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THE AGRICULTURAL EDUCATION MAGAZINE

Finish Beef Project—Tennessee

The Round-Up—New York

(See page 43)

"It is well for a man to respect his own vocation whatever it is, and to think himself bound to uphold it, and to claim for it the respect it deserves."—Charles Dickens.

A. K. GETMAN **Professional** R. W. GREGORY

Farm Census Furnishes Basis for New School Projects

Z. R. PETTET, Chief Statistician for Agriculture, Bureau of the Census, Department of Commerce

Part II

PART I of this article, which appeared in the August, 1937, issue, described, briefly, the purposes of the English Land Utilisation project and the Alabama crop reporting plan with an explanation of the necessity for agricultural statistics.

Z. R. Pettet

Let us now turn from the general to the specific and make a concrete application of the acreage recording and mapping program to regular schoolwork. The outline herein should be regarded as merely suggestive. Some of the steps could be omitted, actual application of the ideas will doubtless develop many improvements, and changes may be necessary to adapt the plan to local conditions.

The first step is to write the Bureau of the Census of the Department of Commerce for a "Heading Facsimile Tabulation Sheet" showing the items available on the small unit basis of the Agricultural Census of 1935. Briefly, this facsimile lists the various items which are available on the minor civil division basis consisting of the number of farms growing each of the various crops, together with the acreage and production; the number of farms having the various classes of livestock; and totals of each kind of animals. (See separate leaflet which has been supplied by the Bureau of the Census.)

The second step is to secure a minor civil division map for the state prepared by the Census, but for sale only by the at 10c for each State. The minor civil division maps present the smallest political units, selected by the Census for enumeration purposes and upon which tabulations are made.

The third step is to secure from the Census Bureau photostatic copies of these minor civil division statistics for the county, at cost of reproduction, 35c per sheet. There are, usually, six sheets per county.

The fourth step is to enlarge the minor civil division maps and duplicate them so that each pupil would have one for field work.

The fifth step, which would be helpful in training pupils and familiarizing them with mapping, is to copy upon these maps the most important figures, such as the number of farms, acres of crop land harvested, etc., for each minor civil division. Even without completion of the program this feature will make interesting school exercises. The Census experts in analyzing these data do this for all items, as it furnishes the easiest means for detection of errors and for intensive study.

The sixth step is to apportion the minor civil division or the school districts among the pupils. If possible an enlarged minor civil division map should be given each, with territory allocated to each plainly indicated. Within the territory assigned the pupil is to secure all farm records and make a new map showing the utilisation of land, pastures, and the number of acres of the individual crops, as a part of his schoolwork.

The pupils may obtain the information which is desired in several ways.

1. The first and commonest method is to use a schedule asking the questions and recording the answers in the same manner as the census enumerators do. A sample of the 1935 farm schedule may be obtained from the Census Bureau without cost. (See Figure I.)

2. To prepare enumeration booklets in which each line is given to a farm and records made in vertical columns which bear the appropriate questions or headings—for example: (See Table I)

3. The third method, mentioned previously, is to prepare an enlarged county or minor civil division map and locate the field boundaries and place the information directly upon the maps. Various adaptations or combinations of these

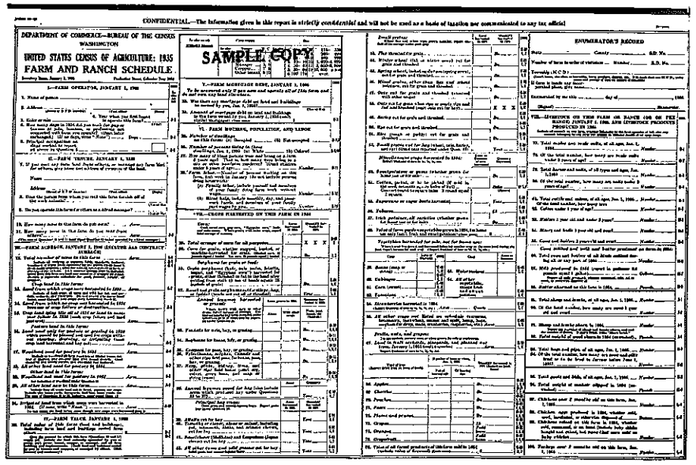


Figure I—Farm Schedule

NAME OF FARM OPERATOR	POST OFFICE ADDRESS	LAND OPERATED			Total Corn Acres	Grain Crops Grown for Grain				
		Owned Acres Operated by Owners	Rented From Others: Acres Rented for Cash	Rented From Others: Acres Rented for Cash		Winter Wheat Acres	Spring Wheat Acres	Oats Acres	Barley Acres	Rye Acres
		1	2	3	4	5	6	7	8	9
John Smith	York, Nebr.	160	40	10	50	42		10	12	

methods may be used.

If a schedule is used the pupils should be trained very carefully in its use with proper explanations of what is desired, how the various crops shall be handled, the order in which questions should be asked, etc. Helpful directions will be found on the back of the 1935 Farm Census schedule.

It is usually thought to be a very simple matter to ask a question and get a reply which is accurate and satisfactory. Before the last farm census, however, our area supervisors were well trained in the use of the schedule, with every difficulty being taken up by the experts and explained, with examinations requiring accuracy in recording information on the schedule, and the editing or straightening out of the difficulties of the reports after they are received. Teachers who desire to use schedules as a part of the regular work will find quite a little time can be advantageously devoted to such preliminary training.

The actual map work and the tabulation of the data should be done under the close supervision of the teacher, if a special instructor is not assigned by the county superintendent of schools.

After the material is recorded upon the schedule, or in the listing book, it should be carefully scrutinized. The next step, technically described as editing, is nothing more or less than making sure that the information is recorded upon the proper line and that there has been no misunderstanding of the various units of measure, no patently untruthful reports made, and that the proper boundaries and farm limitations have been properly observed. The agricultural staff of the Bureau of the Census will be glad to act as advisers in questions which may arise.

If this program is found satisfactory in an experimental way, an organization such as that used in Great Britain would probably be desirable, or it might be conducted by some of the educational organizations already functioning. The program outlined carried out on a large scale is an ideal rather than an expectation.

Many persons discussing this matter have questioned the practicability and possibility of putting into effect in this country a program similar to that of the British Land Utilisation project, because of the tremendous size of the United States, and diversity of American agriculture, when compared with the very compact, well organized, relatively homogeneous agriculture of England. It may be that much additional time and preliminary education will be necessary before it will be possible to undertake a project of this kind on a large scale. However, so great an amount of educational work has been done by the agricultural high schools, the educational divisions of the extension service, the vocational training schools, farm organizations, and particularly the state farmers organizations, and the Office of Education of the Department of the Interior, that sufficient foundation upon which to build appears ready.

The Census itself has contributed, we believe, in preliminary educational work by supplying, free, to thousands of teachers, leaders of organizations, and

27,000 individuals have requested these leaflets of which, roughly, one-seventh were identified as teachers.

Most of the teachers requesting these releases in quantities specified that they desired them for use in their classes. This use ranged from the grammar schools, utilizing the data for elementary arithmetic, to college seniors and graduates, using them in sociology and economics and for a basis of their theses. The great proportion of teachers using them, however, appear to be among the teachers of vocational agriculture and vocational schools.

Before starting upon important programs of mapping the school districts

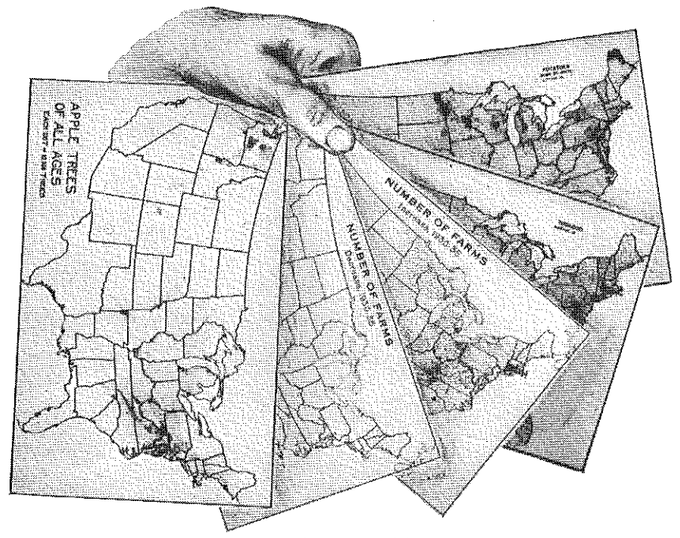


Figure II—Shaded Maps

Figure III—State Bulletins

intensively, preliminary work might be done with state and county mapping from these releases. Dot, crosshatch, shaded maps, or those based on color codes could be used. (See Figure II.)

would be handled later in recording Census figures or working up completed maps for the minor civil divisions.

Many instructors who might find it impracticable to take up the ambitious program previously outlined will doubtless desire to use these county leaflets in their teaching courses.

The officials of the Bureau of the Census will take pleasure in sending sample sets to every teacher and will furnish these releases in quantities up to 50 for classroom use, while the supply lasts. The description of these releases is, as follows:

1. The series of commodity releases, 43 in number, giving information on uses of land, principal crops, and livestock

2. The individual county stories, which give for each county the principal agricultural statistics of the 1935 Census, with a short press summary

A. M. FIELD

Methods

Teaching Soil Conservation

G. P. DEYOE, State Teachers College, Platteville, Wisconsin
M. A. DOSER, High School, Cumberland, Wisconsin[1]

"Hordes of gullies now remind us
We should build our lands to stay,
And departing leave behind us
Fields that have not washed away."[2]

ONE measure of the success of vocational training for the farm boy is the degree to which this training functions in the solution of present and future problems of importance in farming. In many parts of the United States, problems of soil conservation are among those of greatest importance to the present and future welfare of farmers and to the nation as a whole.

The fact that approximately 75 percent of the land in the United States is subject in varying degrees to water or wind erosion, or both, brings one to the realization that attention to the conservation of soil is more than a sectional problem. It is estimated that more soil fertility is lost each year thru erosion than is taken from the soil by plant growth, and that the replacement of the elements lost by erosion would require the purchase of commercial fertilizers costing nearly one-half billion dollars. According to government figures, upwards of one hundred million acres of land formerly under cultivation have been ruined or severely damaged by water erosion, an area which is equivalent to the combined areas of Illinois, Ohio, North Carolina, and Maryland. In addition, an area of similar size has been damaged, but less seriously.[3] If on top of such staggering figures as these it is recognized that about 500 years are required by Nature to form one inch of topsoil, and that this amount or more may be lost in one year under careless farming practices, it becomes evident that it is high time for more effective instruction dealing with soil conservation. As one author has put it, "School books do not tell the tale. We have grown up innocently believing that our wealth in soil is as great today as it was when the last foot of land was acquired."[4]

For some years, various agricultural colleges and the United States Department of Agriculture have been performing experiments and fostering educational programs which include some attention to soil conservation. More recently, the Soil Conservation Service has been set up by the latter agency to aid in this important work. Altho the efforts of these various government agencies have been highly valuable from the standpoint of perfecting and demonstrating sound soil conservation practices, there still remains the job of impressing the masses of farmers with the seriousness of erosion and getting them to use methods which may correct erosion difficulties on their own farms.

Instructors of vocational agriculture should assume increased responsibility for this conservation and for helping solve the problems of erosion on individual farms. In most cases, there is need for an increased emphasis on this phase in their programs of instruction. Such increased attention demands careful planning if the instruction is to be effective. Objectives should be formulated and plans should be made relative to time allotments, the placement of these materials in the courses of study, and procedures for making the instruction function on the home farms of the boys and on other farms in the community. *There is available an abundance of information materials on soil conservation, but there appears to be a dearth of practical suggestions for teaching this subject.* Because of the danger that teaching in this field will not be functional in nature, the principal emphasis in the materials that follow has been upon the pedagogical aspects.

Well-Conserved Layout

Suggestions for Objectives

As a preliminary step to effective instruction, the careful definition of objectives is highly important. The following objectives are suggestive of important skills, appreciations, and other learning products toward which the instructional efforts in soil conservation should be directed.

1. To develop a realization of the importance of a fertile soil to successful farming and to the present and future welfare of the nation
2. To learn how soil is formed and to gain some appreciation of the length of time involved in soil formation and deposition
3. To develop an understanding of the several ways in which soil fertility has in this depletion
4. To develop an understanding of the causes of soil erosion
5. To learn how soil erosion may be prevented and controlled, and to gain some skill in the application of certain procedures
6. To become familiar with government programs for soil conservation
7. To develop an understanding of the interrelationships of cropping practices and reforestation with soil conservation and moisture control
8. To gain some knowledge of the basic principles involved in the maintenance and improvement of the crop producing power of the soil
9. To gain skill in solving problems of fertility and erosion in relation to the farm home
10. To gain an increased appreciation of the natural environment and a realization of the importance of soil conservation, stream control, reforestation, and protection of existing plant and animal life in maintaining a desirable environment.

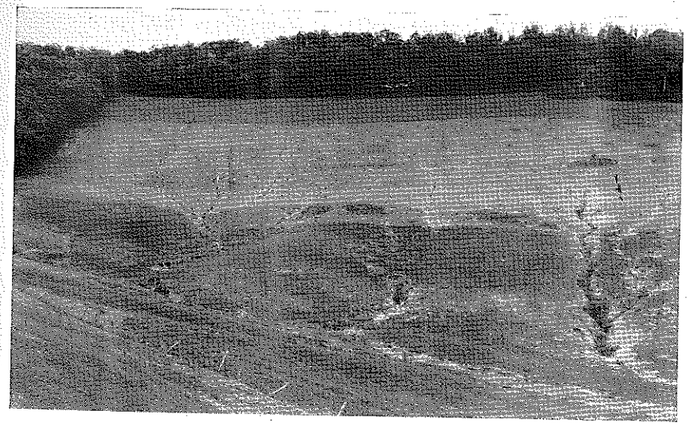
Placement of Instructional Materials

As courses in vocational agriculture are commonly organized, many of the materials on soil conservation fit most logically into farm crop enterprises. However, certain of the managerial phases of soil conservation, which involve plans for the farm as a whole, might be covered in farm management and farm economic phases of the school program. For example, materials best adapted for this advanced work include problems which involve field arrangements and cropping programs for the control of erosion on the entire farm, along with problems which deal with the fertility program for the farm as a whole. In states where instruction in farm mechanics comes in the latter part of the curriculum, certain projects in terraces. Furthermore, it would seem desirable thruout all years in vocational agriculture to utilize opportunities for observations and brief discussions relative to soil conservation which might arise as the result of visits to various farms.

In planning the supervised practice programs, particularly with crop projects, opportunities frequently are present for developing sound soil conservation practices in connection with the projects under consideration.

The time allotted to the various aspects of soil conservation will vary from community to community depending upon the seriousness of the problems of soil erosion. It would appear that materials on the social significance of soil conservation could well be included in the program of instruction in every high school, even if the local problems of erosion are not of a serious nature.

Since the study of soil conservation is a part of the study of the conservation of natural resources in general, and since certain phases of that study are usually considered in biology and general science classes, there is a possibility of some unnecessary overlapping of instruction in the various subjects. Ordinarily this will not be a disturbing difficulty, and duplication can be avoided by conferences between the agricultural instructor and the science teachers.



A Neglected Field

Suggestions for Instructional Procedures

Materials of instruction and pupil activities should be selected which are in keeping with the major objectives. Problems and projects should be utilized which are true-to-life and call for a high grade of thinking.

Introducing the materials on soil conservation, it is desirable to appeal rather directly to the boys' sense of practical values. This may be accomplished by leading the boys thru a series of observations and first-hand experiences which will stimulate them to recognize some of the problems involved. Following this, instruction should center around the inductive problems, which should lead the boys to understand the basic causes of erosion and the principles of erosion control. Previous experiences, recent

at this stage. However, statistical materials must be selected carefully and presented in an attractive fashion to appeal to pupils of high school age. Carefully constructed charts are often helpful, from which the pupils themselves should be permitted to formulate generalizations or verify previous observations. Some suggestions for inductive procedures and for various activities and projects are given in the following list.

1. Field trips to study soil types, depths of soil in various locations, evidences of erosion and deposition, effects of various cultural and cropping practices, long-time effects on natural beauty, long-time effects on wild life of land and stream, etc. These observations will lead to the recognition of important problems; and information can be collected which can be used with other data for formulating generalizations relative to methods of soil formation, causes of soil erosion, and the long-time effects of careless practices.
2. Study of experimental data, preferably in chart form, showing the relations of various cropping and cultural practices to soil loss and water runoff. Data of this type will supplement and verify previous observations.
3. Study of experimental data on the relations of the crop rotations and crop usage to the maintenance and improvement of soil fertility. By means of these data, generalizations may be formulated relative to soil management practices which are desirable in addition to those needed for the control of soil erosion.
4. Observation of demonstrations of terracing, strip cropping, stream and gully control, and reforestation. If possible, some of the control devices should be observed during the process of construction. These experiences will provide contact with the application of certain principles of successful erosion control.
5. Observations following heavy rainstorms, especially in the spring and fall. By this means, the serious nature of sheet erosion, initial gullying, silt-laden streams, and flooding turbed will indicate the seriousness of soil losses of this nature.
6. Practical exercises in testing soil samples for acidity, available phosphorus, and amount of organic matter, with contrasts between uplands, side hills, and lowlands.
7. Projects should be provided which require first-hand experience with such activities as running contour lines, constructing terraces, and building soil-saving dams. Some of these may be undertaken as class projects and some as parts of the supervised practice programs.
8. Mapping of entire farms in the community to show areas of erosion, field arrangements, drainage, and cultural practices. This should be followed by replanning the entire farm so as to be in keeping with approved practices of land-use and erosion control.
9. After one or two class projects similar to the preceding, each boy should undertake the study of erosion and fertility problems on his home farm. Land-use programs and feed usages should be considered from the standpoint of maintaining and improving soil fertility. These projects are especially suited for the farm management and farm economics year.
10. Some school grounds have soil erosion problems which may be utilized by classes in agriculture for group projects.
11. The use of a school reforestation plot in which plantings are made annually.
12. The planting of forestry plots and windbreaks on the home farm.
13. Demonstration plantings for checking wind erosion. Tree belts are being effectively used in some places to aid in keeping small areas of "blow soils" under control.
14. Various demonstrations on a small scale may be constructed on portions of the school grounds and in sandboxes in the classroom. These projects may be used to demonstrate contour lines, sheet erosion, gullying, the effects of vegetation on water runoff and soil losses, and other aspects of soil erosion. An excellent demonstration for the classroom is described in the Cornell Rural School Leaflet, Vol. 29, No. 24. (See references.) Suggestions are included in the same publication for making a simple rain gauge, measuring slopes, etc.

Making the Instruction Function on the Home Farm

The real test of the efficiency of vocational instruction does not lie in how well the boys grasp the facts of the subject under consideration but rather in what use is made of these facts and principles on the home farms. For this reason, special efforts should be made to get the boys to utilize soil conserving practices in connection with the supervised practice programs. Fortunately, many of the most helpful soil-saving practices do not require much cash outlay. Such practices as strip cropping, contour farming, use of sod crops, long-time rotations, and the control of small

Supervised Practice

H. H. GIBSON

Suiting the Project Selection to the Local Home Farm

J. H. WILSON, Teacher,
Winterville, Georgia

J. H. Wilson

A GREAT deal has been said and written concerning the problem of selecting practice programs for boys studying vocational agriculture. Those who have had experience in dealing with this problem agree that a properly selected and well-adapted home practice program is the first step toward successful teaching in this field. If it is to be a functional practice program it must of necessity grow out of the local home farm situation. Since this is so, each boy presents an individual problem in this matter, because of the varied conditions found on the individual farms.

However, regardless of these differences in home project programs, as to scope, kinds of enterprises, farm practices, and other variable factors, a procedure in arriving at a sound and practicable program for all boys can be developed. As an example of how this has been done, let us take Horace Hancock, of the Winterville, Georgia, community, a first year vocational agricultural student, and follow thru the procedure used in projecting a long-time home practice program for him as a basis for his studies in vocational agriculture.

It was essential that certain facts be known concerning Horace's home farm before attempting to set up his practice program. To gather these facts two types of surveys were made of the home farm: (1) a farm management survey and (2) a soil resources survey.

It was found from the farm management survey that Horace lives on a 93 acre home-owned and operated farm. Of this 93 acres, 70 acres are being cultivated with 3 head of mules. Typical of most farms in the local area, this farm is a cotton farm. That is, cotton occupied about 42 percent of the cultivated land or 29 acres, and produced 53 percent of the farm income. The minor enterprises on this farm are: dairy cows, 2; laying hens, 140; sweet potatoes, ⅛ acre; and home garden, ½ acre. The contributory enterprises are found to be: corn, 26 acres; oats, 8 acres; wheat, 3 acres; peas and sorghum for summer hay, 11 acres; and hogs for pork, 3. The survey revealed: (1) a need for a more adequate supply of food for the home family of five persons, including fruits for home use; (2) a need for more feed for the of this farm; (4) there was very little indication that any definite soil conservation practices were being used; (5) none of the cultivated land has been properly terraced; (6) practically all the cultivated land showed signs of sheet erosion and about 10 acres were filled with small gullies; (7) the permanent pasture was poor and no efforts were being made to improve it; (8) it was evident that very little attention had been given to landscaping or beautifying the home grounds; (9) the total farm and family income was only $536.31 or $107.26 per person. This income is much too low to provide the standard of living expected of this family.

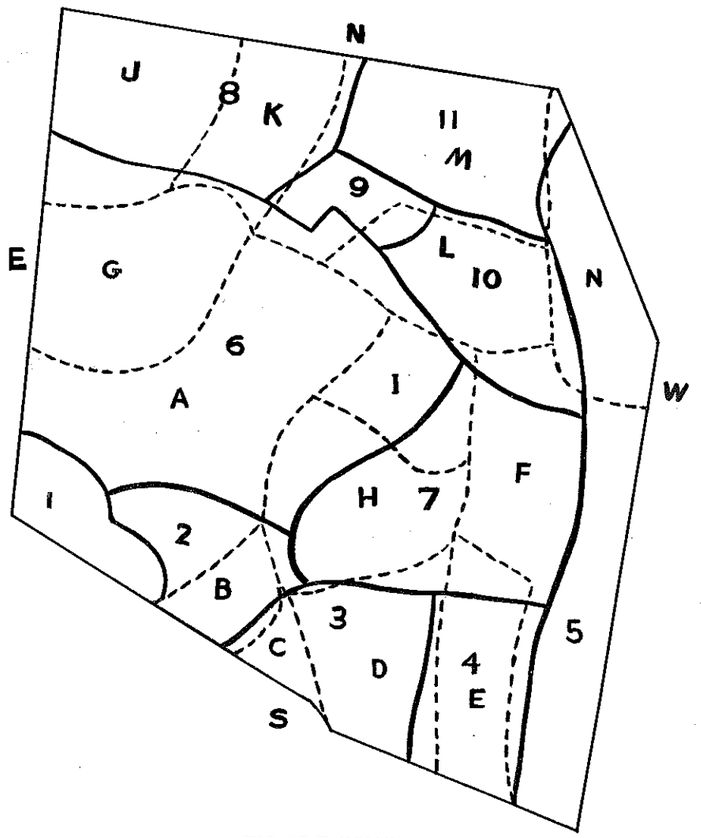
Soils Resources Survey

This survey was made by Horace under the supervision of his agriculture teacher. In this study, a map of the farm was made, locating areas of farm according to: (1) soil types; (2) degree of slope; (3) percent of erosion; (4) present land use; (5) a replanned land use program. See accompanying map of farm and tables I and II.

It may be seen from the land use map that the cropping system does not conform to the practices most conductive to the best interest of conserving the soil, nor for the greatest production of these crops.

From the information gathered from these surveys a practice program was set up for Horace, looking forward to improving the farming business and improving the farm as a place to live. The practice program was planned cooperatively by Horace, his parents, and the vocational agriculture teacher. Every effort was made to make this program afford an opportunity for participation by the boy and thereby give him the ability to correct present undesirable farm practices and bring about the needed changes on his farm home.

Two aspects of the practice program were pulled out: (1) Horace's project program and (2) his practices on the



HORACE HANCOCK FARM

TABLE II—Present Use of Land Area

Field	Name of Enterprise	Acres
A	Cotton	16
B	Miscellaneous	2
C	Farmstead	1
D	Cotton	7
E	Corn	5
F	Pasture	11
G	Oats	8
H	Corn	6
I	Fallow	3
J	Corn	7
K	Wheat	3
L	Cotton	6
M	Wood	10
N	Corn	8

TABLE I—Soils: Resources Survey

Area	Acres	(1) Soil Types	(2) Degree of Slope (percent)	(3) Degree of Erosion (percent)
I	2	Madison gravelly loam	5	40
II	4	Cecil sandy clay loam	4	25
III	5	Cecil clay loam	5	10
IV	4	Cecil sandy loam	3	10
V	12	Meadow	–3	5
VI	30	Cecil sandy loam	5	50
VII	13	Cecil gravelly loam	7	40
VIII	9	Cecil clay loam	4	15
IX	2	Cecil gravelly loam	10	70
X	6	Cecil clay loam	10	70
XI	6	Cecil sandy loam	7	5

farm other than project. The program increases in scope as Horace develops and becomes capable of handling a larger project. The complete practice program as projected over a period of four years, is as follows:

I. FIRST YEAR'S PRACTICE PROGRAM.

A. Project Program.

For a major cash enterprise 3 acres of cotton were planned and 50 baby chicks were taken for a minor enterprise. The contributory enterprises included 3 acres of corn to produce feed for the work stock and a part of the poultry feed. Three acres of Austrian winter peas (a winter legume) were to be planted on the land preceding corn. The purpose of growing legumes was to add organic matter to the soil and supply the nitrogen needed for corn production. One acre of wheat was grown for chicken feed.

B. Practices on Home Farm Other Than Project.

(1) Horace treated 12 bushels of oats for smut. These oats were planted on the home farm; (2) he selected and set 10 fruit trees as a beginning for a home orchard.

II. SECOND YEAR'S PRACTICE PROGRAM.

A. Project Program.

(1) Three acres of cotton will continue to be the major source of cash for Horace. This cotton will be planted on the land that was in corn the previous year. The minor enterprise of poultry will be 25 laying hens and growing out 100 baby chicks. He will also have three acres of corn preceded by Austrian winter peas. The corn and Austrian winter peas will be grown on cotton land of the previous year. The corn will be used as feed and the Austrian winter peas as fertilizer for corn. The wheat enterprise will be increased to two acres and one acre of oats will be added. The wheat and oats will be used as poultry feed. Horace plans to follow the wheat

B. Practices on the Farm Other Than Project.

Horace plans to plant one acre of crimson clover for a seed patch. The seed from this patch will be used on Area VII of the farm. This is one portion of the farm needing additional organic matter and a close growing winter crop to help check the sheet erosion now taking place. He plans to continue to develop a home orchard by setting 10 more fruit trees and caring for the orchard by pruning and by carrying out a systematic spray schedule for it. He is to plan and assist in growing a good home garden to supply the home with the necessary vegetables. On land Area VI, he expects to lay off terrace lines with a Bostrum terrace level and help construct efficient terraces on 10 acres of this area that need terracing most. It shows a need for terracing from the extent of sheet erosion. About 40 percent of the topsoil is gone. He will harvest and plant one pound of loblolly pine seed. The plants are to be used in reforesting 5 acres of Areas IX and X. This portion of the farm has a 70 percent erosion and a 10 percent slope and should be taken out of cultivation.

III. THIRD YEAR'S PRACTICE PROGRAM.

A. Project Program.

He will increase the cotton to 6 acres, laying hens to 50, and grow out 300 baby chicks; the chicks are to be culled and sold as broilers. He will also grow a pig for a brood sow. The contributory enterprises are to be increased this year: corn, 5 acres for feed for work stock; Austrian winter peas, 2 acres; crimson clover, 3 acres, to be turned under green in preparation for corn. He will grow 3 acres of wheat and 3 acres of oats for poultry and livestock feed. The 6 acres of small grain will be followed by Lespedeza for hay.

B. Practice Other Than Project.

Horace will begin to improve the home grounds by setting some of the wide leaf Ligustrum as foundation plantings around the home. The development of the orchard project is to be continued by pruning and following the spray schedule as planned. The terracing program will be continued by terracing 5 acres more of same area of which 10 were terraced last year.

IV. FOURTH YEAR'S PRACTICE PROGRAM.

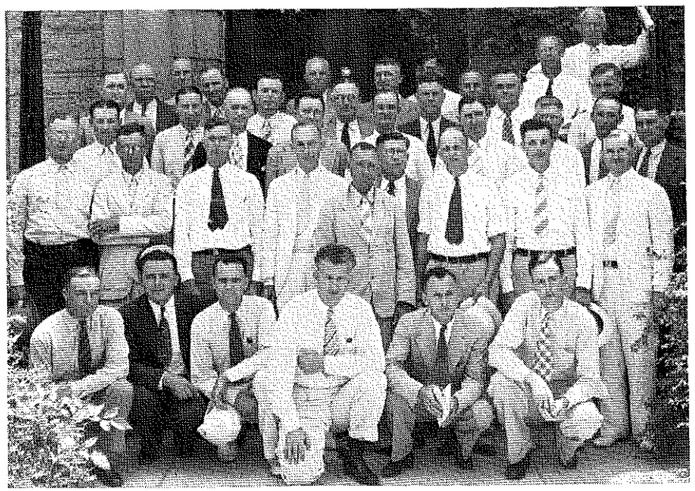
A. Project Program.

For a major cash enterprise, 6 acres of cotton will be planted on land that was in corn the previous year. Horace is to increase the poultry flock to 100 laying hens and grow out 300 more chicks from which to select his next year's layers and will market the surplus as broilers. He expects to breed a sow and produce pigs for home use and to market the surplus. The contributory enterprises will continue to be corn, 6 acres, preceded by crimson clover on the previous year's cotton land. The small grain program will be continued by growing 3 acres of wheat and 3 acres of oats. The small grain will be followed by Lespedeza for hay.

B. Practices on Farm Other Than Project.

Four acres in area H now planted to corn are to be taken out of cultivation and put in permanent pasture, by sodding with Bermuda and planting Dallas, Carpet, Lespedeza, and crimson clover. Replace corn land taken out of cultivation by planting 4 acres of meadow land now in pasture, Field VI. The landscaping of the home grounds is to be continued by planting some of the flowering shrubs and establishing a base for lawn by use of Bermuda. An additional 10 acres of Area F of the farm will be terraced, and the pruning and spraying of the home orchard will be continued.

Horace is well under way with the first year's portion of his practice program and expects to develop the other as time permits. The entire practice program is an outgrowth of his home farm



TEN-YEAR CLUB OF MISSOURI

There are 61 members in the club. Mr. Floyd Barnhart, Caruthersville, president of the agricultural teachers association for 1937 and 1938, stands at the extreme right in the second row from the front. In the rear row at the left, first man, Mr. J. L. Perrin, State Supervisor, and third man, Mr. C. L. Angerer, Assistant Supervisor. These men were presented

Farmer Classes

V. G. MARTIN — J. B. McCLELLAND

Evening Schools in Arkansas

S. D. MITCHELL, District Supervisor,
Conway, Arkansas

THE organization of the evening class in vocational agriculture in the Conway district begins with the construction of the annual program of work in the early fall months. The advisory board which determines the agricultural program for the community considers the need for evening school instruction and suggests a few of the outstanding problems of this group. This procedure insures support of the evening school program by the leading farmers of the community.

Interest among the prospective group is cultivated a week or ten days previous to the time of the meeting. Members of the local chapter of the F.F.A. furnish cars for a house-to-house canvass to classify the prospects and secure needed data. Each group is assigned to a definite bus route and thru the co-operation of the bus driver continues to keep his group informed of the progress of class organizations by notices to the parents by the pupils on the bus.

The wholesale oil dealers of the town are solicited for donations of gasoline and motor oil to care for bus operations. The school busses are furnished by the drivers. Local F.F.A. chapter members assigned to the particular bus routes are responsible for the publicity and advertising of each lesson. General announcements concerning the class are made in school assemblies and news articles are run daily in the local paper.

The first meeting is never to be wasted. A live, interesting agricultural topic is thoroly prepared by the instructor to be presented at this meeting. When possible this topic deals with some line of previous endeavor and the achievements. The details of an early meeting, years previous, from which grew a bull club which introduced a fine bull, with some citations of his outstanding records and breeding, would be an example of a theme for the first meeting. This meeting should be one of inspiration with thoughtful planning along the line of prospective problems. It concludes with listing the problems as determined by the advisory board and a discussion of the possibilities of doing the greatest good. Tactful procedure is necessary to prevent a compromise in which a part of several problems would be considered. This is the first test of the instructor's ability. The problem must have definite limitations.

Organization of the problem into instructional units is accomplished by first selecting the individuals familiar with the problem to assist with the discussion. Each unit is determined by the individual, but the procedure is varied to provide interest and variation. Lectures, field trips, group discussions, charts, slides, and motion pictures are used to maintain interest. This procedure maintains is initiated thru personal services for members of the evening class. Announcements are made by the instructor of various kinds of equipment available and the services which his department has set up as a service department for his evening class members. Forms are provided for recording requests for personal services, and a committee of the local F.F.A. chapter arranges the members requesting services into circuits. The circuit procedure economizes the time of the instructor and enables him to have a definite time to visit the class members. These visits for personal services furnish the needed opportunity for launching the supervised practice program. Other group meetings are held as often as problems arise.

Evening schools in the Conway district for the past three years have dealt with problems of adjustment relating to the New Deal agencies. Four school busses have operated each year to transport approximately 80 farmers to and from classes.

One series dealt with the soil conservation problem and the last lesson was a field trip over the regional demonstration area located within four miles of the school building.

Evening Class Instruction on Diseases of Farm Animals

H. T. WOODRUFF, Teacher,
Jay, Florida

IT WAS not hard to decide just what the course should be based upon when the evening class was organized in the Cross-road and Pine Level communities last year.

In looking over the record of individual services to farmers in these communities, it was noted that seven out of each ten pertained to treatment of diseases and management of livestock. In fact, the vocational agriculture teacher was called on so frequently for this purpose that it looked as if he was sure to have an unbalanced program and that he was to become a community service man in spite of all that he could do. Something had to be done to remove part of this burden from the teacher's shoulders so that he would have time to help the farmers with many other problems just as important. The logical solution to this problem seemed to be an evening class based on diseases of farm animals.

It was not difficult to get 38 farmers of these communities to attend the course, because they could see where it would be of value to them in dollars and cents to be able to save a mule with the colic or to save a cow by knowing how to remove a retained afterbirth. Of course this service had been given where possible by the teacher, but most of the farmers were interested in knowing how of things the farmers could easily learn to do themselves if they had some instruction on how to do the job. In the second place, any job that the farmers would do would be that much relief to the teacher.

The first meeting was called a few days prior to a test of all cattle in this section of the state for tuberculosis by the state livestock sanitary board. Naturally, the farmers were interested in tuberculosis of cattle, so it was decided by the teacher that this would be a good subject to discuss with them. Before the end of the first meeting, a survey was made of the different disease and ailment problems which the farmers had with their livestock so that no important things would be overlooked. It was decided that the topic for the next meeting would be methods of administering medicines, treatment of wounds (this was important due to screw-fly prevalence in this community), and treatment for broken bones and sprains.

The course calendar was as follows:

1. Tuberculosis of cattle
2. Administering medicines, treating wounds, broken bones, and sprains
3. Diseases of the horse and treatment. (Diseases of the digestive and respiratory systems)
4. Diseases of horse and treatment. (Lameness, diseases of urinary organs, of the heart, and nervous system)
5. Diseases of cow—Common ailments and their treatment. (Milk fever, calving troubles, retained afterbirth, Bang's disease, garget)
6. Diseases of cow—Common ailments and their treatment. (Mineral deficiency, cowpox, pneumonia, congested udder, hemorrhagic septicemia, lumpy jaw, and impaction)
7. Diseases of hogs. (Hog cholera and cholera-like diseases)
8. Diseases of hogs. (Skin and intestinal parasites, blind staggers, diarrhea, and pig eating)
9. Diseases of poultry and treatment. (Chicken pox, roup, paralysis, and cholera)
10. Parasites of poultry. (Lice and mites)
11. Sanitation
    a. Isolation of sick animals
    b. Proper disposal of dead animals
    c. Disinfectants for poultry houses, stables, and proper way to use same
    d. Inoculating and vaccinating to prevent disease.

Mimeographed notes were given the farmers on symptoms and treatment of diseases studied. Demonstrations were given in drenching animals, dehorning, castrating, treating wounds for screw worms, making post-mortem of chickens for intestinal worms, pumping up udder for milk fever, and removing afterbirth.

It was not possible to have all of these demonstrations at the class meeting time, but it was possible while the course was in progress to get groups of neighboring farmers together to witness

of these farmers averaged losing one hog per year from hog cholera, so it was decided that all hogs should be vaccinated to prevent cholera. It was further decided that it was more economical to treat pigs at weaning time because it took less vaccine and the risk of the disease would be for a shorter period of time. Quite a number of these farmers raised several hundred pullets each year and had been handicapped with chicken pox. It was decided to vaccinate the pullets after the cockerels had been sold. The teacher ordered the vaccine and helped to treat the pullets. They are now able to treat the pullets themselves. As a result of evening class instruction the number of calls for treating cows for milk fever and removing retained afterbirths has decreased. Since holding this evening class all farmers have had the opportunity to have their cattle treated for Bang's disease. Many of the farmers have learned to do their own dehorning with dehorners loaned them by the teacher. A total of 159 head of livestock were treated by these farmers during the period of supervised practice. This does not include several hundred head of poultry upon which improved practices have been used. These farmers have been quite successful in that they have lost a very small percentage of the livestock they have treated compared with a large percentage when there was no vocational department in the school and no vocational agriculture teacher to help them.

The primary purpose of the course was to teach each farmer to rely upon himself more in minor cases and to call upon the teacher only after he had done all that he could do.

Evening Class Work in Farm Shop

H. L. ARIAIL, Teacher,
Grayson, Georgia

TEACHERS of vocational agriculture are faced with many problems when teaching in a community. Perhaps one of these problems is in evening class work. Here is a summary of the method I used in helping to solve this problem in my community.

Two years ago, I started an evening class in farm shop. When the meetings started we had no shop building nor any equipment with which to actually do the work. My teaching at first was only a matter of lecture and discussion. After a few meetings one of the class members suggested that we build a farm shop—and here was the main problem with which we were confronted—the school could not afford to build and equip a farm shop. The interest of the members was so great that they were not ready to give up, so it was suggested that all donate towards building and equipping the shop. Some of the members gave money, others corn, velvet beans, and anything they had on the farm that we could sell and get money; the tools were donated or loaned for use in the shop.

After everything was subscribed for the shop and the necessary equipment obtained, the farmers built the shop. By the co-operation of the farmers of the

During the two years of teaching in the shop much has been accomplished. The farmers are learning how to do all of their shopwork, and other than this, they have a place equipped with tools available to do all of their work. Every farmer in a given community cannot afford to build and equip a complete farm shop for himself, but if all the farmers in a community will each donate a little, then build and equip one farm shop called the "Community Farm Shop" the problem will be solved.

This being strictly a cotton section we have, thru our farm management program, been trying to grow enough grain for home use. We have no binders or reapers in the community so the method of harvesting the grain was by use of the cradle, this being very hard and slow. To make it easier we have devised a mower attachment which includes a reel and dumper and eliminates the hand cradle. The mower attachment will do the same amount of work as three or four men using a cradle. This one thing has made the growing of grain a simple job and has increased the interest in growing food for home use.

A summary of the work done in the "Community Farm Shop" at Grayson, Georgia, during the school year 1935-36 is as follows:

Farm implements repaired—1,168
(This includes plows, Fowler cultivators, fertilizer distributors, wagon wheels, mowing machines, and many other tools found on the farm.)
Farm implements made—280
Household furniture and appliances repaired—30
Household furniture and appliances made—20

The number of farmers receiving instruction and having access to the "Community Farm Shop" was 168. To show the actual value or saving to the community, I have placed a value on all shopwork done and the things made.

Value of shopwork done....	$ 4,351.35
Cost of materials, coal, etc..	1,830.63
Actual saving to farmers...	2,520.72

The farmers have access to the shop at all times. The only cost for doing their work at the "Community Farm Shop" is five cents per hour to pay for coal and lights. A person may work all day for 40 cents, accomplishing a great amount of work.

I might say, that a vocational teacher's time would be pretty well loaded if he carried on a program similar to this without any assistance. I have had as helpers in all of my work for the past two years two W. P. A. vocational teachers. These two men assisted in the shop program by helping with instruction and keeping up the tools.

We have made the evening class work in farm shop a permanent part of the vocational agricultural department and expect to continue this valuable asset in our community. I contribute the great success of our shop program to the co-operation of the farmers. You must have co-operation in order to accomplish anything.

If, in instructing a child, you are vexed with it for want of adroitness, try, if you have never tried before, to write

A Part-Time Class Council

WENDELL WESCOTT, Instructor,
Osage, Iowa

IN MY estimation the organization of a part-time class council is one of the first and most important steps in getting a part-time class underway. Last year was the first for the department of vocational agriculture at Osage as well as for the course for out-of-school boys, and so the council was especially valuable as a means of helping the teacher to locate out-of-school young men and to determine their interests.

The members of the council were picked on the recommendation of the county agricultural agent and superintendent of schools. Those selected were boys who were leaders in their respective communities. Of the five members, one had been a Future Farmer. Three of them were high school graduates. Each one lived a different direction from town.

These boys were all interseted in planning and carrying out a course that would be interesting and worth while. In addition to planning, these boys met regularly during the course to discuss the various problems that arose and to work out proposals to bring before the entire class for final decision.

The first meeting of the council was held three weeks before the course opened. It was decided to take a survey of the out-of-school boys of the community to find out what they were interested in studying, what recreations they preferred, and to get some personal data about these prospective students.

As a result of this survey, a six weeks course was decided upon. A mimeographed summary of the plans for the course was made up by the council and given out to a large number of school boys. Newspaper articles were published in the county paper previous to the opening of the course. Enrollment cards were prepared, some being given to prospective students by members of the council, some by the all-day students, and some being sent by mail.

Response by the young men of the community was immediate. Twenty-six fellows appeared at the organization meeting with 33 at the first regular meeting when the school started. More boys were interested, but the agriculture room facilities were such that the group had to be limited.

The course was started after the Christmas vacation and was divided into two three-week periods. The first period was devoted to the study of swine production, with farm arithmetic as the related subject. Legumes were studied the second period. The class met daily in the afternoon.

No tuition or fees of any kind were charged. References used included books in the agricultural department library, magazines, and state and federal bulletins.

The meetings were conducted on a discussion basis. Reports by members of the class, outside speakers, and moving pictures were also included. Each member enrolled for the supervised home practice work which was elected at the end of the course. Attendance was excellent except for a few days in February when the roads were blocked with snow and when the weather was extremely

Farm Mechanics Now and Tomorrow

M. R. WILSON, Instructor in Farm Mechanics,
Manhattan, Kansas

M. R. Wilson

TRAINING in farm mechanics is a phase of agricultural education. Remarkable progress has been made in the last decade in teacher-training methods in farm mechanics as well as the quality of farm mechanics work done by vocational agriculture teachers.

Nevertheless, much improvement is necessary if growth is to keep pace with the mechanical advancement in agriculture. The initiative and leadership for such growth must come from the progressive and outstanding farm shop teachers as well as the teacher-trainers of the different phases of the farm shop program.

It has been contended that a farmer never went broke because he could not file a saw, but many of them have expended valuable time and considerable money on the road between home and town to get some piece of equipment repaired that should have been repaired at home.

One issue that must be taken into account is the inadequate shop preparation of many of our vocational agriculture teachers. Nevertheless, they are all former farm boys and have a certain amount of native ability, they are acquainted with hard work, they have acquired a bachelor of science degree, and have a certain amount of intelligence, and with all of the printed information that is available today on shop subjects and the help that can be had from other sources, there is no reason for any vocational agriculture teacher not to be able to improve his own skills and knowledge, as well as teaching methods. He should be able to show marked improvement in the quality and worth-whileness of the work done in his farm mechanics classes.

One of the outstanding issues we are facing today is that of power on the farm. Quoting from U. S. D. A. Bulletin 1348: "Seventy-five years ago the average agriculture worker could care for but 12 acres of crops; now, considering the United States as a whole, he can attend to at least 34 acres.

"Since power and labor represent on the average approximately 60 percent of the total cost of producing farm products, it is only reasonable that we should give some attention to the power angle of production.

"Of the 16,000,000,000 horsepower-hours utilized annually by agriculture, animal power furnishes 61 percent, tractors 16 percent, motor trucks four

electric power five and one-half percent." This does not take into consideration the enormous amount of power-drawn and power-driven machinery.

Another issue that faces this program is how to make the farm mechanics program on the farm sufficiently attractive to offset the lure of the city machine shop, garage, or factory. There is no question but that a large percentage of our farm boys have native ability in regard to mechanics. This, plus the knowledge of how to work, which the farm boy has acquired in his years on the farm, makes him a very desirable addition to the personnel of any of these industries.

Welding, both oxy-acetylene and electric has made considerable progress in the farm mechanics program of some of our states. Indications are found that progress is being made in the addition of this line of work in several of our schools. Is this an issue we are facing? Is there any justification for it in a farm mechanics program? Assuming there is justification, how far should it be allowed to go? Can it be justified on the grounds that the future farmer should be trained and have ability to judge if those broken and worn parts of farming equipment can be economically repaired instead of buying new parts? Lack of judgment in farm machinery repair as to what cannot be economically repaired, is one matter that should be considered. This is one thing that sends a considerable percentage of the farmer's purchasing dollar into the steel and labor markets.

Are we justified in making an issue of farm mechanics project for profit? Why isn't it just as logical for a boy to have a farm mechanics project for profit as to have a crop or livestock project for profit? In this sense, acquiring farm implements, repairing and putting them into serviceable condition for the boy's own use in his farming operations, is considered as being farm mechanics for profit. Is not the accumulation of farm implements as essential to the boy's future farming operations as the accumulation of livestock, seed, feed, etc.? Is there not a chance for profit in the rebuilding of a binder, a mower, a gasoline engine, a power washing machine, a plow, or a tractor? The investment in farm machinery and equipment is a major one on many farms. Certainly such machinery and equipment is as essential to farming as livestock, seed, feed, etc.

Go into any industry where apprentices are working, and you will see that the advanced boys have begun to accumulate a few tools of their trade. Go into your local garages and machine shops and you will find that the younger men on the job who are learning the

here in the field of vocational agriculture in that we are expecting and hoping to make a better farmer of a student, yet, when he gets thru he is poorly equipped as far as the accumulation of tools and equipment is concerned? Wouldn't it be well to encourage the use of the school shop in repairing and reconditioning such pieces of farming equipment which the boy might be able to accumulate during his time in high school?

The Functions and Aims of Farm Mechanics

When one aims a gun at an object he has hopes of hitting it. At what should we aim our farm mechanics program and what should we expect to accomplish?

The first and foremost objective to be accomplished by every legitimate means, is to have each future farmer set up on his own farm a farm shop with the proper equipment that will take care of the jobs that should be taken care of on the average farm. This farm shop should be provided with an inexpensive wood or coal burning stove so that the farm mechanics activities can be carried on in the season of the year when farming activities are at their low point.

Experience has proved that nearly every man has at least a spark of mechanical ability and, if the proper housing facilities, and tools are provided on a farm, some mechanical activity will take place that should contribute to more successful farming.

It will be noted that in practically every case successful farmers carry on a certain amount of farm mechanics activities.

The second thing at which we should aim in the farm mechanics program is to closely co-ordinate this work with the boys' agriculture projects; also to use the farm shop to increase the future farmer's equipment outlay. This not only strengthens the agriculture projects but also increases the worth-whileness of the farm mechanics activities. This points out the importance of close connection between agriculture and farm mechanics. The farm equipment outlay not only includes shop hand tools, but farm accessories and farm machinery.

The third aim should be in connection with the amount and quality of farm mechanics training each future farmer should receive while in school. Each boy, while in the farm mechanics course, should have enough experiences of different types to do the major farm mechanics jobs as found on the average farm, in a workman-like manner and with a certain amount of precision.

A man is known by the company he keeps. A workman is known by the equipment he keeps. A farmer depends upon a varied assortment of equipment for his success; therefore, the fourth aim in the farm mechanics program should be to set up certain standards of tools and other farm equipment,

ficiency in this part of the farm mechanics program.

The Problem of Putting the Farm Mechanics Program into Practice

In the farm mechanics program the definite basic skills should come first and their application later.

In the acquiring of these skills, a standard of workmanship should be adhered to and this should be reasonably high. There is no excuse for a poor quality of farm mechanics work just because it happens to be given to boys who are not going into industry.

The necessary skills may be acquired and a good quality of work turned out by the selection of the right projects and by the proper supervision from the shop teacher. Projects selected for the development of skills should be worth while.

After skill is acquired, confidence in ability soon follows and the student is eager to try his skill on more difficult projects. This is the instructor's opportunity to promote some worth-while farm mechanics projects. If he has sold his farm mechanics program properly to the parents, as well as the community, and uses reliable survey methods, there should be no difficulty in securing all the projects the boys can handle properly.

System, organization, a certain amount of mechanical ability, job sheets, and reference material are aids the teacher should have in order to promote a worth-while farm mechanics program. This is assuming, of course, that he has adequate tool equipment.

In order to be successful the farm mechanics program must be sold to the community. One way to do this is to prove that the farm mechanics classes can do farm mechanics work of a high type. This necessitates incorporating in the farm mechanics program those things listed in the preceding paragraph. Not one of these things is impossible to acquire. To be put into effect, they may involve a little initiative on the part of the instructor. Job instruction sheets should be prepared by the teacher.

Sufficient, suitable reference material pertaining to shop work should be available. System and organization are two things he should be able to work out for his own department. If he is unable to do this he should consult some authority in whom he has confidence and follow advice. If he is utterly lacking in mechanical ability he is out of place in trying to develop a vocational agriculture program. He should direct his efforts to some other field. If he has a spark of mechanical ability he can fan that spark into a flame by practicing in his shop on those things at which he knows he is deficient. He can also take some additional training in some institution that will increase his mechanical ability. One way to offset a part of this training is to procure some used farm machinery, gas engines, trucks, or tractors, and together with his advanced students become proficient in their repair.

In order to encourage the farm boy to remain on the farm, farm life must be made attractive. This not only includes those phases of agriculture that makes the farm productive but also includes some home conveniences.

the kitchen, sewage disposal, etc. It includes a shop on the farm, equipped with the necessary tools, properly housed. A campaign with the judicious use of the proper survey blanks and continuous salesmanship on the part of the vocational agriculture teacher as to the advantages of a farm shop, will show results. A good farm shop makes the farm more attractive to the fa m boy.

Encouragement, salesmanship, and leadership are all necessary if you expect your future farmers to begin to accumulate a part of their farming equipment and put it in running order during their high school career. If funds are short there is a possibility of accumulating an interest in various pieces of farm equipment in exchange for labor performed on them. Many local implement dealers with repairs on their shelves would rather have the repairs in machines and receive their pay after the next harvest. Certain types of machines, when in a good state of repair, have good rental value which is a factor that might be considered in the financing of this phase of the work.

As mentioned earlier in this discussion, welding was considered as being a possible future issue in the farm mechanics program. Some very interesting results have taken place in a few farm mechanics programs where welding has been available to the boys. At least one and possibly more welding outfits have been installed in high school farm shops in the past year. This work is given to third year boys and they do some very good work. Three instructors have stated that their communities are bringing more and more pressure to bear on the school to have welding instruction given in the farm mechanics work.

The state program in one state includes welding instruction as a part of the third year farm mechanics course. Welding, both oxy-acetylene and electric, could be incorporated in the teacher-training program, but for reasons mentioned before, this is not yet a clear cut issue that we are facing and more definite knowledge should be had before it is set up as an issue.

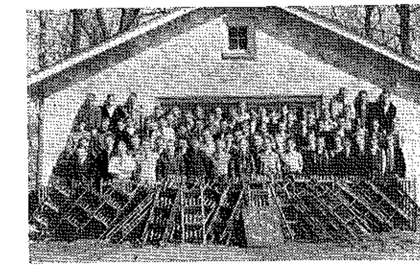
In conclusion it might be stated that on the whole very creditable work is being done in our farm mechanics shops thruout the state. Here and there are found inefficient shop teachers, but they are growing scarce. These teachers will either have to improve their own skills and mechanical ability to satisfy an increasingly critical attitude on the part of their communities, or the younger men will soon take their places.

A Shop Project

C. L. ANGERER, Assistant Supervisor,
Jefferson City, Missouri

IN a new farm shop, with the largest enrollment of vocational agriculture students in the state of Missouri, solving a problem of national importance is the unique combination that Darrell M. Young has with his 74 boys.

The boys, in addition to their regular farm shop work, each constructed a case as shown in the picture to hold their books, bulletins, magazines, and as a



the boys own room, and was finished in the color and type of finish to harmonize with the furniture in each room. These cases were constructed at a total cost of 30 cents. This included wood, screws, and finish. The making of these bookcases is now a regular job of each freshman vocational agriculture boy. Therefore, every Future Farmer from Pierce City Missouri Chapter will have a place to keep his project and farm records in the future.

This is the first year in the new shop building of limestone quarried at home. The shop is 26′ x 50′; equipped with nece sary hand tools and some power tools to do all kinds of general shop work that might need to be done on any of the boys home farms. The shop course carries jobs that make it possible for the boys to perfect skills in woodwork, hot and cold metal, harness, rope, leather, sheet metal, concrete, wood finishing, lettering, drawing, and tool fitting.

The shop is wired for electricity, piped for gas and hot and cold water. The Future Farmer chapter put an extension speaker in the building from their own classroom radio.

Soil Conservation

(Continued from page 47)

pally managerial in nature. This functional type of instruction constitutes a real challenge to instructors in vocational agriculture if they are to have objective evidences of the effectiveness of their instructional effort.

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Footnotes

1. The authors are appreciative of evaluations and suggestions from C. B. Campbell, of River Falls, Wisconsin, and Tom Madden, of New Richmond, Wisconsin, who served with M. A. Doser on a state committee in 1936.
2. Author unknown.
3. Data to corroborate these statements are available in various governments publication and from other sources.
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Studies and Investigations

E. C. MAGILL E. R. ALEXANDER

Some Causes for Dropped Departments of Vocational Agriculture in Texas

J. C. SOWERS, Teacher,
Woodlake, Texas

WHY do so many schools drop their departments of vocational agriculture? Do the reasons vary as widely as the schools that drop their departments or are there a few frequently recurring causes responsible for most of the departments dropped? It is possible that an analysis of such causes might lead to recommendations that would greatly decrease the number of departments lost?

It was with these thoughts that the writer undertook to determine some of the causes for dropped departments of vocational agriculture in Texas for a period inclusive of the years 1920-21 to 1932-33, during which time 153 departments of vocational agriculture were dropped in this state and 207 departments retained.

As a means of establishing a basis for this study, a letter was sent to the superintendents in all schools that had dropped departments, requesting them to give the reasons for discontinuing such departments.

The reasons as given by these superintendents were grouped under 18 headings, a total of 169 reasons being given by the 87 superintendents who replied. Examination of the frequencies under these headings revealed that eight of the reasons recurred to make up 72 percent of the total of all reasons given. It was further found that these eight reasons could be divided into two groups, relating to finances and efficiency of teachers, as follows:

GROUP I

Reason Given	No. Times Given
Lack of school finances	25
Per-capita cost too high	16
Enrollment too small	11
Salary of teacher too high	9
Total	61

GROUP II

Reason Given	No. Times Given
Failure of teacher to sell work	23
Inefficiency of teacher	19
Lack of co-operation of the teacher	10
Course not popular with the students	9
Total	61

All other reasons were scattering, and none of them followed a definite trend. The frequency with which the eight above named reasons recurred led to two generalizations: (1) the cost of instruction in vocational agriculture is relatively too high and (2) the efficiency of the teachers is too low. It was noted that in no case did the superintendent discredit the value of vocational agriculture as a course, except to the extent that the teacher failed to do some part of his school finances" and "failure of teacher to sell his work" were given for the years 1930-31 thru 1932-33 indicates that the depression may have influenced the dropping of departments during this period.

Average Tenure of Teachers

The foregoing reasons as given by superintendents thus furnished a basis for the study of the causes for dropped departments of vocational agriculture. The next step was to secure such data as were available from various sources as a check upon the reliability of the reasons given by superintendents. Data covering tenure of teachers, classification of schools, and enrollment in affiliated schools were available for the entire period covered by the study.

Average tenures of teachers during the period of the study were:

In schools with retained departments.....2.85 years
In schools with dropped departments.....1.94 "
Average individual tenure of all teachers who lost departments.....2.27 "

The average tenure of all vocational teachers in schools retaining departments is thus shown to be decidedly higher than that in schools losing departments. The average individual tenure of all teachers who lost departments is also less than the average tenure of teachers who retained their departments. Many of the teachers who lost departments in the early part of the period covered by the study, particularly in 1920-21, were found to have increased their tenure in the latter years of the study.

Relation to Classification and Enrollment

Only 52 percent of the dropped departments were in four year affiliated high schools, while 80 percent of the retained departments were in such schools. Furthermore, the average enrollment in those affiliated schools that did drop departments was only 138 pupils, while the average enrollment in those affiliated schools retaining departments was 173. The average enrollment in unaffiliated schools dropping departments was undoubtedly still lower than that in the affiliated schools from which departments were dropped. These figures show definitely that the greater number of the departments dropped was in the non-affiliated and the smaller affiliated schools.

Other Factors Considered

Other data considered included: (1) percentage of time devoted by teacher to the teaching of vocational agriculture, (2) average salaries of teachers of vocational agriculture, (3) percentage of departments with local F.F.A. chapters, capita cost of instruction in vocational agriculture. These data, which were available only for the years 1929-30 thru 1932-33, are discussed below in the order named.

(1) *Percentage of Time Devoted to Vocational Agriculture.* Only 59 percent of the schools dropping departments (1929-30 thru 1932-33) had teachers devoting all their time to vocational agriculture, while 80 percent of the schools establishing and retaining departments during the same period employed teachers devoting full time to vocational agriculture.

(2) *Average Salaries of Teachers of Vocational Agriculture.* Nine superintendents stated that the agriculture teacher's salary was out of proportion to that of other teachers. Altho data on salaries of other high school teachers were not available, it was found that the average salary of teachers of vocational agriculture ($2,160) in schools retaining departments during the years 1929-30 thru 1932-33 was higher than the average salary of teachers ($2,067) in schools dropping departments during this time.

(3) *Percentage of Departments With Local F.F.A. Chapters.* Only 46 percent of the dropped departments during 1929-30 thru 1932-33 had F.F.A. chapters, while 98 percent of the established and retained chapters had such chapters.

(4) *Average Enrollment in Departments.* Average enrollment in vocational agriculture classes in schools dropping departments from 1929-30 thru 1932-33 was only 23, while the average enrollment in schools retaining departments was 34.

(5) *Per-capita Cost of Instruction.* The average per-capita cost of instruction in vocational agriculture ($94.85) for schools dropping departments during 1929-30 thru 1932-33 was one-third higher than the average per-capita cost ($63.86) in schools retaining departments during this period. These figures do not in any way represent the true per-capita cost of instruction because no consideration is given to the enrollment in evening and part-time classes. Furthermore, in arriving at a true per-capita cost of instruction, it would be necessary to consider the length of periods devoted to vocational agriculture and also instruction given thru supervision of home practice work.

Superintendents from 16 schools gave the reason that the per-capita cost of instruction was too high. This is interpreted to mean that the cost of vocational agriculture is too high as compared with other school subjects. Further investigation is necessary to determine the true per-capita cost of instruction in vocational agriculture as compared with that of other subjects taught in high schools.

Conclusions and Recommendations

ture, as given by superintendents, points to three general conclusions: (1) the teachers failed to do their work efficiently, (2) the schools were unable to finance the work in vocational agriculture, and (3) the student enrollment was too small.

In the light of these findings, the following recommendations seem in order: (1) that the state supervisors set up some satisfactory standard for selecting communities for the establishment of new departments of vocational agriculture, and (2) that the work of the teachers of vocational agriculture be more carefully supervised.

Starting a New Department

JOHN C. BURRINGTON, Teacher,
Stockbridge, Massachusetts

Nine Factors for Success

1. A potential enrollment of at least 20 students interested in agriculture.
2. A promoter to talk up the course and sell it to influential people.
3. Proper attitude in community.
4. Housing accommodations with a chance for growth.
5. Appropriations sufficient to get satisfactory equipment and pay large enough salary to hold a man's interest.
6. Classroom, library, laboratory, and shop facilities.
7. A teacher to fit the situation.
8. Proper working relationships with agricultural and community leaders.
9. Functioning program of activities both in vocational agriculture classes and F. F. A.

The potential enrollment may be determined by a personal canvass of students at present in the high school and eighth grade. The students living on farms should be interviewed personally with the purpose of finding out their interests and aptitudes. Out-of-town students, in cases where you are to teach in a town high school, may be located by getting names and addresses from superintendents of schools, 4-H Club leaders, and interested farmers. Some towns depend upon tuitions for a substantial school revenue. In such cases we cannot neglect possible tuition students. Some teachers use a farm youth survey to locate students. I have had no success with this method. There have been few replies and those have yielded nothing. I find that the best success comes from personal interviews repeated two or three times prior to the opening of school. All of these methods are equally applicable to finding out potential enrollment, to maintaining enrollment in established departments, and to increasing the enrollment where needed.

One of the greatest factors in getting a department established in Stockbridge has been the unflagging enthusiasm of our superintendent of schools, Donovan S. Jones. On coming here as superintendent some two years ago, he immediately saw the need for such a course as vocational agriculture in the high school curriculum. He had been a teacher of agriculture for many

the Baby Town Meeting. We are not all fortunate enough to have such a superintendent to promote a department, but much can be done by simply explaining the work to members of school boards, selectmen, or other community leaders.

The attitude of the community toward a course in agriculture is usually determined by what the course does. In that sense we can manufacture our own community attitude. It is well to make some efforts at community service, to be very careful about conduct of students on trips, in shop and classroom, and to do the best quality of work that you know how to do. You say old stuff! Well, I'm a young fellow and I've made plenty of mistakes and I know the effects. We have worked on community attitude by assisting in Grange fair; speaking at Grange meetings and meetings of horticultural society; attending farm bureau meetings; pruning 300 trees in town; and assisting in conducting tent caterpillar egg-gathering contest. These are some of the activities of the boys and teacher in day classes. We offered evening shop work and an adult class in gardening. The interest in gardening was very good for the first year of the course in a new department. Average attendance 10 in 10 meetings.

Suitable housing facilities are necessary to convenience and to state board approval. We have a classroom in the basement 22′ x 30′ with a battery of 5 large windows on the east side. This room has running water, a large sink, and three blackboards. The shop room is not conveniently located for it is two miles from the high school building and is in a district school. However, the shop is located directly across the street from the garage where auto mechanics is taught. This is ideal, for the shop class can be divided and part can work at general shop work while another group is working at auto repairing. The farm shop is 35′ x 40′, not quite large enough, but quite comfortable. The garage is 36′ x 100′ and offers an opportunity for boys to work under commercial conditions. Of course, the shop room should be equipped with electricity, running water, and room for storage of lumber. We lack the running water. A vise for every boy in the largest class in woodworking is minimum equipment. Therefore the shop room must be large enough to accommodate the necessary benches and still leave an open space for work on large projects. We have equipped the shop with an 8′ x 8′ garage door to admit machinery. I believe that a healthy department of vocational agriculture will grow for a period of years after its establishment. Therefore, it is necessary to have a chance to accommodate larger numbers than come into the course during the first year. The shortage of room will be felt most acutely in the farm shop.

The appropriation for the first year, or two years, of a department should cover salaries and $1,000 to $1,500 for equipment and supplies. The amount for equipment and materials can be reduced when the department becomes fully equipped. Many departments get along well on $300–$500 annually over the amount for salaries. The salary must be equal to the average for the state and that of surrounding states or undone. Here is the list of expenses for the first year for equipment and supplies in the Stockbridge Department.

Office supplies and printing	$ 60.56
Books, specimens, models, etc.	168.48
School, room shop and farm supplies	395.74
Library subscription, papers	7.85
Land, buildings, furnishings	36.35
Alterations and Improvements	119.75
New furniture	208.67
New shop and laboratory equipment	401.25
Freight, express, cartage	45.45
	$1,444.10

In shop work the most beneficial expenditure of money is on hand tools, for boys will not have many power tools at home. We have a hammer, saw, and smoothing plane for each boy. There is a vise for each boy. L. M. Roehl of Cornell has published a very staisfactory list of tools in "Shop Management in Rural High Schools."

The co-operative attitude of key individuals in the community helps greatly in attaining success. We have established pleasant working relationships with leaders in the Grange, county extension service, local fair, and with many farmers and estate superintendents. I think the most effective means of attaining and maintaining these relationships are personal interviews and work done by the boys on these men's places.

The teacher should be fitted for this job. His experience and training are constantly in demand and should be in line with the needs of the community. In addition to experience and training the man must have tact and energy. All agriculture teachers know the requirements so I will not say more.

As an aid in publicity and to systematize the program of a department, a good functioning program of activities, both for vocational agriculture and F. F. A., is very effective. This can be laid out on a weekly or monthly basis but should be checked with the calendar to get best results.

Class Council

(Continued from page 51)

The recreational program consisted of two parties to which girl friends were invited. Wrestling matches and basketball practice constituted the athletic part of the program. Two educational trips were taken.

As a result of the trip to Ames the members of the part-time class became the nucleus of the "Mitchell County Rural Young Peoples' Organization," which now has a membership of 60 young men and women holding regular monthly meetings. This organization is being sponsored jointly by the county agent and the teacher of agriculture.

Other results and values of the class that might be mentioned are an increased interest on the part of the boys in better farming, strengthening the position of the agricultural department in the community, providing worthwhile social and recreational activities

Future Farmers of America

L. R. HUMPHREYS

The Future Farmer Scrapbook Contest

L. L. PRICE, Teacher,
Ida, Louisiana

ALL future farmer chapters in the state of Louisiana keep a chapter scrapbook each year, which is entered in the state scrapbook contest. The state is divided into six F. F. A. districts. Each district holds a contest. The winning book is sent to the state office and entered in the state contest.

Chapter presidents have asked me the question, "What is a scrapbook?" Many chapters have not felt sure as to just what a scrapbook is, how is it prepared, and what it may contain. I have prepared a score card to be used in judging the books in district one of our state and an explanation of the card. Chapters in this district follow this score card each year in preparing material for the "scrapbook"; consequently all chapters will have prepared their books on a uniform basis.

What Is a Scrapbook?

The scrapbook is an organized bound volume of all material collected by the chapter during the year, which pertains either directly or indirectly to the activities of the chapter. It should be classified and arranged according to natural division. The contents might include the following: a title page inside the book cover, the table of contents, chapter organization, officers, members, newspaper clippings of chapter activities, our educators, other agricultural news clippings, poetry, banquets and other social activities of the chapter, miscellaneous social activities, fairs (ribbons, pictures, etc. for each fair in which chapter participated), chapter newsletters, state convention activities, state camp activities, judging contests, community activities of chapter, letters and invitations received by the chapter, programs given by chapter, national F. F. A. programs, other contests entered by chapter, scenes of interest to chapter members, and pictures of good livestock of different types according to those adapted to the locality.

Content of Scrapbook

The content of the scrapbook will vary from year to year with the activities of the chapter. Therefore, the organization cannot be laid down as a set rule for all cases. The book is not intended for the purpose of collecting a lot of foreign material which has no relation to the activities of the chapter, but a living summary of the chapter's activities.

Each chapter member should be held responsible for collecting and bringing to the chapter any item of interest to the part of the year, and what material is brought in can be incorporated as collected. Or the items can be held in a file and all incorporated at one time. Preparing a scrapbook should be a pleasure and a joy to the chapter rather than a burden. Chapter officers and advisers should not wait until late in the year to plan for a scrapbook but should make kodak pictures of the activities of the chapter as they occur. In this way all phases of the chapter's work can be represented.

Following is the score card and an explanation of it:

CALL FOR CONVENTION

To Members of the Future Farmers of America:

As national president of the Future Farmers of America, I am issuing a call for the Tenth National Convention to be held at the Municipal Auditorium in Kansas City, Missouri, October 17 to 22, 1937. Officers of chartered State, Territorial and Insular Associations are requested to make immediate plans for representation. Each association, in good standing with the national organization, is entitled to two official delegates.

For the past two years, plans have also been underway to appropriately observe this particular national F. F. A. gathering with a "Tenth Convention Celebration." Numerous special events are to be included. The success and effectiveness of this planning will depend largely on whole-hearted and wide-spread participation on the part of associations and chapters thereof. A cordial invitation to be present is extended to all F. F. A. members, their parents, and friends.

May we have full attendance at this coming convention to celebrate properly 10 years of F. F. A. progress and in order to lay plans for still greater years of accomplishment ahead.

JOE H. BLACK,
President

Sheridan, Wyoming
August 1, 1937

Score Card

Item	Score
I. CONTENT:	
a. Appropriateness	50
b. Quality of materials	50
c. Scope or amount	50
d. Variety of content	50
e. Value of book to chapter	50
Total	250
II. TOPOGRAPHY:	
a. Organization	50
b. Arrangement	40
c. Originality	40
d. Neatness	40
Total	170
III. GENERAL APPEARANCE:	
a. Appeal	40
b. Holding interest	40
Total	80
GRAND TOTAL	500

EXPLANATION OF SCORE CARD

I. CONTENT:

a. Appropriateness:
The material to be incorporated in the scrapbook should be of interest to the chapter members. It must have some relation to the chapter's program of work either directly or indirectly. For example, pictures of the boys, of their supervised farm practice, of their homes, surroundings, town, school, people who have aided them, co-operative projects, social work done by chapter, rural or community beautification, newspaper clippings about their work or other agricultural or Future Farmer work, community activities in which members are interested, and miscellaneous collections which carry a lesson for the members.

b. Quality of materials:
All material should possess value and merit recognition. It should show improved practices. For example, a nicely printed banquet program would be more attractive than one typed by hand.

c. Scope or amount:
The book to be most valuable must cover all phases of F. F. A. work. A large collection of material should be made on each item to show a comparison of methods. A small book with little in it could be made attractive from the standpoint of neatness, but what would be its value?

d. Variety of content:
Everything in which the chapter has participated should be represented in the form of either pictures, newspaper stories, ribbons, programs, or entertainment paraphernalia, etc. Poetry and humor are not to be overlooked.

e. Value of book to chapter:
It must be evident that the chapter members as a group have attained some benefit from their effort in collecting, assembling, and organizing the material in the book. The material should serve as a permanent record of the chapter's accomplishments for the year, to be filed with the secretary's records, there to be available for the chapter's reference in the future. Items therein contained should be of such nature that the members can use them for educational purposes in the future.

II. TOPOGRAPHY:

a. Organization:
All material must be classified in some definite order, with a table of contents and proper labels for each division. For example, a newspaper section for all local F. F. A. news, one for other agricultural news, one for kodak pictures of members and their practices, one for entertainments, one for fairs, one for contests, and various other sections according to the material available for the chapter in question.

b. Arrangement:
Within each section of the classification is the material of that division, which should be displayed in relative order. The material should be properly balanced on the sheet on which it is pasted. There should not be any crowding of material. Long items should be set the long way of the book. Short items should be set the short way of the book.

c. Originality:
Original ideas deserve merit, especially when they show improvement. However, originality does not mean all and should be considered only when it conforms to the rules of the contest, yet shows advancement in the same.

d. Neatness:
The quality and quantity of the material doesn't make the proper appeal if it isn't presented in a neat fashion. One should refrain from handling a book with soiled hands, crimping leaves, blotting paste or ink on the sheets.

III. GENERAL APPEARANCE:

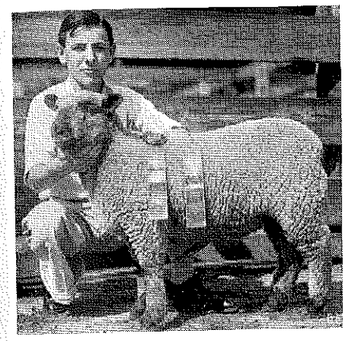
a. Appeal:
The book should make one feel as if the maker had accomplished a volume of activities which were recorded therein in a most interesting manner. One should also have created within himself a desire to see further what that chapter is doing and what it stands for.

b. Holding interest:
The material contained within the book should be of the type and quality as to hold one's interest even after he had seen it before. A valuable scrapbook is worth looking thru

Lamb Carcass Contest

C. L. ANGERER, Assistant Supervisor,
Jefferson City, Missouri

A SPECIAL feature of the National Stockyards Vocational Agriculture Fat Lamb Show which was held at the National Stockyards, June 3 and 4, for students of vocational agriculture in Illinois, Arkansas, and Missouri, was the LAMB CARCASS CONTEST. The benefit of such a contest to Future Farmers is that it gives them a report on the dressing percentage of the lambs which they sold to the packers. The average dressing percentage of lambs on the market is 50% and 52% and it was interesting to find that a majority of the lambs exhibited by these boys dressed from 52.6% to 61.54%.



Champion Lamb
Exhibited by J. C. Renter, Illinois

The contest was divided into six sections. Schools exhibiting 10 lambs or less; the department at Freeburg, Illinois, won first place in this division. The average dressing percentage of the lambs was 61.54. In the class of 11 to 20 lambs; the department of vocational agriculture at Montgomery City, Missouri, W. H. Remmert, Instructor, won first with an average dressing percentage of 54. In the class of 21 to 30 lambs, the vocational agriculture department at Alton, Missouri, Cleo Taylor, Instructor, won the blue ribbon with an average dressing percentage of the lambs being 54. In the class of 31 to 40 lambs, the department of vocational agriculture at Green City, Missouri, R. M. Luyster, Instructor, won the blue ribbon, the dressing percentage of the lambs was 54.5. In the class of 41 to 50 lambs, the Stet, Missouri High School, Justin Doak, Instructor, won the blue ribbon because the lambs exhib ted by the boys of this school averaged 54.6. In the class of over 50 lambs the Troy, Missouri, High School, Glen Woodruff, Instructor, won the blue ribbon, the reserve champion lamb dressed 55% and the remainder, 54.5%.

Chapter Co-operates for Profit

H. R. LOVE, Instructor,
Watertown, Tennessee

THE Watertown, Tennessee, Chapter has conducted a co-operative project for the past several years, which has proved very valuable in many ways to the individual members as well as to the chapter. We have been greatly handicapped due to the fact that we were tenants and subject to the terms of the rental contract, resulting in a short tenure and the loss of the farm management phase of the project.

With such conditions existing the idea of land ownership was brought before the chapter at our Father and Son Banquet and met with such hearty approval of those present that $120 was subscribed by the fathers and the business men. Three trustees were appointed to work with a committee from the chapter to select and purchase a plot of land. A field of three and one-half acres of land was selected and purchased with the unpaid balance handled thru one of the local banks.

The entire field was planted in certified D. & P. L. No. 11 cotton. A total of 2,765 pounds of seed cotton was harvested and sold for $162.71 with a labor income of $109.10. With the funds on hand the chapter made a payment of $69.18 on the land and set aside $75.00 as their budget for the next year.

The feeling and spirit of ownership has stimulated interest in the chapter project as is shown by the fact that every member of the chapter put in the minimum number of hours work requested of him and a higher percent of the boys leaving school are retaining membership in the chapter. This project has afforded the boys a good opportunity to put into practice the various subjects studied in class. They have added lime to the land and have built terraces where they are needed as soil improvement practices, creating considerable interest among the boys and is being closely watched by a number of farmers in the community.

While studying the job of feeding hogs for market, the boys decided to feed out some hogs for the April market. The officers of the chapter secured a loan thru a local bank and purchased 18 hogs weighing 90 pounds each. The class of 20 boys rented a barn and divided it into three pens. In each pen they placed six hogs, a self-feeder and a water trough. All the hogs were vaccinated and treated for worms before being put on feed.

The class was divided into three groups and a leader selected for each group. Each group is responsible for one pen. All the hogs were fed corn in the self feeders with a supplement. One group is using a supplement worked out in class and the other two groups are using commercial feeds, thus each group is using a different supplement. Rate of gains made and cost of gain will be studied along with other factors.

In addition to learning the steps in dry-lot feeding, the boys hope to earn money with which to send delegates to the National F. F. A. Convention in Kansas City this fall.

A Co-operative Landowner Chapter Project

C. F. BENNETT, Adviser,
Dyer, Tennessee

THE Dyer, Tennessee, F. F. A. Chapter has conducted a co-operative project for the past several years, which has proved very valuable in many ways to the individual members as well as to the chapter. We have been greatly handicapped due to the fact that we were tenants and subject to the terms of the rental contract, resulting in a short tenure and the loss of the farm management phase of the project.

With such conditions existing the idea of land ownership was brought before the chapter at our Father and Son Banquet and met with such hearty approval of those present that $120 was subscribed by the fathers and the business men. Three trustees were appointed to work with a committee from the chapter to select and purchase a plot of land. A field of three and one-half acres of land was selected and purchased with the unpaid balance handled thru one of the local banks.

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The feeling and spirit of ownership has stimulated interest in the chapter project as is shown by the fact that every member of the chapter put in the minimum number of hours work requested of him and a higher percent of the boys leaving school are retaining membership in the chapter. This project has afforded the boys a good opportunity to put into practice the various subjects studied in class. They have added lime to the land and have built terraces where they are needed as soil improvement practices, listening to, the members talk about their project.

The subject of the tenant farmer in the United States is one that we hear discussed in Congress, over the radio, and even read about in the newspapers. Much has been suggested that should be done, but comparatively little has been accomplished so far as a wholesale elimination of this evil is concerned. Perhaps we all realize that this is a task that will require time and much training along the line of pride in ownership as well as developing the ability to operate as a landowner. The co-operative chapter project furnishes one of the best classroom or laboratory devices that the teacher has access to for developing these qualities in the Future Farmer boys. The ownership of the proceeds of the project without the ownership of the land will not be complete.

In a Quandary

(Continued from page 43)

average semester hours required for this degree being around 30, from 6 to 10 hours should be allowed for non-residence credit.

At the risk of being tiresome we will give briefly the setup as employed by Alabama for the past 18 years:

We hold an annual summer conference of three weeks for teachers of vocational agriculture. Both subject matter and professional courses are offered. Teachers in attendance can secure three hours residence credit by taking two subjects. In addition they may attend an hour and a half course for three weeks which sets up a "field problem" or off-campus problem. This he may complete, under supervision, when he goes back on his job. If this problem is completed within the year he gets two hours non-residence credit for it. Thus, in eight years he can graduate by taking 24 hours residence credit (three hours each summer) and in addition taking six field problems (each carrying two hours of non-residence credit.)

Of the other 12 southern states which responded to the questionnaire, eight have devised plans for securing off-campus or extension credit for their teachers of vocational agriculture. Teacher-trainers in agriculture at the Land Grant Colleges of the South who expressed themselves on the matter, stated that they considered this work of equal or more value to their teachers than that secured by residence credit. Probably 1,500 teachers in the south would answer likewise.

As the number of agricultural teachers increase this problem is going to become more aggravated. We are wondering what the colleges which train these men, in this and other regions, are going to try to do about the matter. There are 1,000 southern teachers of vocational agriculture in a quandary.—S. L. Chestnutt, Auburn, Alabama.

Youth is the season of hope, enterprise, and energy, to a nation as well as an individual.—W. R. Williams

To waken interest and kindle enthusiasm is the sure way to teach easily and successfully.—Tryon Edwards.

Let our teaching be full of ideas.

Farm Census Furnishes Basis New School Projects

(Continued from page 45)

3. A series of state summaries, containing about the same information for the state as contained in the county series.

In addition to the free releases, there are separate state bulletins, containing detailed statistics for all counties, secured at the 1935 U. S. Census of Agriculture. (See Figure III.) These bulletins range in price from 5c to 15c each, depending upon the size of the state and the number of counties in the state. It is necessary to purchase these bulletins from the Superintendent of Documents, Government Printing Office, Washington, D. C., as the Census supply has been practically exhausted. Any teacher taking up this program will probably find it advisable to have copies of the state bulletins. If purchase is not practicable, arrangements with libraries can usually be made to purchase desired bulletins and have them available for general use. Most libraries have funds set aside to buy books requested. In addition to the releases mentioned, the Bureau has reprinted a few special magazine articles describing Census work, which show how the Census statistics are connected with the everyday life of the people of the United States. A few of these reprints may be had upon request to the Census by mentioning that the request originated from this article in the *Agricultural Education*.[1]

	Date of Issue
1 Extension Service Review	September, 1936
Domestic Commerce	December 20, 1936
Domestic Commerce	December 30, 1936
News for Farmer Co-operatives	December, 1936

This story has been devoted particularly to the mapping and recording of farm census statistics. The range of such a project might be greatly extended to cover the study of tenancy, rural life, farm income, crop insurance, etc. In the intensive study of such problems, every teacher of sociology, economics, rural finance, current history, civics, etc. will find the Census minor civil division data helpful.

The teachers of vocational agriculture have been using the data so widely that it has not been thought necessary to describe its use for their purposes, such as farm management, agricultural economics, crop forecasting, or in the statistical courses as basic material for graphs, charts, diagrams, etc. To the teachers who have not carried on this map work and are interested in it, may we suggest that they write the Census for sample dot maps or that they purchase from the Superintendent of Documents, Government Printing Office, Washington, D. C., the publications entitled "A Graphic Summary of American Agriculture Based Largely on the Census"[2] and "A Graphic Summary of Farm Tenure."[3]

Teachers who desire to use this plan should go carefully over every detail. In writing for any of the material he should attend to the needs for the entire class in order to avoid unnecessary correspondence and to be sure the proper items are secured.

2 Compiled by Dr. O. E. Baker and issued by the Department of Agriculture, May, 1931, Publication No. 105

3 Compiled by H. A. Turner and issued by the Department of Agriculture (Based Largely on the Census of 1930 and 1935), Publication No. 261

For convenience, we are listing the material available and where it may be obtained:

From—BUREAU OF THE CENSUS, DEPARTMENT OF COMMERCE, WASHINGTON, D. C.

	Cost
Heading Facsimile Tabulation Sheet	Free
Duplicate Photostats—1935 Minor Civil Division Figures—County—6 Sheets (35c per sheet)	$2.10
Sample Farm Census Schedule—1935	Free
Instructions (Reverse of Census Schedule)	Free
State Release	Free
County Release	Free
Commodity Releases	Free
Sample Dot Maps	Free
Reprints of Magazine Articles on the Census	Free

From—SUPERINTENDENT OF DOCUMENTS, GOVERNMENT PRINTING OFFICE, WASHINGTON, D. C.

	Cost
Minor Civil Division Map—Each State	$ .10
State Bulletins—1935 Census of Agriculture, First Series—Each	.05
Except Georgia, Kentucky, Texas	.10
State Bulletins—1935 Census of Agriculture, Second Series—States	.05–.15
Volume I—First Series Bulletins Assembled	2.50
Volume II—Second Series Bulletins Assembled	2.50
Graphic Summary of American Agriculture Based Largely on the Census—by Dr. O. E. Baker, Publication No. 105—U. S. Department of Agriculture	.60
Graphic Summary of Farm Tenure—By H. A. Turner, Based Largely on the Census of 1930 and 1935, Publication No. 261—U. S. Department of Agriculture	.10

From—THE LAND UTILISATION SURVEY OF BRITAIN

	Cost
The Land Utilisation of Britain—1934. An Outline Description of the First Twelve One-Inch Maps—By L. Dudley Stamp, B. A., D. Sc., Director of the Survey and E. C. Willatts, B. Sc. (Econ.), Organising Secretary	1 shilling—net
Land Utilisation Map of England & Wales. Based on the "One-Inch" Ordnance Map. Sheet 87. Ipswich. Printed and Published for the Land Utilization Survey of Great Britain by the Ordnance Survey, Southampton	5 shillings—net
Land Utilisation Map of England & Wales. Based on the "One-Inch" Ordnance Map. Sheet 12. Keswick and Ambleside. Printed by the Ordnance Survey, Southampton, Published by the Land Utilisation Survey of Britain	5 shillings—net

Much of the material may be obtained without cost, but a large portion of the statistics are published in pamphlets and volumes which must be purchased from the Superintendent of Documents, Government Printing Office, Washington, D. C.

In conclusion, a very cordial invitation is extended to make use of the Census as a service bureau. Not only does the Census obtain information on agriculture, but it has divisions which make surveys of population, manufactures, business, vital statistics, financial statistics of cities and states, religious bodies, and special subjects.

Corrections

In the July, 1937, issue on page four, J. A. Linke was the writer of the article on "Which Way Vocational Agriculture?" and on page six Mr. L. F. Lee, who wrote the article on "Teaching Landscape Gardening," is located at

VOCATIONAL AGRICULTURE DIRECTORY

John W. Studebaker*—U. S. Commissioner of Education
J. C. Wright*—Ass't Commissioner for Vocational Education
J. A. Linke*—Chief, Agricultural Education Service

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W. A. Ross*—Subject Matter
R. W. Gregory*—Part-time and Evening
W. N. Elam*—Special Groups

*Office of Education, Washington, D. C.

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Arizona	A. G. Snyder, Phoenix	L. D. Klemmedson, Tuscon
Arkansas	E. B. Matthew, Little Rock	K. L. Holloway, Fayetteville C. S. Woodard, Pine Bluff (c)
California	J. A. McPhee, San Luis Obispo	S. S. Sutherland, Davis
Colorado	L. R. Davies, Denver	G. A. Schmidt, Fort Collins
Connecticut	R. L. Hahn, Hartford	C. B. Gentry, Storrs
Delaware	W. L. Mowlds, Dover	R. W. Heim, Newark
Florida	J. F. Williams, Jr., Tallahassee	E. W. Garris, Gainesville R. L. Reynolds, Tallahassee (c)
Georgia	L. M. Sheffer, Athens	J. T. Wheeler, Athens F. M. Staley, Industrial College (c)
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Idaho	Wm. Kerr, Boise	H. E. Lattig, Moscow
Illinois	J. E. Hill, Springfield	A. W. Nolan, Urbana
Indiana	Z. M. Smith, Indianapolis	S. S. Cromer, La Fayette
Iowa	G. F. Ekstrom, Des Moines	Barton Morgan, Ames
Kansas	L. B. Pollom, Topeka	C. V. Williams, Manhattan
Kentucky	R. H. Woods, Frankfort	Carsie Hammonds, Lexington E. M. Norris, Frankfort (c)
Louisiana	S. M. Jackson, Baton Rouge	Roy L. Davenport, Baton Rouge Cornelius King, Scotlandville (c)
Maine	H. S. Hill, Orono	H. S. Hill, Orono
Maryland	H. F. Cotterman, College Park	H. F. Cotterman, College Park
Massachusetts	R. W. Stimson, Boston	F. E. Heald, Amherst
Michigan	E. E. Gallup, Lansing	H. M. Byram, East Lansing
Minnesota	Leo Knuti, St. Paul	A. M. Field, St. Paul
Mississippi	F. J. Hubbard, Jackson	V. G. Martin, State College P. S. Bowles, Alcorn (c)
Missouri	J. L. Perrin, Jefferson City	Sherman Dickinson, Columbia
Montana	Herschel Hurd, Helena	R. H. Palmer, Bozeman
Nebraska	L. D. Clements, Lincoln	H. E. Bradford, Lincoln
Nevada	R. B. Jeppson, Carson City	R. B. Jeppson, Carson City
New Hampshire	E. H. Little, Concord	E. H. Little, Concord
New Jersey	H. O. Sampson, New Brunswick	H. O. Sampson, New Brunswick
New Mexico	Frank Wimberly, State College	H. M. Gardner, State College
New York	A. K. Getman, Albany	P. J. Kruse, Ithaca
North Carolina	Roy H. Thomas, Raleigh	L. E. Cook, Raleigh S. B. Simmons, Greensboro (c)
North Dakota	E. H. Jones, Fargo	E. H. Jones, Fargo
Ohio	R. A. Howard, Columbus	W. F. Stewart, Columbus
Oklahoma	J. B. Perky, Stillwater	D. C. McIntosh, Stillwater D. C. Jones, Langston (c)
Oregon	E. R. Cooley, Salem	H. H. Gibson, Corvallis
Pennsylvania	H. C. Fetterolf, Harrisburg	H. S. Brunner, State College
Puerto Rico	Antonio Texidor, San Juan	Nicolas Mendez, Mayaguez
Rhode Island	G. H. Baldwin, Providence	G. H. Baldwin, Providence
South Carolina	Verd Peterson, Columbia	W. G. Crandall, Clemson College J. P. Burgess, Orangeburg (c)
South Dakota	H. E. Urton, Pierre	R. R. Bentley, Brookings
Tennessee	G. E. Freeman, Nashville	N. E. Fitzgerald, Knoxville W. S. Davis, Nashville (c)
Texas	P. G. Haines, Austin	E. R. Alexander, College Station S. C. Wilson, Huntsville T. A. White, Kingsville Ray Chappelle, Lubbock C. H. Banks, Prairie View (c)
Utah	Mark Nichols, Salt Lake City	L. R. Humpherys, Logan
Vermont	Kenneth Sheldon, Burlington	Kenneth Sheldon, Burlington
Virginia	W. S. Newman, Richmond	E. C. Magill, Blacksburg G. W. Owens, Petersburg (c)
Washington	J. A. Guitteau, Olympia	Everett Webb, Pullman
West Virginia	John M. Lowe	Roy A. Olney, Morgantown† D. W. Parsons, Morgantown†
Wisconsin	L. M. Sasman, Madison	J. A. James, Madison
Wyoming	Sam Hitchcock, Cheyenne	S. H. Dadisman Laramie