualified vocational agricultural students. He explained that both in-school and graduating students who were going on to college, as well as terminal students, were considered qualified for the "workerships." The teacher, superintendent and advisory council members arranged for a program in which students qualifying for "workerships" were given on-the-job experiences in the occupations of their choice related to farming.

In 1960, Bailey¹⁷ referred to nonschool agencies as "a goldmine of teaching resources." In discussing the availability and use of resource persons, he said:

In most any community there are at the teachers very fingertips practically unlimited teaching resources. Many non-school agencies and industries are assuming and increasing role in acquainting teachers with and offering them their resources and services. In the light of the increasing scope and complexity of his role, the teacher of vocational agriculture may be overlooking a great teaching opportunity by not seeking help from these non-school agencies. When properly selected, and used, personnel from non-school agencies can make a significant

¹⁶Kenneth B. Cutler, "Agri-Business--Agri-Service Training for Vocational Agriculture Students." The Agricultural Education Magazine, 32:229, April 1960.

¹⁷Zeno Bailey, "A Goldmine of Teaching Resources," The Agricultural Education Magazine, 32:201, March 1960.

contribution to the over-all improvement of the program of vocational agriculture. Some advantages in their use are:

- (1) The novelty of their presence stimulates student interest.
- (2) They are specialists since the nature of their work requires it.
- (3) School-community relations are fostered through working with non-school agencies.
- (4) Specialists assist teachers in keeping abreast of developments in various fields.
- (5) The teacher is assisted in his guidance program (occupational opportunities).
- (6) Their contribution enrich the over-all program of instruction.

Strong¹⁸ found in a study made in 1946 that enrollment, average attendance and persistency of attendance increased as the number of meetings with outside speakers increased. He further found that due to the increased enrollment the total number of practices elected per course increased with the number of outside speakers while the practice per member decreased. His survey showed that about one-half of the teachers favored two to three meetings with outside speakers, while over one-half of the farmers wanted four- to five-speaker meetings. He further found that an average of four outside speakers were used in current problem courses, and two in unit courses. The study showed that instructors with longer experience used fewer speakers, and that the use of outside speakers increased with the size of the town.

¹⁸ Wayne D. Strong, "Types of Courses and Use of Speakers in Agricultural Evening Schools," Summaries of Studies in Agricultural Education, Supplement 2 (Washington: Government Printing Office, 1946), p. 97.

CHAPTER II

PRESENTATION OF DATA

The first page of the questionnaire used in this study was designed to secure information relative to the experience of teachers of vocational agriculture as well as the size and location of departments. Information tabulated from the first page of the questionnaire is included in Tables I through XI of this chapter.

As shown in Table I, 30 of the 58 teachers had less than 10 years experience in teaching at their present location. Twenty-two had 10 to 20 years, and 6 showed more than 20 years experience. The group average was 10.7.

According to Table II, 35 of the 58 teachers included in this study had taught at other locations. Of this number 18 teachers had less than 5 years experience at other locations and 12 showed 5 to 10 years. Only 5 of the teachers showed more than 10 years experience. The average for the group of 35 teachers was 5.5 years experience at other locations.

The information in Table III shows that 9 departments had less than 20 high school students enrolled in vocational agriculture. There were 17 departments that had 40 to 60 students and 32 departments reported 60 or more enrolled. The average number enrolled by the 58 departments was 64.4 students.

The data presented in Table IV show that 40 of the 58 departments responding included adult and/or young farmer classes in their

TABLE I
TENURE OF TEACHERS IN THEIR PRESENT LOCATION

Tenure in Years ^a	Number	Per Cent
Less than 5	22	37.9
5 - 9	8	13.8
10 - 14	15	25.9
15 - 19	7	12.1
20 - 24	3	5.2
25 - 29	1	1.7
30 or more	2	3.4
Total	58	100

^aAverage number of years at present location, 10.7.

TABLE II
TENURE OF THIRTY-FIVE TEACHERS AT OTHER LOCATIONS

Tenure in Years ^a	Number	Per Cent
Less than 5	18	51.4
5 - 9	12	34.3
10 - 14	2	5.7
15 - 19	1	2.9
20 - 24	1	2.9
25 or more	1	2.9
Total	35	100

^aAverage number of years at other location, 5.5.

TABLE III
NUMBER OF HIGH SCHOOL STUDENTS ENROLLED IN
DEPARTMENTS OF VOCATIONAL AGRICULTURE

Enrollment ^a	Number	Per Cent
Less than 20	1	1.7
20 - 29	2	3.4
30 - 39	6	10.3
40 - 49	6	10.3
50 - 59	11	19.0
60 - 69	9	15.5
70 - 79	6	10.3
80 - 89	5	8.6
90 - 99	8	13.8
100 or over	4	6.9
Total	58	99.8

^aAverage number of high school students enrolled, 64.4.

TABLE IV
 NUMBER OF ADULT AND YOUNG FARMERS ENROLLED IN
 DEPARTMENTS OF VOCATIONAL AGRICULTURE

Enrollment ^a	Number	Per Cent
Less than 10	1	2.5
10 - 19	14	35.0
20 - 29	10	25.0
30 - 39	9	22.5
40 - 49	3	7.5
50 - 59	0	--
60 - 69	2	5.0
70 or over	1	2.5
Total	40	100

^aAverage number of adult and/or young farmers enrolled, 26.1.

programs. The enrollment ranged from less than 10 to more than 70. Of the 40 departments reporting adult and/or young farmer programs, 14 departments enrolled 10 to 20; 10 reported 20 to 30; and 6 departments had over 40 adult and/or young farmers. The average number enrolled by the 40 departments reporting was 26.1

The location of the departments included in this study as related to Land Grant Colleges, or other colleges with agriculture, is shown in Table V. Fourteen departments were shown to be less than 50 miles distant; 28 from 50 to 100 miles; 10 from 100 to 150 miles; 2 from 150 to 200 miles and 4 departments were 200 or more miles distant from a college with agriculture.

Table VI shows the range in miles from the departments to the nearest experiment station. Thirteen of the departments were located within 25 miles of an experiment station; 17 from 25 to 50 miles; 21 from 50 to 75 miles; 5 from 75 to 100 miles and two departments were reported as being more than 100 miles distant from an experiment station.

Table VII shows that of the 32 schools located in urban areas, 17 were in areas having a population center (town or city) of less than 2,000 inhabitants; 7 with centers of 2,000 to 5,000; 4 with 5,000 to 10,000; 1 with 10,000 to 15,000; and 3 departments were located in urban areas having population centers of 20,000 or more inhabitants.

Twenty schools were located in rural areas as shown in Table VIII. The table further shows that 6 of the schools were located less than 10 miles from a city; 14, 10 to 20 miles; 3, 20 to 30 miles; 1,

TABLE V

NUMBER OF MILES TO NEAREST UNIVERSITY (WITH AGRICULTURE)
OR COLLEGE (WITH AGRICULTURE)

Miles	Number	Per Cent
Less than 50	14	24.1
50 - 99	28	48.3
100 - 149	10	17.2
150 - 199	2	3.4
200 or over	4	6.9
Total	58	99.9

TABLE VI
NUMBER OF MILES TO NEAREST EXPERIMENT STATION

Miles	Number	Per Cent
Less than 25	13	22.4
25 - 49	17	29.3
50 - 74	21	36.2
75 - 99	5	8.6
100 or over	2	3.4
Total	58	99.9

TABLE VII
POPULATION OF URBAN AREAS WITH DEPARTMENTS
OF VOCATIONAL AGRICULTURE

Inhabitants	Number	Per Cent
Less than 2,000	17	53.1
2,000 - 4,999	7	21.9
5,000 - 9,999	4	12.5
10,000 - 14,999	1	3.1
15,000 - 19,999	0	--
20,000 or more	3	9.4
Total	32	100

TABLE VIII
DISTANCE OF SCHOOLS IN RURAL AREAS FROM CITIES

Distance from City in Miles	Number	Per Cent
Less than 10	6	23.0
10 - 19	14	53.8
20 - 29	3	11.5
30 - 39	1	3.8
40 - 49	0	--
50 or more	2	7.7
Total	26	99.9

30 to 40 miles, and 2 rural schools were located 50 miles or more from a city.

The data in Table IX show that the teachers in urban areas used resource persons more times for more hours than did teachers in rural areas. The 25 rural teachers used resource persons 215 times for a total of 756 hours, resulting in an average per teacher use of 8.6 times and 30.2 hours. The 33 urban teachers used resource persons 372 times for 1,366 hours, giving a per teacher average of 11.3 times and 41.4 hours.

Table X shows that teachers located less than 100 miles from a university or college with agriculture used resource agencies more than did teachers whose departments were 100 or more miles from such an institution.

There were 42 teachers less than 100 miles who used resource persons 451 times for 1,597 hours; an average of 10.7 times and 38.0 hours. The 16 teachers located 100 or more miles from such an institution used resource persons 136 times for 525 hours, an average of 8.5 times and 32.8 hours.

Table XI relates teaching experience to the use of resource agencies. The more experienced teachers used resource persons more than teachers having little experience.

The 25 teachers with 10 years or less teaching experience used resource persons 198 times for 637 hours or an average of 7.9 times and 25.5 hours, while 33 teachers with over 10 years experience used resource people 382 times for 1,454 hours or an average of 11.6 times for 44.1 hours.

TABLE IX
THE USE OF RESOURCE PERSONS IN RURAL URBAN AREAS

Location of Teachers	Number of Teachers	Times Used	Hours Used	Avg. No. Times Used	Avg. No. Hours Used
Rural	25	215	756	8.6	30.2
Urban	33	372	1366	11.3	41.4

TABLE X

DISTANCE FROM A UNIVERSITY OR COLLEGE WITH
AGRICULTURE RELATED TO THE USE OF
RESOURCE AGENCIES

Miles Distant	Number of Teachers	Times Used	Hours Used	Avg. No. Times Used	Avg. No. Hours Used
Less than one hundred	42	451	1597	10.7	38.0
One hundred or more	16	136	525	8.5	32.8

TABLE XI
TEACHING EXPERIENCE RELATED TO THE USE OF RESOURCE AGENCIES

Years Experience	Number of Teachers	Times Used	Hours Used	Avg. No. Times Used	Avg. No. Hours Used
Ten or less	25	198	637	7.9	25.5
Over ten	33	382	1454	11.6	44.0

Tables XIII through XX contain information related to the use of resource personnel by fifty-eight teachers of vocational agriculture in teaching high school students and adults who are enrolled in classes in vocational agriculture.

The data recorded in Table XII show that in teaching high school students to solve problems in cotton production, 18 teachers used resource personnel for a total of 49 hours. Representatives of commercial companies manufacturing and/or marketing insecticides were used by the greatest number of teachers (4) and United States Department of Agriculture cotton grading specialists were used more hours (9) than any other agency. The table shows that in teaching cotton jobs to adults, resource persons were used by 19 teachers for 55 hours. Representatives of insecticide companies were used by the greatest number of teachers (4), and State Experiment Station personnel for more hours (12).

Other resource agencies finding a prominent place in the teaching programs for vocational agricultural teachers in teaching cotton jobs to high school students and adult farmers were fertilizer and other representatives of commercial companies, representatives of cooperatives and the county agricultural Extension agent.

The table further shows that in teaching tobacco, 22 teachers used resource personnel in teaching high school students and 16 used resource persons in teaching adults. They were used 74 hours in the program for high school students and 42 hours for adults. In each case, the United States Department of Agriculture tobacco grading specialists were used by more teachers for more hours. Insecticide representatives of commercial companies proved to be next in importance as a resource

TABLE XII

RESOURCE PERSONNEL USED, AND THE EXTENT USED, BY 58 TEACHERS OF
VOCATIONAL AGRICULTURE IN TEACHING COTTON AND TOBACCO TO
HIGH SCHOOL STUDENTS AND ADULT FARMERS

Resource Personnel	Cotton				Tobacco			
	No. of Teachers Using and Hrs. of Instruction Involved							
	H. S.		Adult		H. S.		Adult	
	Students	Farmers	Students	Farmers	Students	Farmers	Students	Farmers
	Tchs.	Hrs.	Tchs.	Hrs.	Tchs.	Hrs.	Tchs.	Hrs.
Commercial co. rep. (insect.)	4	7	4	11	3	6	4	6
Commercial co. rep. (feed and seed)					1	1	1	2
Commercial co. rep. (fertiliz.)	2	4	3	5	1	1	2	4
Commercial co. rep. (other)	1	8	1	4			1	2
Coop. (credit) (Gov. agencies)	2	6	1	4				
Credit agencies (private)								
Coop. (marketing services)	2	7	2	7				
Coop. (other services)			1	1	1	5	1	2
Extension (co. agric. agent)	2	4	1	4	1	1		
Extension (specialists)			1	1			1	2
Local laymen (skilled-mech.)	1	3			1	3		
Univ. or college (not Exten.)								
State Dept. of Education								
State Board of Health								
(local sanitation officers)								
State Dept. of Conservation								
(forestry)								
State Dept. of Agriculture								
State Geologist								
US - TVA								
USDA:								
(Disease Control								
Specialists)								
(FHA)								
(Forestry Service)								
(SCS)								
(Grading Specialist-tob.								
etc.)	3	9	2	6	14	57	6	24
(ASC)								
(Federal Crop Insurance)								
(Other Specialists)								
State Exp. Sta. personnel	1	1	3	12				
Others								
Total	18	49	19	55	22	74	16	42

agency.

Table XIII is concerned with the use of resource personnel by fifty-eight teachers of vocational agriculture in teaching forage and grain jobs to high school students and adult farmers. The table shows that agencies were used 1 hour each in teaching high school students forage jobs. The agencies used were insecticide and feed and seed representatives of commercial companies, and the county agricultural Extension agent.

In teaching forage jobs to adult farmers, two teachers used resource persons for a total of 3 hours. Insecticide representatives were used by one teacher for 1 hour and the county agricultural Extension agent was used by one teacher for 2 hours.

The table further shows that in teaching grain jobs, 14 teachers used resource persons for 36 hours in teaching high school students, and 15 teachers used resource personnel for 42 hours in teaching adult farmers. Feed and seed company representatives were used by more teachers for more hours than any other agency in teaching high school students, while grading specialists were used by more teachers with adult farmers and feed and seed representatives were used for more hours. Other resource persons prominently used in this area were representatives of the Agricultural Stabilization Conservation agency and the county agricultural Extension agent.

Table XIV indicates the use made of resource personnel by fifty-eight teachers in teaching garden and small fruits and forestry to high school students and adult farmers.

TABLE XIII

RESOURCE PERSONNEL USED, AND THE EXTENT USED, BY 58 TEACHERS OF
VOCATIONAL AGRICULTURE IN TEACHING FORAGE AND GRAIN TO
HIGH SCHOOL STUDENTS AND ADULT FARMERS

Resource Personnel	<u>Forage</u>				<u>Grain</u>			
	No. of Teachers Using and Hrs. of Instruction Involved							
	<u>H. S.</u>		<u>Adult</u>		<u>H. S.</u>		<u>Adult</u>	
	<u>Students</u>	<u>Farmers</u>	<u>Students</u>	<u>Farmers</u>	<u>Students</u>	<u>Farmers</u>	<u>Students</u>	<u>Farmers</u>
	<u>Tchs.</u>	<u>Hrs.</u>	<u>Tchs.</u>	<u>Hrs.</u>	<u>Tchs.</u>	<u>Hrs.</u>	<u>Tchs.</u>	<u>Hrs.</u>
Commercial co. rep. (insect.)	1	1	1	1				
Commercial co. rep. (feed and seed)	1	1			4	12	2	11
Commercial co. rep. (fert.)					1	1		
Commercial co. rep. (other)								
Coop. (credit) (Gov. agencies)								
Credit agencies (private)								
Coop. (marketing services)					1	1	1	1
Coop. (other services)					1	4	1	1
Extension (co. agric. agent)	1	1	1	2	2	5	2	10
Extension (specialists)							1	1
Local laymen (skilled-mech.)								
Univ. or college (not Exten.)							1	2
State Department of Education								
State Board of Health (local sanitation officers)								
State Depart. of Conservation (forestry)								
State Department of Agri- culture								
State Geologist					1	4	1	2
US - TVA					1	2		
USDA:								
(Disease Control Specialists)								
(FHA)								
(Forestry Service)								
(SCS)							1	4
(Grading Specialist- tobacco)								
(ASC)					2	6	3	7
(Federal Crop Insurance)								
(Other Specialists)								
State Experiment Station personnel					1	1	1	1
Others							1	2
Total	3	3	2	3	14	36	15	42

TABLE XIV

RESOURCE PERSONNEL USED, AND THE EXTENT USED, BY 58 TEACHERS OF
VOCATIONAL AGRICULTURE IN TEACHING GARDEN AND SMALL
FRUIT AND FORESTRY TO HIGH SCHOOL STUDENTS
AND ADULT FARMERS

Resource Personnel	Garden and Small Fruits				Forestry			
	No. of Teachers Using and Hrs. of Instruction Involved							
	H. S. Students		Adult Farmers		H. S. Students		Adult Farmers	
	Tchs.	Hrs.	Tchs.	Hrs.	Tchs.	Hrs.	Tchs.	Hrs.
Commercial co. rep. (insect.)	1	1						
Commercial co. rep. (feed and seed)	1	1						
Commercial co. rep. (fert.)								
Commercial co. rep. (other)					1	1		
Coop. (credit) (Gov. agencies)								
Credit agencies (private)								
Coop. (marketing services)								
Coop. (other services)								
Extension (co. agric. agent)					1	2		
Extension (specialists)			1	4				
Local laymen (skilled-mech.)								
Univ. or college (not Exten.)								
State Depart. of Education								
State Board of Health (local sanitation officers)					1	2		
State Depart. of Conservation (forestry)			1	1	6	21	2	8
State Depart. of Agriculture								
State Geologist								
US - TVA					1	4		
USDA:								
(Disease Control Specialists)								
(FHA)								
(Forestry Service)					9	31	3	12
(SCS)					1	5		
(Grading Specialist - tobacco)								
(ASC)								
(Federal Crop Insurance)								
(Other Specialists)								
State Experiment Station personnel					1	2		
Others	1	5						
Total	3	7	2	5	21	68	5	20

In teaching garden and small fruits to high school students, 3 teachers used resource persons for a total of 7 hours. Representatives of insecticide and feed and seed companies and the State Experiment Stations were the agencies used. The agencies were used an equal number of times by the teachers; however, representatives from the State Experiment Stations were used 5 hours as opposed to 1 hour for each of the other two agencies.

In teaching garden and small fruits to adults, 2 teachers used resource persons for a total of 5 hours. The agencies used were Extension specialists by 1 teacher for 4 hours, and representatives from the Soil Conservation Service (forestry) for 1 hour.

It is also shown that in teaching forestry jobs, 8 agencies were used by 21 teachers for a total of 68 hours in teaching high school students. United States Department of Agriculture personnel representing the Forestry Service were used by more teachers (9) more hours (31) than any other agency. Next in importance as to use was the State Department of Conservation (forestry) which was used by 6 teachers for 21 hours.

In teaching forestry to adult farmers, 2 agencies were used by 5 teachers for a total of 20 hours; the United States Department of Agriculture Forestry Service was used by 3 teachers for a total of 12 hours; and the State Department of Conservation (forestry) was used by 2 teachers for a total of 8 hours.

Table XV shows the use made of resource personnel by teachers of vocational agriculture in teaching farm management and poultry jobs

TABLE XV

RESOURCE PERSONNEL USED, AND THE EXTENT USED, BY 58 TEACHERS OF
VOCATIONAL AGRICULTURE IN TEACHING FARM MANAGEMENT AND
POULTRY TO HIGH SCHOOL STUDENTS AND ADULT FARMERS

Resource Personnel	Farm Management				Poultry			
	No. of Teachers Using				and Hrs. of Instruction Involved			
	H. S.		Adult		H. S.		Adult	
	Students	Farmers	Students	Farmers	Students	Farmers	Students	Farmers
	Tchs.	Hrs.	Tchs.	Hrs.	Tchs.	Hrs.	Tchs.	Hrs.
Commercial co. rep. (insect.)	1	1			1	2		
Commercial co. rep. (feed and seed)	1	1			5	10	4	9
Commercial co. rep. (fert.)								
Commercial co. rep. (other)								
Coop. (credit) (Gov. agencies)	5	18	2	4	2	5	1	1
Credit agencies (private)	4	8						
Coop. (marketing services)	1	4			2	5		
Coop. (other services)	1	4			1	4		
Extension (co. agric. agent)	2	4	2	12	2	2	1	1
Extension (specialists)	1	2	4	37	1	2		
Local laymen (skilled-mech.)	2	7			1	3	1	1
Univ. or college (not Exten.)								
State Department of Education	1	1						
State Board of Health (local sanitation officers)								
State Depart. of Conservation (forestry)	2	11						
State Depart. of Agriculture								
State Geologist								
US - TVA			1	1				
USDA:								
(Disease Control Specialists)								
(FHA)	1	4	1	2				
(Forestry Service)								
(SCS)	1	1	1	1				
(Grading Specialist - tobacco)	1	1						
(ASC)			1	2				
(Federal Crop Insurance)								
(Other Specialists)								
State Experiment Station personnel			1	1				
Others	2	10	1	2				
Total	26	77	14	62	15	33	7	12

to high school students and adult farmers.

Twenty-six teachers used 15 agencies for a total of 77 hours in teaching farm management jobs to high school boys. Personnel of cooperative credit government agencies were used by more teachers (5) as well as for the greatest number of hours (18). Private credit agencies were next in importance being used by 4 teachers for a total of 8 hours. State Experiment Station personnel were used for a total of 10 hours by 2 teachers.

In teaching farm management to adult farmers, teachers used resource persons from 9 agencies. Fourteen teachers used resource persons for a total of 62 hours. Extension specialists were used by more teachers (4), and for the greatest number of hours (37).

The table shows that in teaching poultry jobs to high school students, 8 agencies were used by 15 teachers for a total of 33 hours. Feed and seed representatives of commercial companies were used by more teachers and for a greater number of hours than were any other agency. Other agencies used were commercial people, representatives of cooperatives, county agricultural Extension agents, Extension specialists and local laymen.

Four agencies were used by 7 teachers for a total of 12 hours in teaching poultry to adult farmers. Feed and seed representatives were used by more teachers (4) for more hours (9) than any other agency. One teacher reported using representatives of cooperative credit governmental agencies for 1 hour. Another used the county agricultural Extension agent 1 time for 1 hour, and another used

local laymen 1 time for 1 hour.

Table XVI is designed to show the use of resource personnel by teachers of agriculture in teaching livestock and dairying jobs to high school students and adult farmers. The section of the table devoted to livestock shows that 16 agencies were used in teaching high school students by 37 teachers for a total of 95 hours, and that feed and seed representatives of commercial companies were used by more teachers (10) for more hours (24) than any other agency. Other agencies frequently used were credit agencies, Extension specialists and county agricultural Extension agents.

In teaching livestock jobs to adult farmers, 12 agencies were used by 28 teachers for a total of 88 hours. Representatives of feed and seed companies were used by the greatest number of teachers (7) the greatest number of times (22). Extension specialists and county agricultural Extension agents found important use in the area. The section of the table devoted to dairying shows that 10 sources of resource personnel were used in teaching high school students by 20 teachers for a total of 61 hours. Feed and seed representatives of commercial companies were used by more teachers (5) for more hours (16) than were representatives from any other agency. Other commercial company representatives were frequently used as were Extension specialists and county agricultural Extension agents.

In teaching dairying to adult farmers, teachers used representatives of 7 agencies. Fifteen teachers used these agencies for a total of 38 hours. Feed and seed representatives of commercial companies were used by more teachers (7) for more hours (17) than were the representatives

TABLE XVI

RESOURCE PERSONNEL USED, AND THE EXTENT USED, BY 58 TEACHERS OF
VOCATIONAL AGRICULTURE IN TEACHING LIVESTOCK (BEEF, SHEEP
AND HOGS) AND DAIRY TO HIGH SCHOOL STUDENTS
AND ADULT FARMERS

Resource Personnel	Livestock (Beef, Sheep and Hogs)				Dairy			
	No. of Teachers Using and Hrs. of Instruction Involved							
	H. S. Students		Adult Farmers		H. S. Students		Adult Farmers	
	Tchs.	Hrs.	Tchs.	Hrs.	Tchs.	Hrs.	Tchs.	Hrs.
Commercial co. rep. (insect.)	3	10	2	8	1	2	1	2
Commercial co. rep. (feed and seed)	10	24	7	22	5	16	7	17
Commercial co. rep. (fert.)	1	1	2	6			1	2
Commercial co. rep. (other)					3	15	1	2
Coop. (credit) (Gov. agencies)	3	15	2	3	1	4	1	2
Credit agencies (private)	1	2			1	2		
Coop. (marketing services)	2	3						
Coop. (other services)			1	2				
Extension (co. agric. agent)	5	11	4	14	3	3	2	4
Extension (specialists)	3	6	4	15	3	9	2	9
Local laymen (skilled-mech.)								
Univ. or college (not Exten.)	1	1	1	6				
State Depart. of Education	1	5	1	4	1	2		
State Board of Health (local sanitation officers)	1	4						
State Depart. of Conservation (forestry)								
State Depart. of Agriculture	1	4			1	4		
State Geologist								
US - TVA	1	4	1	2				
USDA:								
(Disease Control Specialists)								
(FHA)								
(Forestry Service)								
(SCS)								
(Grading Specialist - tobacco)								
(ASC)								
(Federal Crop Insurance)								
(Other Specialists)	1	1						
State Experiment Station personnel	1	1	2	4				
Others	2	3	1	2	1	4		
Total	37	95	28	88	20	61	15	38

of any other agency.

Table XVII is concerned with the use of resource personnel by fifty-eight teachers of vocational agriculture in teaching soil conservation and farm and home beautification jobs to high school students and adult farmers. The table shows that in teaching soil conservation jobs to high school students, 16 agencies were used. Sixty-six teachers used resource persons for a total of 295 hours.

The Soil Conservation Service was used by more teachers (25) for more hours (148) than any other agency.

In teaching soil conservation jobs to adults, 9 agencies were used by 29 teachers for a total of 104 hours. The Soil Conservation Service again was the agency used by the greatest number of teachers (15) for the greatest number of hours (56).

According to the table concerned with teaching farm and home beautification jobs to high school students, 10 agencies were used by 14 teachers for a total of 35 hours. The number of times as well as the hours used were very well divided between the agencies represented. The agencies used were insecticide company representatives 2 times for 5 hours, feed and seed company personnel 1 time for 1 hour, other commercial company representatives 2 times for 5 hours, government cooperative agencies 1 time for 1 hour, Extension representatives (specialist and county agricultural Extension agents) 3 times for 4 hours, Tennessee Valley Authority representatives 2 times for 6 hours, Federal Housing Administration representatives 1 time for 8 hours, and other representatives 1 time for 4 hours.

TABLE XVII

RESOURCE PERSONNEL USED, AND THE EXTENT USED, BY 58 TEACHERS OF
VOCATIONAL AGRICULTURE IN TEACHING SOIL CONSERVATION AND
FARM AND HOME BEAUTIFICATION TO HIGH SCHOOL STUDENTS
AND ADULT FARMERS

Resource Personnel	Soil Conservation				Farm and Home Beautification			
	No. of Teachers Using and Hrs. of Instruction Involved							
	H. S. Students		Adult Farmers		H. S. Students		Adult Farmers	
	Tchs.	Hrs.	Tchs.	Hrs.	Tchs.	Hrs.	Tchs.	Hrs.
Commercial co. rep. (insect.)					2	5	1	2
Commercial co. rep. (feed and seed)	3	4			1	1		
Commercial co. rep. (fert.)	7	19	1	2	1	1		
Commercial co. rep. (other)	2	6			2	5	2	4
Coop. (credit) (Gov. agencies)					1	1		
Credit agencies (private)								
Coop. (marketing services)	1	10						
Coop. (other services)	2	12			1	2		
Extension (co. agric. agent)	2	7	1	1	2	2	1	1
Extension (specialists)	4	9	2	9				
Local laymen (skilled-mech.)							1	4
Univ. or college (not Exten.)	1	1						
State Depart. of Education								
State Board of Health (local sanitation officers)	1	4					1	4
State Depart. of Conservation (forestry)	8	38	3	12				
State Depart. of Agriculture	1	2						
State Geologist								
US - TVA					2	6	1	6
USDA:								
(Disease Control Specialists)								
(FHA)					1	8	2	2
(Forestry Service)	2	2	1	1				
(SCS)	25	148	15	56				
(Grading Specialist - tobacco)	3	14	2	14				
(ASC)	3	18	3	8				
(Federal Crop Insurance)								
(Other Specialists)	1	1	1	1				
State Experiment Station personnel								
Others					1	4		
Total	66	295	29	104	14	35	9	23

In teaching adult farmers farm and home beautification jobs, resource personnel from 7 agencies was used by 9 teachers for a total of 23 hours. The Farm and Home Administration and commercial company representatives were used by more teachers (2 each) and Tennessee Valley Authority representatives more hours (6) than any other agency.

Table XVIII indicates the use made of resource personnel by fifty-eight teachers in conducting their Future Farmer of America programs for high school boys. Twenty-three agencies were used by 52 teachers for a total of 122 hours. The table shows that resource persons were used most in the areas of farm mechanics and farm credit. Local laymen who were skilled mechanics were used by 5 teachers for a total of 17 hours. Private credit agencies were used by 4 teachers for a total of 13 hours. Agencies used by 3 teachers were cooperative credit agencies, Extension specialists, and university or college representatives. Representatives of the State Board of Health, State Department of Conservation (forestry), and the Tennessee Valley Authority.

The use of resource persons by teachers of vocational agriculture in teaching shop and power machinery jobs is shown in Table XIX in teaching shop jobs to high school students. Three agencies were used by 13 teachers for a total of 60 hours. Local laymen were used by 6 teachers for 33 hours, cooperatives (electric, et cetera) representatives were used by 5 teachers for a total of 17 hours and commercial company representatives were used by 2 teachers for 10 hours.

In teaching shop jobs to adult farmers, 4 agencies were used. These agencies were used by 9 teachers for a total of 175 hours. The

TABLE XVIII

RESOURCE PERSONNEL USED, AND THE EXTENT USED, BY 58 TEACHERS OF
VOCATIONAL AGRICULTURE IN TEACHING FUTURE FARMERS OF
AMERICA TO HIGH SCHOOL STUDENTS AND ADULT FARMERS

Resource Personnel	Future Farmers of America No. of Teachers Using and Hrs. of Instruction Involved	
	H. S. Students	Adult Farmers
	Tchs. Hrs.	Tchs. Hrs.
Commercial co. rep. (insect.)	2	9
Commercial co. rep. (feed and seed)	2	3
Commercial co. rep. (fert.)	1	1
Commercial co. rep. (other)	2	3
Coop. (credit) (Gov. agencies)	3	6
Credit agencies (private)	4	13
Coop. (marketing services)	1	1
Coop. (other services)	2	5
Extension (co. agric. agent)	2	2
Extension (specialists)	3	9
Local laymen (skilled-mech.)	5	17
Univ. or college (not Exten.)	3	7
State Dept. of Education	1	1
State Board of Health (local sanitation officers)	3	5
State Dept. of Conservation (forestry)	3	7
State Dept. of Agriculture	1	1
State Geologist		
US - TVA	3	4
USDA:		
(Disease Control Specialists)		
(FHA)	2	2
(Forestry Service)	2	6
(SCS)	2	9
(Grading Specialist - tobacco)	2	7
(ASC)	2	2
(Federal Crop Insurance)		
(Other Specialists)		
State Experiment Station personnel		
Others	1	2
Total	52	122

TABLE XIX

RESOURCE PERSONNEL USED, AND THE EXTENT USED, BY 58 TEACHERS OF
VOCATIONAL AGRICULTURE IN TEACHING SHOP AND
POWER AND MACHINERY TO HIGH SCHOOL
STUDENTS AND ADULT FARMERS

Resource Personnel	Shop No. of Teachers Using and Hrs. of Instruction Involved				Power and Machinery No. of Teachers Using and Hrs. of Instruction Involved			
	H. S. Students		Adult Farmers		H. S. Students		Adult Farmers	
	Tchs.	Hrs.	Tchs.	Hrs.	Tchs.	Hrs.	Tchs.	Hrs.
Commercial co. rep.	2	10	2	7	2	21	2	3
Cooperatives (electric, etc.)	5	17	3	53	2	26	1	4
Extension (co. agric. agent)								
Extension (specialists)			1	1				
Local laymen (skilled-mech.)	6	33	3	114	6	25	3	24
University or college (not Extension)								
State Board of Health (local sanitation officers)								
US - TVA								
USDA (SCS)								
Others _____								
Total	13	60	9	175	10	72	6	31

resource persons used, arranged according to use, were skilled mechanics by 3 teachers for 114 hours, representatives of cooperatives used by 3 teachers for 53 hours, commercial company representatives used by 2 teachers for 7 hours and agricultural Extension specialists by 1 teacher for 1 hour.

While teaching power and machinery to high school students, 10 teachers used 3 agencies for a total of 72 hours, local laymen were used by 6 teachers for 21 hours, cooperatives by 2 teachers for 26 hours and commercial company representatives by 2 teachers for 21 hours.

In teaching power and machinery to adults, 6 teachers used 3 agencies for a total of 31 hours. The persons used were local laymen by 3 teachers for 24 hours, commercial representatives by 2 teachers for 3 hours and representatives of cooperatives by 1 person for 4 hours.

Table XX shows the use made of resource personnel by fifty-eight teachers of vocational agriculture in teaching buildings and other structures, and soil and water management jobs to high school students and adults.

In teaching buildings and other structures to high school students, 3 agencies were used by 4 teachers for a total of 29 hours. Local laymen were used by 2 teachers for 21 hours, State Board of Health representatives were used by 1 teacher for 4 hours and representatives of the Soil Conservation Service were used by 1 teacher for 4 hours.

In teaching buildings and other structures to adults, 4 agencies or sources of resource persons were used by 6 teachers (3) for more hours (24) than any other agency.

TABLE XX

RESOURCE PERSONNEL USED, AND THE EXTENT USED, BY 58 TEACHERS OF
VOCATIONAL AGRICULTURE IN TEACHING BUILDINGS AND OTHER
STRUCTURES AND SOIL AND WATER MANAGEMENT TO
HIGH SCHOOL STUDENTS AND ADULT FARMERS

Resource Personnel	Buildings and Other Structures				Soil and Water Management			
	No of Teachers Using and Hrs. of Instruction Involved							
	H. S. Students		Adult Farmers		H. S. Students		Adult Farmers	
	Tchs.	Hrs.	Tchs.	Hrs.	Tchs.	Hrs.	Tchs.	Hrs.
Commercial co. rep.								
Cooperatives (electric, etc.)			1	2				
Extension (co. agric. agent)							1	4
Extension (specialists)								
Local laymen (skilled-mech.)	2	21	3	24	1	1		
University or college (not Extension)								
State Board of Health (local sanitation officers)	1	4	1	2				
US - TVA					2	10	2	4
USDA (SCS)	1	4	1	2	8	60	2	10
Others _____					1	3		
Totals	4	29	6	30	12	74	5	18

In teaching soil and water management jobs to high school students, 4 agencies were used by 12 teachers for a total of 74 hours. The Soil Conservation Service was used by more teachers (8) for more hours (60) than any other agency.

In teaching adults in the area of soil and water management, 3 agencies were used by 5 teachers for a total of 18 hours. The Soil Conservation Service was used by 2 teachers for 10 hours, Tennessee Valley Authority by 2 teachers for 4 hours and county agricultural Extension agent by 1 teacher for 4 hours.

Table XXI indicates the use made of resource persons by vocational agricultural teachers in teaching rural electrification and processing farm products jobs to high school students and adults.

In teaching high school students in the area of rural electrification, 5 sources of resource people were used. Representatives of electric cooperatives were used by more teachers (10) for more hours (92) than any other agency. Other resource persons used were local laymen, Tennessee Valley Authority representatives, commercial company representatives and Extension agents.

In teaching rural electrification jobs to adults, 3 agencies were used by 12 teachers for 38 hours. Electric cooperatives were used by more teachers (8) for more hours (27) than any other agency.

The county agricultural Extension agent was the only resource person used in teaching processing farm products to high school students and adults. In teaching high school students, 1 teacher used the county agent for 4 hours while in teaching adult farmers 1 teacher used the

TABLE XXI

RESOURCE PERSONNEL USED, AND THE EXTENT USED, BY 58 TEACHERS OF
 VOCATIONAL AGRICULTURE IN TEACHING RURAL
 ELECTRIFICATION AND PROCESSING FARM
 PRODUCTS TO HIGH SCHOOL STUDENTS
 AND ADULT FARMERS

Resource Personnel	Rural Electrification				Processing Farm Products			
	No. of Teachers Using and Hrs. of Instruction Involved							
	H. S. Students		Adult Farmers		H. S. Students		Adult Farmers	
	Tchs.	Hrs.	Tchs.	Hrs.	Tchs.	Hrs.	Tchs.	Hrs.
Commercial co. rep.	1	6						
Cooperatives (elect. ect.)	10	92	8	27				
Extension (co. agric. agent)	1	1			1	4	1	2
Extension (specialists)								
Local laymen (skilled-mech.)	4	9	2	7				
University or college (not Extension)								
State Board of Health (local sanitation officers)								
US - TVA	2	8	2	4				
USDA (SCS)								
Others _____								
Total	18	116	12	38	1	4	1	2

county agricultural Extension agent for 2 hours.

Table XXII is made up of information taken from Tables XII through XVIII, and does not include any information on the use of resource persons in the area of farm mechanics. The table shows that resource persons were used 322 times for a total of 952 hours in teaching high school students.

Insecticide companies were used more times (37) than any other agency. Other agencies used in order of importance were feed and seed companies (34), Soil Conservation Service (29), county agricultural Extension agents (15), and grading specialists (23).

Representatives of the Soil Conservation Service were used for more hours (163) in teaching high school students. Others in order of importance were grading specialists (88), forestry representatives of the State Department of Conservation (77), feed and seed representatives (74), and cooperative credit agencies (55).

Resource persons were used 161 times and for 490 hours in teaching adults. Feed and seed companies were used more times (21) than any other agency. Some others in order according to use were Soil Conservation Service (17), Extension specialists (16), county agricultural Extension agent (15), and representatives of insecticide companies (13).

Extension specialists were used for more hours (78) than any other agency. Some others used were Soil Conservation Service (61), feed and seed companies (61), county agricultural Extension agents (49), and grading specialists (44).

TABLE XXII

RESOURCE PERSONNEL USED, AND THE EXTENT USED, BY 58 TEACHERS OF
VOCATIONAL AGRICULTURE IN TEACHING HIGH SCHOOL STUDENTS
AND ADULT FARMERS AREAS OTHER THAN FARM MECHANICS

Resource Personnel	No. of Teachers Using and Hrs. of Instruction Involved					
	H. S. Students		Adult Farmers		Total	
	Tchs.	Hrs.	Tchs.	Hrs.	Tchs.	Hrs.
Commercial co. rep. (insect.)	37	43	13	30	50	73
Commercial co. rep. (feed and seed)	34	74	21	61	55	135
Commercial co. rep. (fertilizer)	14	20	9	19	23	39
Commercial co. rep. (other)	11	38	5	12	16	50
Coop. (credit) (Gov. agencies)	17	55	7	14	24	69
Credit agencies (private)	10	25			10	25
Coop. (marketing services)	10	31	3	8	13	39
Coop. (other services)	9	36	4	6	13	42
Extension (co. agric. agent)	25	44	15	49	40	93
Extension (specialists)	15	37	16	78	31	115
Local laymen (skilled-mech.)	4	32	3	5	7	37
Univ. or college (not Exten.)	5	9	2	8	7	17
State Department of Education	4	9	1	4	5	13
State Board of Health (local sanitation officers)	6	15			6	15
State Department of Conservation (forestry)	19	77	6	21	25	98
State Department of Agriculture	5	18			5	18
State Geologist	1	4	1	2	2	6
US - TVA	8	20	3	9	11	29
USDA:						
(Disease Control Specialists)						
(FHA)	4	14	3	4	7	18
(Forestry Service)	11	39	4	13	15	52
(SCS)	29	163	17	61	46	224
(Grading Specialist - tobacco)	23	88	10	44	33	132
(ASC)	7	26	7	17	14	43
(Federal Crop Insurance)						
(Other Specialists)	2	2	1	1	3	3
State Experiment Station personnel	4	5	7	18	11	23
Others	8	28	3	6	11	34
Total	322	952	161	490	483	1442

In teaching all groups, resource persons were used 483 times for a total of 1,442 hours. Feed and seed companies were used more times (55) than any other agency. Others in order were insecticide companies (50), Soil Conservation Service (46), and county agricultural Extension agents (40).

Representatives of the Soil Conservation Service were used for more hours (224) in teaching all groups. Next in order were feed and seed representatives (135), grading specialists (132), Extension specialists (115) and forestry representatives of the State Department of Conservation (98).

Information was taken from Tables XIX, XX and XXI to form Table XXIII. Table XXIII shows the use made of resource persons by teachers of vocational agriculture in teaching farm mechanics.

The table shows that in teaching farm mechanics to high school students, local laymen were used 19 times; representatives of electric cooperatives, 17; and the Soil Conservation Service 9 times.

Electric cooperatives were used 135 hours and local laymen were used 64 hours.

In the program for adults, electric cooperatives were used 13 times and local laymen 11 times. Local laymen were used 169 hours and electric cooperatives 86 hours.

Electric cooperatives and local laymen were used 30 times each in teaching all groups. The Soil Conservation Service was used 12 times.

Local laymen were used 258 hours, electric cooperatives 221, and the Soil Conservation Service 76 hours in teaching farm mechanics jobs to all groups.

TABLE XXIII

RESOURCE PERSONNEL USED, AND THE EXTENT USED, BY 58 TEACHERS OF
VOCATIONAL AGRICULTURE IN TEACHING FARM MECHANICS
TO HIGH SCHOOL STUDENTS AND ADULT FARMERS

Resource Personnel	No. of Teachers Using and Hrs. of Instruction Involved					
	H. S. Students		Adult Farmers		Total	
	Tchs.	Hrs.	Tchs.	Hrs.	Tchs.	Hrs.
Commercial co. rep.	5	37	4	10	9	47
Cooperatives (electric, etc.)	17	135	13	86	30	221
Extension (co. agric. agent)	2	5	2	6	4	11
Extension (specialists)			1	1	1	1
Local laymen (skilled-mech)	19	89	11	169	30	258
University or college (not Extension)						
State Board of Health (local sanitation officers)	1	4	1	2		
US - TVA	4	18	4	8	8	26
USDA (SCS)	9	64	3	12	12	76
Others _____	1	3			1	3
Total	58	355	39	294	95	643

CHAPTER III

SUMMARY AND IMPLICATIONS

I. SUMMARY

Summary of Related Studies

The following statements summarize findings in studies reviewed for this investigation:

1. Resource persons were needed to help the teacher keep in step with the technological, economic and social changes affecting farmers.
2. The teacher was considered no longer a specialist in the field of agriculture.
3. As farming became more specialized, the need for the use of resource agencies increased.
4. Resource persons could bring to a class new authority, new interest, new information and new points of view.
5. The enrollment and attendance in adult classes increased with the use of effective resource persons.
6. School community relations were improved through working with nonschool agencies.
7. Some suggested resource agencies were specialists, commercial company employees, local laymen and experiment stations personnel.
8. Specialists could be used to explain technical information by the telling process.
9. Specialists could be seated with class members as consultants.
10. Resource persons have been used successfully in training

students for occupations in agri-business and agri-service.

11. Resource persons could be used in obtaining and teaching occupational information.

12. The success of the practice of using resource persons depended upon the teacher's ability to organize and use the work of special teachers.

Summary of Study

This study was made as a result of the writer's experience in using resource persons and a belief that the use of such persons has strengthened his program in teaching vocational agriculture.

The writer's objective in preparing the first part of the questionnaire (Appendix B) was to obtain information about the teachers and their departments that might influence the use of resource persons.

The data collected showed that the teacher respondents had taught an average of 10.7 years at their present locations and thirty-five had taught 5.5 years at other locations. They had enrolled an average of 64.4 high school students and 26.1 adults. Most of the departments were located within 100 miles of a university or college with agriculture and within 75 miles of an agricultural experiment station.

Of the fifty-eight departments included in this study, thirty-two were in urban and twenty-six in rural areas.

The survey showed that the teachers in urban areas used more resource persons for more hours than did the teachers working in rural areas. Teachers in departments near universities or colleges with agriculture made greater use of resource persons than did teachers

located at a greater distance from such institutions.

This study shows that in teaching high school students, the Soil Conservation Service was used more times (38) than any other agency in teaching high school students. Agencies next in order were insecticide companies (37); feed and seed companies (34); county agricultural Extension agents (27); and cooperatives, other than credit and marketing, (26).

Representatives of the Soil Conservation Service were used for more hours (227) in teaching high school students. Some others, ranked according to use, were: cooperatives, other than credit and marketing, (171); local laymen (121); grading specialists (88); and forestry representatives of the State Department of Conservation (77).

The data showed that feed and seed companies were used more times (21) in teaching adults. Next, in order, were the Soil Conservation Service (20); cooperatives, other than credit and marketing, (17); Extension specialists (17); and county agricultural Extension agents (17).

Local laymen were used for more hours (174) in teaching adults. Some others finding frequent use were cooperatives, other than credit and marketing, (92); Extension specialist (79); Soil Conservation Service (73); and feed and seed companies (61).

In teaching all groups, the Soil Conservation Service was used more times (58) than any other agency. Others, in order, were: feed and seed companies (55); insecticide companies (50); county agricultural Extension agents (44); and cooperatives, other than marketing and credit, (43).

Representatives of the Soil Conservation Service were used for more hours (300). Other agencies furnishing resource persons for several hours' instruction were local laymen (295); cooperatives, other than credit and marketing, (263); feed and seed companies (135); and grading specialists (132).

The study showed that resource persons were used more times and for more hours in teaching both high school students and adults in the area of soil conservation than in any other area of instruction.

Teachers used resource agencies an average of ten times for 34.3 hours.

II. IMPLICATIONS

As a part of this study questions are raised, and solutions proposed, to further clarify the findings. The writer feels that the questions included are those questions teachers of vocational agriculture might ask in deciding whether or not to give greater emphasis to the use of resource personnel in their programs.

The first question is: Why should the teachers of vocational agriculture use resource personnel?

Advancements in agricultural science, technology and business are being made so rapidly that teachers are unable to keep up with current information without using resource personnel.

As farming becomes more specialized, the need for the use of resource personnel increases. Educational leaders are no longer considered specialists in the field of agriculture.

The use of resource persons, especially of laymen, bring new authority to a class. Everyone respects the opinion and advice of the person who is doing a job successfully.

The resource person brings new interest by affording a change from the routine of classwork, and by adding new information on the problem under study. The resource person brings a new point of view to the class; his approach to the problem will not be the same as that of the regular teacher.

The resource person enables the teacher to conduct a well-rounded program. He would no longer shun areas because of lack of preparation.

Resource personnel would help departments adjust to change. The change might be the introduction of a new crop, the production of a new kind of livestock, the use of a new system in livestock or crop production, or the use of a different method of marketing.

Their use offers unlimited teaching resources. Every person doing an important job in a community is a potential resource person.

The use of resource persons helps the teacher fit his program to the needs of his teaching area. By using persons working in the area, especially laymen, he is assured of meeting, to some degree, the needs of students interested in the occupations represented by the laymen helping with the program.

The use of resource personnel will improve school-community relations. The teacher's program becomes "our program" after the resource person has made his contribution.

The use of resource personnel tends to increase attendance. The teaching situation is not complete until the teacher has a satisfactory

number in his class.

Another question might well be: What resource personnel should be used by teachers of vocational agriculture?

The teacher is likely to make greater use of agencies directly related to agricultural activities.

Some persons and agencies suggested for use as resource personnel were federal and state agencies, commercial organizations, public relations agencies, cooperatives, town and county employees, hobbyists, travelers, clergymen, foreigners, state supervisors, teacher trainers, local school superintendents, principals, local farmers, fellow teachers and members of the board of education.

The study showed that the agencies most used by the Tennessee teachers were the Soil Conservation Service, feed and seed companies, local laymen, insecticide companies, county agricultural Extension agents, Extension specialists, and cooperatives.

A third question teachers might ask is this: When and how should the teacher of vocational agriculture use resource personnel?

The teacher should use resource persons when he needs the help of specialists when dealing with current agricultural problems resulting from new developments in agricultural science, business and technology.

According to one study, the major use made of agencies was by demonstrations, movies, and field trips.

Teachers used teaching supplies furnished by agencies as well as personnel.

When there are several "off farm" factors to be considered by young men becoming established in farming, it was suggested that the teacher use experts and specialists to present the specific programs required by the young farmers.

The teacher should use local resource people to help him evaluate his adult program.

When certain types of technical information needs to be explained, specialists may be brought before a class as speakers, or used by having them sit with the members of the class and contribute to the discussion from time to time as consultants.

Resource personnel should be used, too, as consultants to help the teacher plan and evaluate his program.

The teacher may use resource personnel in the field of occupational guidance. Students may interview the workers on the job in occupations in which they are interested. The teacher may bring before the class representatives of occupations in which several students are interested.

Resource persons may help in training students for occupations in agricultural business and occupations related to agriculture by giving students on-the-job experience in occupations of their choice. Farm placement may have an important place in some programs.

The writer, as a beginning teacher of vocational agriculture, avoided the use of resource personnel in his program for fear that their use might reflect on his ability as a teacher. The same feeling by

teachers today may account for the fact that the more experienced teachers, as shown by this study, made greater use of resource persons than did those of less experience.

The writer believes that all teachers, regardless of experience, can strengthen their programs through the use of resource personnel.

The study showed that teachers near universities and colleges with agriculture, agricultural experiment stations, and those in urban areas made greater use of resource persons than did the rural teachers. This difference in use was probably due to teachers leaning too heavily on specialists and experts from outside their service areas.

The writer feels that the location of departments should not affect the extent to which a teacher uses resource persons, and that resource persons from the teacher's service area can make the greater contribution to the teacher's program.

Today, we in agriculture, are confronted with two important problems: the problem of rapidly expanding world population, and the problem of an unfavorable image of many in agriculture in the eyes of the general public. This image is especially true of farmers and paid agricultural workers.

The rapidly expanding population is considered by many to be the greatest problem the peoples of the world face (not excepting the threat of the hydrogen bomb).

How can we in agriculture produce, process and distribute sufficient food and fiber to take care of this increasing population? This is a question that teachers of vocational agriculture must have a

part in answering. Some countries have failed to answer this important question; a fact responsible for much of the unrest in the world.

Those engaged in agriculture in America have been able to supply our population with the needed food and fiber, even to provide a safe surplus.

Some of the problems, regulations and adjustments resulting from this needed surplus have worked to create an unfavorable image in the eyes of the general public of many in agriculture--a general public that fails to see in our surplus; strength for our nation; a seven months' emergency supply of food and fiber; and the results of keeping in operation the agricultural forces that we must rely on to meet our more critical future needs.

The use of resource personnel will enable the teachers of vocational agriculture to continue to do their part toward supplying our population with needed food and fiber. They will help the teacher bring to his service area--in the shortest time possible--the benefits of research in the field of agriculture.

What will we do about the second problem, the unjustified image of many in agriculture?

The writer feels that we must improve our relations with the general public by helping them understand more about the problems, the services, and the importance of agriculture to our nation's future.

The writer would suggest to teachers of vocational agriculture that they find a place for some of their critical public in their programs. Let them help with their programs, and at the same time help them to see the entire agricultural program in its proper light.

If teachers of vocational agriculture are to do their part toward keeping in operation the machinery needed to provide food and fiber for our expanding population--if we are to create the proper image of those in agriculture--we must broaden, strengthen and publicize our programs. As one means toward doing this, the writer recommends the use of resource personnel by teachers of vocational agriculture.

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APPENDIX A

TABLE XXIV

RESOURCE PERSONNEL USED, AND THE EXTENT USED, BY 58 TEACHERS OF
VOCATIONAL AGRICULTURE IN TEACHING HIGH SCHOOL STUDENTS
AND ADULT FARMERS

Resource Personnel	No. of Teachers Using and Hrs. of Instruction Involved					
	H. S. Students		Adult Farmers		Total	
	Tchs.	Hrs.	Tchs.	Hrs.	Tchs.	Hrs.
Commercial co. rep. (insect.)	37	43	13	30	50	73
Commercial co. rep. (feed and seed)	34	74	21	61	55	135
Commercial co. rep. (fertilizer)	14	20	9	19	23	39
Commercial co. rep. (other)	16	75	9	22	25	97
Coop. (credit) (Gov. agencies)	17	55	7	14	24	69
Credit agencies (private)	10	25			10	25
Coop. (marketing services)	10	31	3	8	13	39
Coop. (other services)	26	171	17	92	43	263
Extension (co. agric. agent)	27	49	17	55	44	104
Extension (specialists)	15	37	17	79	32	116
Local laymen (skilled-mech.)	23	121	14	174	37	295
Univ. or college (not Extension)	5	9	2	8	7	17
State Department of Education	4	9	1	4	5	13
State Board of Health (local sanitation officers)	7	19	1	2	8	21
State Department of Conservation (forestry)	19	77	6	21	25	98
State Department of Agriculture	5	18			5	18
State Geologist	1	4	1	2	2	6
US - TVA	12	38	7	17	19	55
USDA:						
(Disease Control Specialists)						
(FHA)	4	14	3	4	7	18
(Forestry Service)	11	39	4	13	15	52
(SCS)	38	227	20	73	58	300
(Grading Specialist - tobacco)	23	88	10	44	33	132
(ASC)	7	26	7	17	14	43
(Federal Crop Insurance)						
(Other Specialists)	2	2	1	1	3	3
State Experiment Station personnel	4	5	7	18	11	23
Others	9	31	3	6	12	37
Total	380	1307	200	784	580	2091

TABLE XXV
 RESOURCE AGENCIES RANKED ACCORDING TO TIMES USED
 BY TEACHERS OF VOCATIONAL AGRICULTURE
 (TOP TWENTY)

Rank	Agency	Times Used
1	Soil Conservation Service	58
2	Feed and Seed Companies	55
3	Insecticide Companies	50
4	County Agricultural Agents	44
5	Cooperatives (Other Than Credit and Marketing)	43
6	Local Laymen	37
7	Grading Specialists	33
8	Extension Specialists	32
9	Commercial Representatives (Other Than Fertilizers, Insecticides and Feed and Seed)	25
10	Forestry Service of the State Department of Conservation	25
11	Governmental Cooperative Credit Agencies	24
12	Fertilizer Companies	23
13	Tennessee Valley Authority	19
14	United States Department of Agriculture, Forestry Service	15
15	Agricultural Stabilization Conservation	14
16	Cooperative Marketing Services	13
17	Agencies Not Listed	12
18	State Experiment Station Personnel	11
19	Private Credit Agencies	10
20	State Board of Health	8

TABLE XXVI

RESOURCE AGENCIES RANKED ACCORDING TO HOURS USED
BY TEACHERS OF VOCATIONAL AGRICULTURE

Rank	Agency	Hours Used
1	Soil Conservation Service	300
2	Local Laymen	295
3	Cooperatives (Other Than Marketing and Credit)	263
4	Feed and Seed Companies	135
5	Grading Specialists	132
6	Extension Specialists	116
7	County Agricultural Extension Agents	104
8	Forestry Service of the State Department of Conservation	98
9	Commercial Companies (Other Than Feed and Seed, Fertilizers and Insecticides)	97
10	Insecticide Companies	73
11	Governmental Cooperative Credit Agencies	69
12	Tennessee Valley Authority	55
13	The Forestry Service of the United States Department of Agriculture	52
14	Agricultural Stabilization Conservation	43
15	Fertilizer Companies	39
16	Cooperative Marketing Services	39
17	Agencies Not Listed	37
18	Private Credit Agencies	25
19	State Experiment Station Personnel	23
20	State Board of Health	21

APPENDIX B



The University of Tennessee
Knoxville
College of Education

Department of
Agricultural Education

Date: July 17, 1961

To: Selected Teachers of Vocational Agriculture in Tennessee

From: R. W. Beamer

Enclosed is a questionnaire dealing with resource personnel who are commonly used by teachers of vocational agriculture in the State in carrying out their instructional programs. The questionnaire was prepared by Mr. Brown Draper, teacher of vocational agriculture at Hartsville, Tennessee. It is one of the data collecting instruments he is using to get information for his thesis problem.

Mr. Draper has designed the questionnaire to get the following four kinds of information:

1. Types of resource personnel being used by teachers of vocational agriculture.
2. The extent to which resource personnel are being used in carrying out instructional programs in vocational agriculture.
3. The extent to which resource personnel are being used with high school students as compared to adult farmers.
4. The instructional areas for which resource personnel are used.

Your cooperation in helping Mr. Draper with this study by completing the questionnaire at your earliest convenience will be appreciated. It will take only a few minutes of your time to complete the questionnaire and I am sure the study (of which the questionnaire is a part), when completed, will be of real value in helping us to improve our use of resource personnel in teaching vocational agriculture in Tennessee.

RWB/db

Enc.

QUESTIONNAIRE

Resource Personnel Used by Teachers of Vocational Agriculture

1. Name _____ 2. School _____
3. Number of years taught at present location ____; At other locations _____?
4. Number of students enrolled in vocational agriculture: High School ____; Adults and Young Farmers _____?
5. Number of miles to nearest University (with agriculture) or College (with agriculture) ____; to experiment station _____.
6. Is your school located in an urban area? Yes _____ No _____
If located in urban area, what is population of town or city?

7. If located in a rural area, what is the distance to nearest city?
_____; population of city? _____

Please complete the forms on the following pages by indicating in the appropriate columns the total hours (estimate to closest hour) you have used each of the resource personnel listed on the left of the page in teaching all-day boys and adult farmers.

Example: If you have used a feed and seed representative from a commercial company in providing instruction on feeding laying hens to all-day boys for eight hours, and in providing instruction to adults in feeding dairy cows for four hours, please indicate this by entering eight in Column (1) under Poultry; and four in Column (2) under Dairy.

Base your estimates on the working year of the teacher of vocational agriculture, July 1, 1960 to June 30, 1961.

Resource Personnel	Area of Instruction									
	Livestock		Farm & Home		Soil		Dairy conserva-		tation	
	Poultry	Beef, sheep, & hogs	Beef, sheep, & hogs	Home	Soil	Soil	tion	tion	tion	Adults
Commercial Co. representatives (insecticides)										
Commercial Co. representatives (feed & seed)										
Commercial Co. representatives (fertilizer)										
Commercial Co. representatives (other)										
Cooperatives (credit) (Government agencies)										
Credit agencies (private)										
Cooperatives (marketing services)										
Cooperatives (other services)										
Extension (county agricultural agent)										
Extension (specialists)										
Local laymen (skilled-such as a mechanic)										
University or college (excluding Extension)										
State Dept. of Education										
State Board of Health (local sanitation officers, etc.)										
State Dept. of Conservation (forestry, etc.)										
State Dept. of Agriculture										
State Geologist										
US - TVA										
USDA (disease control specialist)										

(Cont.)

Resource Personnel	Area of Instruction									
	Cotton Tobacco Forage Grain					Garden & Farm				
	Sm. Fruit Forestry mgt.									
	Hours Taught to: Col. (1) All-day boys: (2) Adults									
Commercial Co. representatives (insecticides)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Commercial Co. representatives (feed & seed)										
Commercial Co. representatives (fertilizer)										
Cooperatives (credit) (Government agencies)										
Credit agencies (private)										
Cooperatives (marketing services)										
Cooperatives (other services)										
Extension (county agricultural agent)										
Extension (specialists)										
Local laymen (skilled - such as a mechanic)										
University or college (excluding Extension)										
State Dept. of Education										
State Board of Health (local sanitation officers, etc.)										
State Dept. of Conservation (forestry, etc.)										
State Dept. of Agriculture										
State Geologist										
US - TVA										
USDA (disease control specialists)										
USDA (FHA)										
USDA (forestry service)										
USDA (SCS)										
USDA (Grading specialists-tobacco, etc.)										

(Cont.)

