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# THE AGRICULTURAL EDUCATION MAGAZINE



Community Swimming Pool and Farm Shop Building, Sponsored by  
The Vocational Pupils at Bruno, Arkansas

*Success in life is a matter not so much of talent or opportunity as of concentration and perseverance.—C.W. Wendte*

# The Agricultural Education Magazine

A monthly magazine for teachers of agriculture. Managed by an editorial board chosen by the Agricultural Section of the American Vocational Association and published at cost by the Meredith Publishing Company at Des Moines, Iowa.

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# Editorial Comment

## Before School Opens

THE George-Deen Act, effective July 1, 1937, authorizes on a permanent basis increased appropriations to the states and territories for vocational education, including vocational agriculture. Under provisions of this act there will be established many new departments of vocational agriculture under the direction of instructors who will be charged with the responsibility of organizing and developing specific programs of work. Many of the departments to be established will be located in areas not heretofore served by a program of vocational agriculture. If these departments are to be effective and permanent, it is essential that a functioning program be set up the first year. The success or failure of the new departments will depend very largely upon the ability of the instructor in charge to make himself and his program of work a vital unit in the state and national program of service to agriculture. It is therefore imperative that the instructor who is placed in a new department give careful thought and attention to the procedure of organization and methods of discharging his responsibilities.

It was found by Mr. M. B. Jordon, graduate fellow in agricultural education, at Louisiana State University, 1936-37, from a study of the problems of vocational agriculture teachers in newly-established departments, that administrators and supervisors of vocational agriculture consider getting desirably established in the community to be the first major responsibility of the instructor in a new department. In getting desirably established it is essential that the instructor assume his duties July first, and obtain suitable living quarters. A wise selection of satisfactory living quarters at first is much more desirable than a critical move later.

The instructor must be well established as a member of the community in which he teaches and should enjoy the confidence of his school patrons before he can hope to plan and execute a functional program of work. It is felt that much of the success of the program of work planned will depend upon the instructor's working relations with the people residing in the school community. Favorable working relations with people may be best secured by personal contacts. The first contacts made in the community by the instructor should be with the school officials, civic organizations, religious organizations, farmer organizations, prospective students and their parents.

The primary purpose of the visit to the county superintendent should be to get personally acquainted, officially report for duty, and counsel with him relative to the program. The official head of the high school, in which the department of vocational agriculture is to be organized, is directly responsible for the administrative phases of the local school unit. This official should be among the first persons contacted by the instructor. His suggestions and confidence should be sought. He should be consulted and kept well informed at all times on the progress of the program in vocational agriculture. The instructor must be willing to co-operate with the local school officials at all times. He should inform himself as to the routine duties assigned to him and execute them with sincerity and promptness.

Many rural communities have civic organizations. Contacts made by the instructor can be so impressive and forceful that his services as a counselor and speaker will be sought by such organizations. The instructor will find it to his advantage to appear before civic groups to explain the nature and objectives of the program in vocational agriculture.

Religious organizations play an important role in the social structure of a community and co-operative working relation with such organizations may be of much aid. The instructor is a community leader by virtue of his profession. Much of his leadership will deal with the youth of the community. The ideals and activities engaged in by the teacher should be indicative of the leadership with which he is charged. The instructor's actual participation in the various community religious activities, however, will depend upon his own desires.

It is important that the instructor become familiar with the program of every farm organization functioning in the com-

It is the instructor's responsibility to take the initiative in both instances. The instructor should not wait for an invitation to attend meetings of local farm organizations. Contacts made with groups or individuals provide the instructor of vocational agriculture with meritorious opportunities for selling the program of vocational agriculture, as well as an opportunity for becoming better established in the community.

The renowned hospitality of the farm family should inspire the instructor to contact the prospective students and their parents. The instructor's first visit to the farm home of the prospective student is made primarily with a view to becoming acquainted with and obtaining the confidence of the family. The maximum success of the program of vocational agriculture is, for the most part, directly in proportion to the co-operation given by the parents of students. Subsequent visits to the farm home may be made for the purpose of explaining the program and determining facilities for the boy's supervised farming program.

The program of vocational agriculture, in order to function efficiently in the community, must be so designed as to prepare or improve persons to pursue successfully specific farming occupations. In planning a program, it is most essential that the instructor obtain a thoro working knowledge of the agricultural practices and needs of the community for use as bases in building a community of work. To completely determine the agricultural practices and farm needs of a community is no easy task when much of the data must be secured from the individual farmers. The time available to the instructor before the school term opens must necessarily be carefully budgeted if he is to obtain the working knowledge of the community so essential in the preparation of a functional program.

Individual farm surveys provide farm facts for the instructor's use in determining the existing farm situations and farm practices. The surveys should be taken early enough in order that the facts revealed will be available for use as a basis in constructing the program of work before school opens. Additional farm facts may be secured by conferences with successful farmers, other agricultural workers, local business people, census reports, and farm literature.

Practically every agricultural community has the services of a county agriculture agent. The county agriculture agent understands and sympathizes with the program of vocational agriculture, and, if given an opportunity, may supply valuable information regarding the agricultural conditions and needs of the community. The county agriculture agent and the agriculture instructor will have many problems in common, and they should join in their efforts as ardent co-workers.

A carefully planned community program of work is an essential feature of the work in vocational education in agriculture. In preparing a specific program the instructor must carefully weigh the needs of the community. He must be thoroly familiar with the people and the agriculture of the community which he is to serve, and have a true vision of his relationship to the life of the community, the school, and other agencies. The needs of the community as shown by an analysis of farm facts indicate the objectives and activities to be included in the long-time and annual programs of work. The annual program of work may include teacher activities regarding systematic instruction to all groups, Future Farmer work, administrative duties, and community work. The content of the long-time program of work will be the result of the instructor's ability to determine definite community needs and to organize the doing of such activities as will meet these needs in logical sequence by years. The superior instructors seek the counsel of others in the locality in formulating their programs and procedures. The most worth while and

(Continued on page 38)

## Index of the Magazine

THE index has been brought up to date with the last issue of Volume IX and a copy of the index is sent to you with this issue. Much credit is due Dr. W. F. Stewart of Ohio for the completion of this work. Additional copies of this index may



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 I

Our English cousins have a school project which we, in this country, might copy to advantage. This undertaking, "The Land Utilisation Survey of Britain" (see figures 1, 2, 3, 4), covers a much wider field than appears at first glance. Not only is it a survey in the general use of the term, but it aims to make a record of existing use of every acre of land in England, Wales, and Scotland. This involves not only the mapping and other geographic features of the work which lend themselves to general school programs, but also recording detailed agricultural information, such as that obtained by the Bureau of the Census in its regular farm enumerations.

Many school superintendents require



Wm. L. Austin, Director Bureau of the Census

teachers to make a somewhat similar general survey of local conditions in order that they may more fully understand the communities which they serve, thus helping to decide matters of policy regarding education. Two important purposes of such a survey are well stated in the preface of the publication describing the British land survey as follows: "It is believed that such a record will serve as a standard of comparison with the past, permitting the study of the geographic and economic factors influencing change in utilisation in any given area, and at the same time will form the proper basis of planning for the future, since any plan must start from the present position and justification must be sought for any change from an existing utilisation to a new one."

tion in the land and its uses, and thus to secure the support of a well informed public opinion for the work of planning the land for the future for the benefit of all. With this latter objective in view, the field work of the Land Utilisation Survey was carried out almost entirely as an educational exercise."

In this country similar projects have been carried on experimentally in several states. Many years ago Mr. F. W. Gist, statistician for both the federal and state crop reporting service of Alabama, carried on a series of courses of crop reporting in the country schools. The students gathered information of the acreage of crops and the number of livestock in their school districts, recorded these as a regular part of their school work, and made monthly reports to the Alabama Statistician on condition of crops and livestock for his use in connection with the regular monthly reports he made to the U. S. Department of Agriculture.

The idea which the Alabama Statistician had in mind differed in its objectives considerably from the English project. The British undertaking appears to have been for two primary purposes—first, the furnishing of school children with interesting, useful material as a basis for various educational exercises; and second, the production of accurate, detailed land-use maps.

The principal purposes of Mr. Gist's courses were three in number:

1. To secure additional information in regard to crops and livestock, to use in connection with regular monthly agricultural report

2. To train a corps of junior crop reporters who would be able to replace the veterans when their period of service was completed

3. To familiarize the students, at an early age, with agricultural and other statistics in order that statistics might be more useful during their entire lives.

Before beginning the actual work on the project, it would be well for the teacher to familiarize himself with both the general purposes and specific agricultural reasons for which the Census statistics are collected, a few of which are, briefly:

(a) For the apportionment of Congressional Representatives, as specified in the constitution

(b) For the guidance of the governmental agencies

(c) For the study of agricultural problems, farm management, home economics, agricultural economics, sociology, etc.

(d) For the purpose of forecasting crops

(e) For guidance of the cotton, grain,

and sellers of speculative commodities  
(f) For facilitating marketing machinery

(g) For assisting in the solution of transportation problems

(h) For obtaining data for specific programs, such as resettlement, land utilization, soil erosion, and crop insurance

(i) For purposes such as stamping out the cattle tick, which causes tick fever, and eradicating diseases which affect dairy cattle, hogs, etc.

(j) For assisting in solving marketing problems

(k) For the business interests in planning advertising and sales campaigns, the allocation and delineation of sales territories, guidance for the credit men, locating sources of supplies, and so forth.

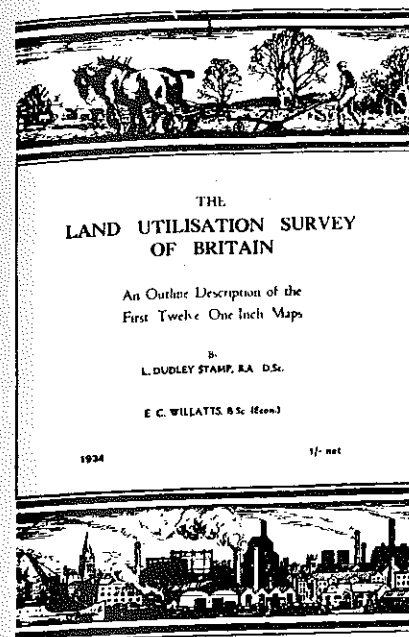
Other similar educational work should be done in advance of putting the program into actual operation which will be outlined in part II, which will appear in the next issue.



Z. R. Pettet, Chief Statistician, Bureau of the Census

Mr. Gist recognized the necessity of beginning with the children, if adequate and accurate agricultural statistics were to be readily obtained in the future. These courses were carried on for many years. Some of these junior reporters that Mr. Gist developed thru these courses, in time became full-fledged crop reporters. Many of these school reporters moved to other states and carried with them the same idea of service. In this way the other statisticians, among them the writer of this article, became conversant with the project and did some work along the same lines. Unfortunately, pressure of work of the state field statisticians, during the World War, became so great that they could no longer find the time required to conduct these classes, and the work gradually died out.

Figure I



\* "The Land Utilisation Survey 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.  
Price 1 shilling—net

recent developments in this country emphasize the advantages which may be obtained from adapting the English method and combining it with the best features of the experimental American work. Within the last four years the numerous emergency agencies, endeavoring to overcome the depression, found the need of having detailed agricultural figures on a geographic area smaller than the county.

The Bureau of the Census, recognizing this need, secured the major items of the 1935 Census of Agriculture on the basis of townships or other minor civil divisions, which, it may be explained, are the most convenient politi-

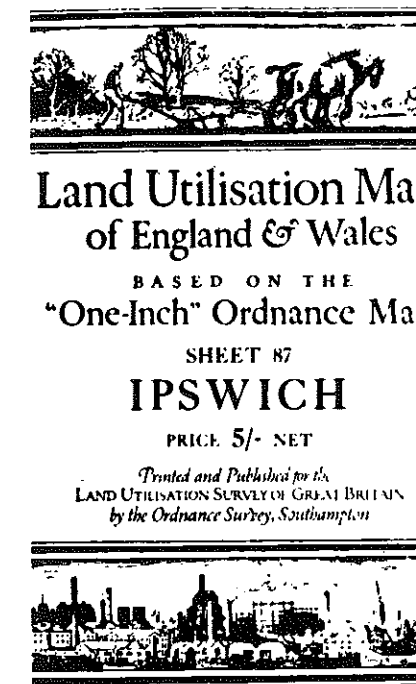
Figure II



Geographic features mapped of every acre

cal subdivisions for use in an enumeration. Other developments which can be

Figure III



\* "Land Utilisation Map of England & Wales" Based on the "One-Inch" Ordnance Map Sheet 87 Ipswich  
Printed and Published for the Land Utilisation Survey of Great Britain by the Ordnance Survey, Southampton  
Price 5 shillings—net

year to year, and to forecast the size of the crops for the guidance of the government, agriculture, and business. The estimating method of carrying forward the basic figures is a very difficult one. Schools could help materially with this problem thru this type of recording and educational work. It is necessary for the teacher to have in mind the reasons for these enumerations, so that they can be explained to

Figure IV



\* "Land Utilisation Map of England & Wales" Based on the "One-Inch" Ordnance Map Sheet 12 Keswick and Ambleside  
Printed by the Ordnance Survey, Southampton, and Published by the Land Utilisation Survey of Britain—5 Shillings Net.



Land Utilisation Map of England and 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.

data are the aerial photographs which are now being used on a large scale by governmental and private agencies for numerous purposes, and a farm address system by which all farms can be designated just as all houses are in the cities, thus giving to each farm the equivalent of a "local habitation and a name."

With all these improvements now at the command of every school teacher, it is easily possible to develop a system of local land mapping with records of the acreage of crops, numbers of livestock, and other farm information which is in constant demand. The ideal project of this kind would provide for the following uses:

1. The local mapping project as an agricultural exercise

2. The recording and tabulation of agricultural statistics, familiarizing the students with the entire subject

3. The determination of boundaries of minor civil divisions and counties which are not always definitely known at present

4. Make possible the tabulation of agricultural information by soil types, distance from markets, population characteristics, and other social and economic data which are of use, not only for school purposes, but to the country at large.

Such close study of local farm statistics would:

(a) Makes it possible for the Bureau of the Census and the Department of Agriculture to obtain reports more easily thru trained enumerators, developed by this method

(b) Do away with difficulty encountered in unknown boundary lines, particularly minor civil divisions

(c) Educate the general public and lessen the resistance which enumerators encounter in areas where the methods and purposes of the Census are not generally understood

(d) Result finally in very accurate and complete statistics for the United States as a whole, beginning with the minor civil division.

This phase of the subject can not be emphasized too strongly from the standpoint of national statistics. It has been the universal experience of the farm statisticians that the greater the knowledge of agricultural conditions and the wider the publicity of the Census, the more accurate and complete the figures which will be obtained, whether they be those of a national census or a limited agricultural survey.

It is not necessary to place further emphasis upon the need for detailed agricultural information at this time as this necessity has been brought out frequently by all workers in the field of agriculture.

Even tho the present need for the statistics for small units may possibly pass with the coming of better times, the work done on the small unit basis is necessary, in the long run, if the agricultural data are to approach perfection.

In this connection, it is necessary for the teacher to know that a major function of the Bureau of the Census, Department of Commerce, is to supply specific information on crops and livestock every five years; and that it is the duty of the United States Department of Agriculture to carry forward these

A. M. FIELD

# Methods

## Testing—Before—After

J. ERVIN BOYD, Instructor,  
Leola, South Dakota

THERE are no two teachers who carry out exactly the same style or methods of teaching. We are constantly experimenting with various devices, methods, and procedures in order that we may do a more satisfactory and effective job of teaching.

If I were asked to state my outstanding achievement in the teaching of vocational agriculture during the past school year, I know that I could safely answer that it was the giving of a complete set of objective tests before and after the studying of a unit.

The usual, accepted standard method of teaching is: first, the approach or creation of interest and the introduction of the unit; second, the breaking up of the large unit into smaller teaching units, assuming all the time that the students know nothing of the thing you are trying to teach. Possibly the third step would be the summarization of all of the material covered in the unit. The fourth and last step is the giving of some type or types of tests to find out how much the class, as individuals, have assimilated or retained, and can recite back to you by word of mouth or writing the proper word or words in the proper places on various tests. This perhaps is all very well.

I had finished a large unit on legume crops and was about to start the unit on soils and soil fertility. As a rule this is a hard unit to motivate, and one in

which it is difficult to create interest. So, naturally, I wondered what I could do to create interest in this subject. I also wondered just how much this class of ten boys know about this stuff that makes plants grow.

I went back to the classroom this particular night after supper and from all my references, bulletins, and tests, which we would use in the study of this unit, I assembled a complete objective test. Perhaps it was even more complete than if I had taught the unit and was ready to test. I had 74 questions, and by giving them 10 points, as I usually do, they totaled 740 points. The next morning I ran off 22 copies of this objective test on the hectograph.

When class was called, I told the boys what we were to study. I asked them what they knew about soils or dirt, this stuff that makes yellow cars of corn and green alfalfa hay. They told me that they had studied a lot about soils in the science class. And so I passed out this test and told them to answer all of the questions they could. In making this test, as in any test, I tried to eliminate every vestige of guessing. There was only one question that they all agreed upon and that was: Do you think you will need to study this unit on soils? They all answered "yes." I collected the papers and that evening corrected them. I found on checking over that there were certain questions they knew—perhaps they had studied them in their science class. These I need not dwell on long. The next day I handed the papers back to the class. They were graded—of course very low—10 percent to 18 percent I

think. They felt a bit set back, and they knew then that there was a challenge to be met. And so we tackled this unit, and it was surprising the interest and enthusiasm put forth.

After we had finished studying this unit and had had our review I again passed out the other ten copies of this same test. They went to work in earnest and when they had finished we exchanged papers and corrected them in class. The grades of course rose considerably. They ranged from 75 percent to 95 percent and not one boy failed. (See graph; record of ten boys; white bars pre-test results; black bars, second test results; dotted line, passing grade.)

That evening I made a graph showing the results of the two tests. I put it on a piece of white cardboard two feet by three feet. When they came to class the following day we took a part of the period to study this graph. They compared grades before and after the test and it made them feel as if they had accomplished a lot—which they had.

On starting the next unit—I told them what we were going to study. Immediately one of the boys asked if they were going to have a test first. I asked if they wanted one and they all chimed "yes." This was my first experience of students asking for a test.

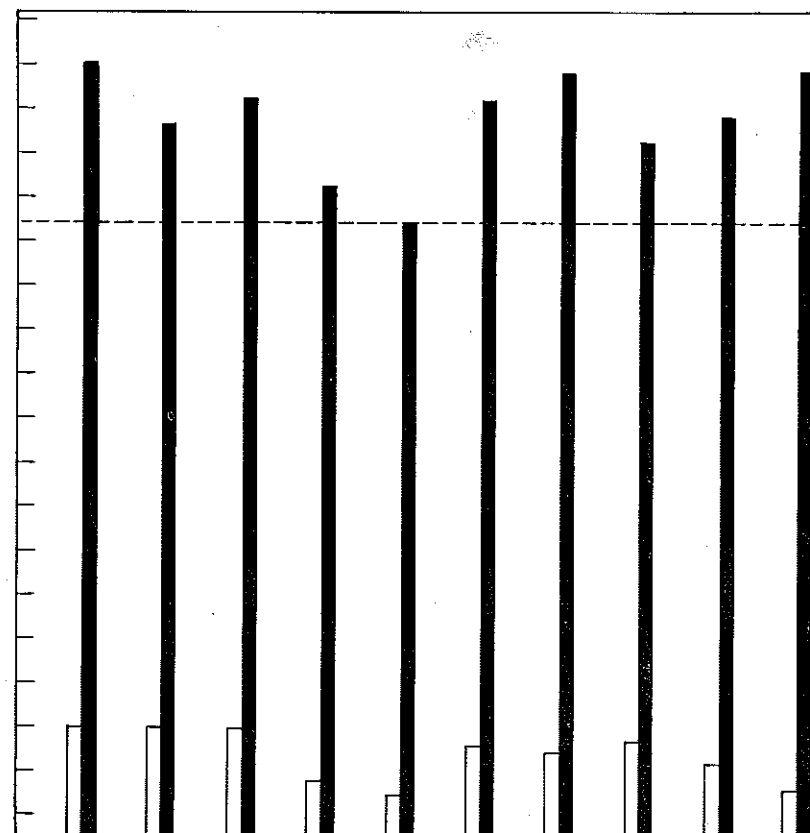
While answering the questions in this next test, I overheard one boy telling his neighbor that he was going to remember some of the hard questions because he knew that they would have them again. I asked myself "why not?" I know that some of my most effective teaching has been where I have told the class "now you had better know this, 'nitrogen fixation' or 'osmosis,' " etc., "because we are going to have it in examination just as sure as you are sitting there."

I used this "before" and "after" method of testing in my animal husbandry class. Here the first test grades were considerably higher, due to the boys' own experience and observations on the farm. Some questions, as in the other tests, they all knew the answers. Had I not known this, no doubt, I would have spent valuable hours and half hours questioning and trying to have them study this when they already knew it.

It also showed me which boys were really loafing on the job. I had one boy, Emil, who had a lower grade after studying a unit than he did before studying. When this was put on the bulletin board and he received the "kidding" from his classmates it did him good. However, it was to be expected of this boy. You perhaps have one or two in your school.

It also showed me boys who had a very low grade at first coming up to the top of the list. This shows they are "really doing things."

I intend to use this again this school year. I am sure I have benefited by it. It does not entail much more work on the part of the teacher. He has to make out the tests anyway. It merely means



I don't believe this would work so well in any subject other than agriculture. To give such a test in chemistry or history the first test would possibly be a blank. However, it does lend itself to the teaching of vocational agriculture.

In a letter to the editor commenting on this article Mr. Boyd made this valuable comment:

"I found in preparing this method of testing, that making out this group or set of questions to use before teaching the unit aided me a great deal in the actual teaching. In other words, I, as the teacher, had a better perspective of what I was going to do in teaching a particular unit. I found it a wonderful help."

## We Test Cows to Improve Boys

FRANK T. VAUGHN, Teacher,  
Unadilla, New York

THE Unadilla Central School draws its students from part of two intense dairy counties, Delaware and Otsego counties, of New York. Since dairying provides the bulk of the income, the program of the agricultural department is naturally centered around this enterprise. A large share of this dairy work is being built around a carefully developed dairy herd improvement program.

Every boy registered in agriculture carries on a dairy herd improvement enterprise in connection with his supervised practice program. The boys living on farms use the home farm herd, while one of the two village boys co-operates with an uncle and the other keeps the records for a near-by farmer. This monthly contact with a practical farm situation is a valuable aid in solving the village boy's problem.

We have set up the following dairy herd improvement objectives:

1. Weed out all unprofitable cows
2. By selection and breeding build up herds with higher producing ability
3. Feed efficiently, according to milk and butterfat production
4. Control contagious diseases
5. Provide data to increase the sale value of good surplus stock.

This program is carried out by the standard system used by New York state vocational agriculture departments, supplemented by a few things we have worked out ourselves. The standard printed dairy record blank supplied by the dairy record office at Cornell University provides the principal part of the record. An additional mimeographed blank is used for the recording of data that is considered useful in evaluating the individual cow and managing the herd. This data includes an identification sketch, age, breed, registry number if registered, weight (estimated with a weight tape), name of dam and sire, and a health record. This data is naturally more complete and more useful for purebreds than for grades.

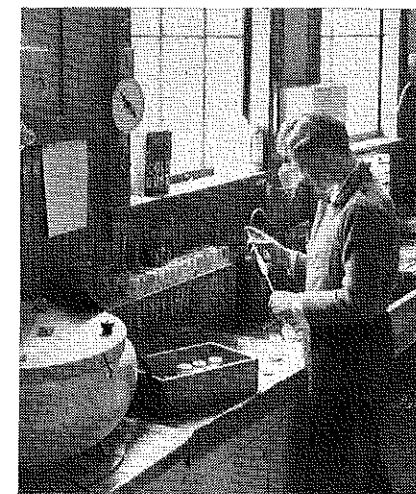
One of these sheets is used for each cow in the herd and kept at the school in a Manila folder. A special mimeographed report blank is filled out each month by the student and returned to the herd owner. This keeps the owner

where they are always on hand to be used in connection with the teaching of dairy jobs.

A mimeographed barn sheet is provided for the recording of pounds of feed, pounds of milk, and other data obtained when the samples are taken. This is kept only until the material is computed and placed on the permanent record.

We concluded that it was impossible to build up a high-grade herd until disease was brought under control, so we have included that in our objectives. An experiment in mastitis control is being made this year. Mastitis (garget) is being recognized as one of the most serious of dairy cattle diseases. It is particularly serious in this section where nearly all milk is sold to a Grade A plant, and a high bacteria count resulting from a mastitis infection results in a material cut in the milk check.

Every cow is tested for mastitis each month by the brom-thymol blotter method. This method was selected as it appears to be the most practical for use by persons without special technical training, as well as being relatively cheap. Concentrated brom-thymol fluid was prepared according to directions of the Geneva experiment station and dropped on blotters we had printed at



A Tester at Work

the local print shop. In this way we turn them out at one-fifth the cost of the commercial product. Care is taken that this test is made according to approved methods, and accurate records of each cow's reaction made. This mastitis program was started only after checking with the state veterinary college. The test is used, not as a positive verdict of infection but as an indication and to detect cases before they become advanced. Apparent cases of infection are always considered as subjects for examination by the veterinarian before final action is taken.

The greatest value of this disease control program, as in the rest of the dairy herd improvement program, is the training it gives the student. We are interested, of course, in improving the health of the herds in our community, but our primary concern is still in developing managerial ability. By this disease control program each boy becomes "disease conscious" and has first-hand experience in solving a practical

other diseases. Tuberculosis has been practically cleaned out under state and federal testing. A few herds have been tested for abortion. When the time seems ripe an effort will be made to coordinate elimination of this disease with our herd improvement program.

In practice, the whole dairy herd improvement program works out as follows. Each boy takes his milk samples and weighs the milk and feed for one day each month. At the same time he takes the mastitis test. The milk is tested at school and the records computed. On the basis of these records he figures the pounds of grain each cow should receive, using Cornell feeding tables. These feeding recommendations are included in the monthly report returned to the farmer.

At the end of the year each boy summarizes his records and makes his conclusions concerning each cow. This will be followed this year by a meeting with the herd owners for a general discussion of the records and their individual application. When these records have been kept several years on the same herds they will be of increasing value.

The records are used in one way or another to tie a large share of our dairy jobs down to actual cases. They are invaluable in handling feeding jobs, to say nothing of jobs on building breeding programs, controlling disease, and the other most important dairy jobs.

We try to keep the boy foremost in working out this dairy herd improvement program. It is distinctly a community service, and it is very easy to put the community service end of the program first. We recognize the value of this service and are trying to extend it, but we cannot justify the program on this basis alone, for there are other agencies whose sole function is to handle this work for farmers, and they are unquestionably better qualified than we. Our primary object is to give training to the boys in our classes, and we feel that the program would be well worth the effort and cost on that basis alone.

## Film Strips

FRED VOGELGSANG, Teacher,  
Oxford, New York

IT HAS been said that variety is the spice of life. This statement applies to the classroom as well as to every other phase of life. In my experience, I have found that the use of film strips in the classroom adds a much needed variety to the ordinary classroom procedure. In the first place, students enjoy seeing various jobs illustrated with pictures. They ask repeatedly for more film strips to be shown, and they display a great deal of interest on the days when this teaching device is used. When tests are given, I find that film strips are a very valuable teaching aid because these tests reveal that students retain knowledge more easily that is illustrated by pictures. I also believe that these pictures may be a great saving of time to the teacher. For instance, charts on price levels can easily be displayed on the screen, studied, and even copied by students without the usual tedious job of drawing all these charts before the



# Supervised Practice

H. H. GIBSON

## Problems and Procedures in Starting and Supervising Boys in New Types of Farming

HOWARD GIBSON, Instructor, Oregon City, Oregon

When should an instructor encourage boys to select new types of farming projects in a community rather than those prevailing and long established?

Only when there are the best of reasons for so doing, most instructors would agree, and yet that is what it has seemed highly desirable to do in the Oregon City high school community. Had projects been selected here in line with the traditional and existing types of farming, project programs could not have been developed of sufficient size and quality to challenge the interests and abilities of the boys and to make their projects both profitable and educational undertakings. After two years of work in agriculture, a number of the boys are well started in a farming business that will be big enough by the time they are thru high school to provide a full time and profitable employment. Had prevailing types of farming projects been selected, it is questionable whether a department of vocational agriculture, based as it must be on a vigorous and thoro going program of supervised farm practice, would have been warranted in Oregon City.

I came to these conclusions after careful study of the community types of farming from many angles, after frequent conferences with the county agent, and consultation with many farmers and businessmen who had witnessed many changes in the economic and industrial life of the region with their consequent effects upon agriculture. The reasons for the conclusions already stated will best be understood by a brief review of the historical background and a survey of the traditional and existing types of farming. Because the conditions here may be somewhat typical of those found in other communities where departments of agriculture are being established, this discussion may at least be suggestive.

*Economic changes effect established types of farming.*

The farms in the vicinity of Oregon City are the oldest in the state. The original settlers were more interested in hunting than in farming. The land that was cleared from logged off timber areas was given over to grain farming—a type of farming that still persists.

A picture of the present farm situation in farms small in size and relatively



Howard Gibson

vatable acreage; a traditional but becoming obsolete type of grain farming still persisting; a soil badly depleted of fertility and organic matter and subject to erosion because of continuous grain cropping and the difficulty at present of growing legumes; a growing metropolitan area which increases the value of the land as a present and potential residential section while affording opportunity for industrial employment and for some part-time farming; good market and transportation outlets for the more intensively produced commodities such as small fruits and poultry products.

*Adequate farm income demands new enterprises on small farms.*

In changing from the long established but now unprofitable types of farming to the new and more progressive types, it is clear that enterprises must be selected that will bring in a relatively large gross income on small size farms. Poultry, as an animal enterprise, and strawberries, as a crop enterprise, meet this requirement. Poultry, because it requires relatively small acreage for the size of the income and further because in this case the Pacific Producers' Co-operative with headquarters at Portland offers a market at our back door. The directors of this association, because of the supervision which the agricultural instructor is able to give, have made special provision for boys in poultry projects to market their eggs and buy their feed co-operatively. A special advantage comes from having in this locality some of the outstanding poultry breeders of the state who have long been recognized for supplying healthy and high quality chicks.

Mr. Ambrose Brownell, a local poultryman with a national reputation, has taken more than a business interest in the boys with poultry projects. In company with the instructor he inspects the brooders, brooding houses and equipment in advance of delivering the chicks. Early in May more than 6,000 chicks, mostly pullet (sexed) chicks, were distributed among boys who either started in the poultry business this year or last year and are expanding their enterprises. Hence, the supervised practice program is now pointed toward poultry production as a major enterprise for a majority of the boys in vocational agriculture. In several instances the poultry projects have become the dominant enterprises on the home farms.

In strawberries we have another enterprise well adapted to bring in a relatively large income for a small acreage. Here we are fortunate, too, in having a crop that will do well on a fairly acid soil. The Red Heart variety, recently developed and improved by the Oregon

favor with the large Ray-Maling Canning Company. This company furnishes strong, disease-free plants to project boys without cost. The boys who planted strawberries last year have excellent prospects for a good crop for which they are now offered 9½ cents per pound, a premium price over other varieties. It is largely thru the projects in vocational agriculture that this variety has been introduced into this locality.

A few of the boys have minor projects in growing perennial grasses for seed. Such seed being scarce and in strong demand, brings a good price and is being used to make up grass mixtures for seeding permanent pastures which, on steeper slopes and clearings, furnish many times the feed now obtained from the wild and native pastures. Thus, small scale dairying will have a place on some farms because of lower feed costs.

Two examples are presented here which indicate the original types of farming before project work was started and the new types of farming projects which were started two years ago. These examples are typical of both kinds of farming in this community and the kinds of projects which the boys are being encouraged to select on such farms. These projects afford such opportunity that the boys are throwing themselves into their work in a wholehearted and thoughtful manner. They have put a number of very specific and scientific practices into operation in producing the pullet flocks and in managing the laying hens. They are getting results and the results are giving them confidence in themselves and in the poultry business. They are now able to stand on their own feet and give a straight-forward account of what they are doing and the reasons back of these practices. Thru such projects the boys are building character as well as a vocation for themselves.

Evald Westlund's project was rated as one of the four best projects in the state, based largely on quality of project, improved practices adopted, and his knowledge and understanding of poultry problems and practices. Bill Brenner and others in their poultry and other projects are demonstrating their ability and are equally deserving of recognition.

These illustrations and explanations are given to indicate that the only hope for a vigorous and sound program of supervised practice, and hence a worthwhile department of agriculture in this community, must come from the adoption of new and progressive types of farming projects in contrast to the traditional and conservative types of farming which have persisted in the oldest farming community in the state.

Had the boys in these two examples selected projects in enterprises which were dominant on their farms to start with, it would have been impossible to

ing on small and relatively high priced farms could not be made to provide a business sufficiently large to warrant them in looking ahead to profitable employment in farming on their home farms and in the local community.

*New types of farming projects provide many interesting and important problems for class instruction.*

Problems and improved practices concerned in establishing and managing the poultry enterprise alone have demanded the major portion of both the group and individual study outside of farm shop for the past two years. Aside from shop every class period during this time has dealt definitely with specific problems, situations, and practices pertaining to projects in poultry, strawberries, and other minor project enterprises. A summary and analysis of pullet production for the first year, together with setting up improved practices for producing pullets the second year, occupied one full month. As the boys continue and expand their projects in poultry, strawberries, grass seed, and pasture projects, new problems for class and individual study are increasing rather than decreasing. (See brief summary in Table I.)

TABLE I—COMPARATIVE ANALYSIS OF PULLET PRODUCTION PROJECT—1935-36

Items	Bill J.	Allen	Adrian	Evald	Charles	Bill B.	Fred
No. "straight run" chicks	...	...	...	...	200	600	500
No. sex chicks	100	112	100	200	...	...	...
No. pullets raised	90	97	90	175	85	300	225
No. cockerels sold	6	4	3	6	101	290	247
Percent Mortality	4%	9.8%	7%	9.5%	7%	1.7%	5.6%
No. months on range	4	...	4	...	4	3	...
Per pullet:							
Lbs. Scratch	9.8	12	9.5	11.4	17.5*	9.2*	14.5*
Lbs. Mash	13.3	10.3	11.6	13.6	13.0*	11*	16.0*
Gal. Milk	...	...	...	1	1	...	...
Lbs. Skim Milk	...	.08	...	...	...	...	...
Lbs. Shell	1.1	...	2	...	1.0	.33	2
Lbs. Grit	2.5	2.3	4	.3	1.4	.9	.18
Lbs. Green Feed	5.5	...	...	...	...	...	...
Hrs. Man. Lab. per pullet	1.4	1.3	2.4	.8	2.4	2.3	.9
Total Cost per pullet	\$1.17	\$1.06	\$1.26	\$1.08	\$1.37	\$.51	\$.88

\*Includes cockerels.

NOTE: Record includes first six months. Cockerels sold are deductible credit.

*Starting new farming types of projects affords many opportunities to study farm management.*

In the process of selecting desirable project programs of a kind which might be continued and expanded from year to year it was necessary to make surveys and studies of the existing types of farming as a means of determining possible gross income. This led to a study of other enterprises that might be selected and better adapted to increase the size of the farm income to the place where farming might be profitable on small farms. Selecting projects in relation to types of farming and the farming business as a whole, brings out a variety of problems which might be classed under the head "farm management and farm reorganization." Thus, farm management principles are naturally associated with problems in selecting home projects and in a way that can be understood and remembered.

*Co-operation of parents indispensable in starting new types of projects.*

The instructor must spend more than the usual amount of time conferring and co-operating with parents when starting boys in new and progressive types of farming projects. First, there must be conferences to discuss the possibilities or limitations of the existing types of farming with a view to getting a project

is not possible, then the boy should not be deluded into believing that there is a place and a future for him in farming on his home farm. It is further questionable whether he should be encouraged to engage in a type of farming project that has little future on his home and other farms of the community. In discussing project selection with parents it is not enough to get them to agree to allow the boy to carry new or additional enterprises which it may be desirable for the boy to select. It is necessary that the parents be thoroughly informed so that they can co-operate intelligently at many points with the instructor in supervising the boy in his project work. All the important specifications and requirements that must be met in the new undertakings, financial and otherwise, must be carefully discussed and worked out. Working out a conservative budget estimate with the parents and boy helps at this point. Even the proved and demonstrated practices that must be adopted if the project is to succeed must be discussed with parents. Not merely the project goals and possible outcomes, but the ways and means to be used and the costs to be met in achieving the goals should be thought

ing and co-operation, are as valuable to them and to me as ten meetings spent in evening classes. And I believe in evening classes. Such parent conferences are not for the purpose of getting the parents to accept the boy's or the instructor's ideas or desires. They are really conferences conducted in a give and take spirit. But when the project in a new enterprise program is once started and agreed upon, there are standards of practice that must be maintained without compromise.

*Instructor must accept responsibility for success of new types of projects.*

I maintain that the instructor must assume responsibility for the success of projects and particularly new types of projects. This responsibility should not be assumed and carried out in arbitrary manner, but should be placed on the highest possible educational plane with both the parents and boy thru the closest kind of conference and understanding. But when practices which determine the success of a new project undertaking are questioned or likely to be changed, the instructor must be prepared to stand on his own feet and fight for what he knows is proved and scientific practice.

In starting new projects in poultry production which must succeed, everybody's ideas (and there are many in poultry raising) won't work. The easiest way, the line of least resistance, is to select projects in the prevailing and established types of farming. This is usually a sound practice, too. But when the facts and conditions point to project selection in new types of farming, the instructor must be prepared to take a firm stand and take strong measures, if necessary, to see the projects thru to a successful conclusion. He cannot afford to get "cold feet."

Projects are always three-cornered arrangements and agreements. This makes it easy for an instructor to shift the blame or responsibility for a poor project upon the neglect or failure of the boy or parents. This is a lazy and cowardly attitude. Unfavorable factors may develop which he may not be able to control, but since he is responsible for guiding the boy in the selection and conduct of his projects and for making it an educational undertaking, he should not shift any blame for failure upon the parents or boy until he has given himself a thoro examination as a possible cause of failure. If instructors assume this attitude, the problem of project selection and supervision, especially for new types of projects, will not be taken lightly.

*Typical Project Selection*

BILL BRENNER

*Home Farm Survey, 1935*

Total acres in farm: 50; acres cultivatable: 17; acres uncultivatable: 33. Farm animals: 5 cows, 2 heifers, 2 horses, 1 brood sow, 25 chickens.

Crop enterprises: 2 a. oats and vetch; 4 a. corn; 2 a. potatoes; 6 a. wheat; 1 a. pasture; 2 a. small and tree fruits mostly for home use (apples, cherries, peaches, prunes, walnuts, filberts, strawberries); 1 a. homestead; 14 a. rented for oats.

*Project Program:*

# V. G. MARTIN Farmer Classes J. B. McCLELLAND

## Evening Class Work in Indiana

R. S. BUNDY, Teacher,  
Rensselaer, Indiana

HAVING taught full time vocational agriculture for six years at Rensselaer, I decided with some timidity to try to organize an evening class in farm shop for adult farmers. To my surprise 51 men reported for the class the first night. Accordingly we listed on the blackboard the jobs which they wanted to take up. They proved to include rope work, soldering, harness repair, harness making, fitting edge tools, sharpening and setting timber, circle saws and hand saws, and farm carpentry. As my room consisted of but one basement room used as a classroom for my day students, we were hampered for space. I asked half of the men to come on Tuesday night and the other half to come on Thursday night. The tools we had were a few I borrowed from the janitor. Some of the men brought in saws, hammers, and squares. Some of the men worked out in the hall. In spite of this very limited equipment a number of jobs were demonstrated by me and by members of the class. Each man then performed some individual work so that I could help him. We had a wonderful spirit in this class, and the men learned to do a number of the jobs.

Sessions were held 10 nights for each group or a total of 20 nights. The average weekly attendance was 50.

In the winter of 1934 at the conference of my key men, it was decided to put on a hog production school. There was a lot of interest in this. I prepared a number of brown paper and crayon charts previous to the class session. Usually the farmer members of the class would answer the questions. I would use the charts to further prove the value of the good practices under discussion. Also, I asked each man to follow two new improved practices on his farm which he had never tried before and which were taught in evening class. Most of the men agreed to this. I have found later in visiting some of these men that many tried to follow up the practices learned in the class. In some cases, the men were unable to follow certain good practices the year of the class but were making plans to do so the following year. Sometimes it has taken two or three years for them to get their pigs raised on clean ground. However, my point is that they finally got it done or started.

I do not have any definite time to visit these men as a follow-up, but I try to contact each man on his farm, if possible, if not, elsewhere, and discuss his problems with him. I do not tell each man that he must have a project—that would scare him out. I do not consider my evening class work finished when the class is over in the late winter, but that I still have a follow-up responsibility with these men.

management, including problems in farm accounting, prices, money, and farm business analysis. This was a large-sized order, but I had more interest in this subject than any.

Last winter we took up another phase of farm management, agricultural planning and soil conservation. As the winter came along the seed corn crisis developed, in which it was found that hardly any of the seed corn would grow. So we spent four nights on seed testing and seed treatment with semesan. Here we found intense interest. One hundred and three men attended. Seed corn from 90 farms was tested and several cribs of corn that would grow were discovered. It was a real service to the community. Also several dolls were made, in which some dolls contained treated seed and others untreated from the same ears. Quite a lot of difference could be seen in favor of treating. Practically every man treated his seed corn and tested it. This summer on our annual evening class, vocational agriculture, and 4-H tour, we visited the farm of one man who planted some treated corn and some untreated. The difference could be seen.

After conducting four evening classes it is my opinion that the practical subjects are the most popular and are appreciated the most. Each year, before I put on a class, I visit a few key men in the community and invite them into a preliminary meeting to discuss subject matter and to work out plans for the time and to insure attendance. I find that this seems to help insure the proper enthusiasm and attendance. I also try to visit key men who would likely have interest in the subject. For instance, in planning for my hog school in 1934 I tried to visit some of the large swine growers. I try to get the men to feel that it is their class. They elect class officers, several of the members are assigned to lead discussion or to perform class experiments before the class, or perform some job before the class. Everything is done that can be done to secure individual participation. "Let the members teach their own class" is a good plan to follow, I have found.

I have always made plenty of preparation before each class period, in which I have tried to anticipate class questions and answers. The classes are conducted in such a way that they are not too dry. Many of the men have told me that they get a "kick" out of the meetings and for that reason like to come.

At the close of the winter sessions a completion night is held for the men and their families, at which certificates are awarded. A supper is held at the close of the meeting. My school board and superintendent have been present in the past to help at each of these final meetings. Also my superintendent has cooperated very nicely with me by being present at least one evening and taking charge of some phase of the work.

I believe that there are certain advantages to conducting evening classes in the community:

adult farmers and taxpayers of the community, both in town and country, the farm owner, the tenant, and some landlords.

(2) It helps to sell the high school to many people who have no other contact with the school. The school is helping them in return for the taxes they pay.

(3) Many of the fathers of the boys in the day school classes will be enrolled in the evening class. This will help the teacher put over the boy's program on the home farm because dad understands more about the advantages of scientific agriculture. The boy will receive more encouragement from dad to stay in the class and do his best work in class and on the farm with his farm practice studies.

(4) It helps to keep the vocational teacher more practical by being in contact with adult farmers actually on the job farming and trying to help them in working out their problems.

(5) Lastly, it permits the teacher to expand his service to the community of a full time agricultural program to include the four phases of his work, namely—with pre-vocational, all-day class students, part-time, and evening class students.

Also I believe that the following requirements must be met for successful work in evening classes:

(1) Some free time in the teacher's daily schedule for opportunity to plan and prepare for this work

(2) Sufficient room and equipment

(3) Farmers must feel that they have problems to solve

(4) Sympathetic viewpoint of teacher toward the problems, joys, and sorrows of rural people

(5) Ability of the teacher to see and meet rural needs

(6) Tenure

(7) Ground work must be laid before the class by arousing interest among the men most likely to be interested.

I firmly believe that adult education is here to stay. I feel that I have a lot to learn about it and, for that reason, enjoy reading the articles written by other teachers in *The Agricultural Education Magazine*.

## Getting Evening School Work Started

A. C. HALE, Teacher,  
Foreman, Arkansas

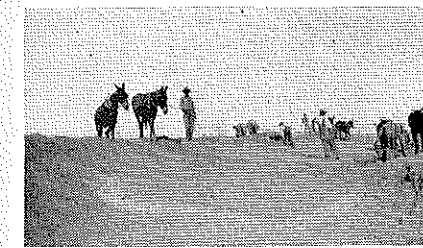
EVENING school work, as sponsored by the vocational department, centers around some special activity.

Organized activities first started six years ago at a rural school 12 miles from Foreman. The main purpose of this organization was social. Local musicians and talent were used for most of the entertainment. There is nothing in this community that will draw a larger crowd than musicians. This will hold true for most communities. These meetings are

The reason for mentioning this general social organization is that all evening class work has been an outgrowth from it, either directly or indirectly. At the general programs the house was usually full, averaging from 75 to 100 men, women, and children. This kind of a mixed crowd is not conducive to teaching a subject of specialized interest but it is a good place to learn what the community's wants and needs are. For example, the first specialized group came as a result of calls for information about grafting and budding pecans; this also included pruning and propagation of peaches, apples, and grapes. Special meetings were held and only those interested in the actual activities attended.

The next outgrowth, which formed a unit for another evening class, came to meet the need of the cattlemen. At the general meeting complaints were made about the loss of cattle by theft, about the need for more and better bulls, and about the need for better methods of selling. Interest in cattle grew until a special group with separate meetings was organized for the cattlemen. This group has grown from 18 to 76 during the four years of its existence. At first this group was confined to one community; it now covers the county and is known as "The Little River Cattlemen's Association." As a result of the meetings three definite problems have been worked out:

1. Offer of a standing reward of \$50 to the person who furnishes information leading to conviction and sentencing of cattle theft. Making of "Brand Book" showing all the marks and brands of the



Working on Levee

members of the association. These books are distributed to each member, to each county officer, and to officers of the adjoining counties. As a cattleman joins he pays \$1 into the association treasury to go for rewards. When this is used each member is assessed. The association has been effective enough that only one reward has been paid during the four years.

2. To sponsor buying and exchanging purebred Hereford bulls.

3. To sponsor co-operative selling of feeder calves.

The next unit came as an outgrowth of the cattlemen's association. The 1935 overflows along Red River made evident, anew, the need for levees. A number of meetings were held to acquaint the farmers with what would be necessary to build and maintain the levee, how to build concrete re-enforced culverts and attach automatic flood gates, and other problems that go with levee control. The farmers in a co-operative effort just finished the last three-mile gap of a five-mile levee before planting time for the 1936 crop. The only money the farmers were out, except for their own labor, was \$245. Of this

automatic concrete flood culverts to take care of rainwater in pocket areas. The balance of the money was used for gasoline and oil for heavy road machinery which was used in early stages of the levee. These levees protect about 11,000 acres of fine alluvial cultivated land in Red River bottom.

The levee people, as the general group, and the cattlemen's association, are organized permanently to meet any future problems.

The picture shows one group at work on the levee. Four to five teams made a working group.

The next special activity will probably center around the cleaning of the channel of Walnut Bayou, which serves as surface drainage for the area protected from the river by the levees mentioned above.

## Part-Time Class Suggestions

C. R. LASH, Teacher,  
Geneseo, Illinois

*Part-time schools:* This group is comprised of farm boys from 16 to 25 years of age who have dropped out of the regular school but who are not yet established in farming. The age limits are rather flexible. Younger boys may be in the class but because of their immaturity they contribute very little and probably get less. Boys older than 25 years of age probably consider themselves above the group, as would those who are under 25 years of age but who have become established in farming for themselves. There is a place for this group in the evening school instead of the part-time school.

Teachers who have held, or contemplate holding, part-time classes are confronted with a host of questions. The answer to those questions is the logical way to discuss this subject of part-time schools. Each question will be taken up and discussed using my own experience in conducting part-time schools and from the experience of others who have studied the subject.

*The need:* Each teacher must determine the need from his own community survey. There is little doubt, however, but that any community has enough out-of-school farm boys to form the nucleus of a good class. Surveys conducted in several states show this to be a fact.

*Promotion:* The teacher who wishes to conduct a part-time school should consult with his principal and school board; tell them what he is attempting, agree upon the compensation, see that added appropriations for materials and equipment are approved, and secure their approval.

*Recruiting:* Upon this point depends the success or failure of the course. Make use of every available club and organization. Local service clubs, rural churches, the Farm Bureau, the all-day students, the F. F. A. chapter, the school records, and many other sources will supply the names of boys the local teacher working alone would not have found. Names alone, however, are not enough. The teacher must make personal contact with as many as possible. If

not fail to do is to contact "key" boys scattered about the community. Secure their promise to attend and to help with the recruiting. Letters or cards sent to the boys whose names have been secured probably will be of some help.

*Publicity:* Teachers of agriculture are very poor writers. Here is one place to start. Write an article for the local papers telling what you are trying to do and stating the time and place of the first meeting. This is enough for the first article but weekly articles should appear from then on as the course progresses.

*Who shall teach the class?* It is my opinion that the all-day teacher should be the teacher of the part-time class, with possibly special teachers or outside help from time to time as occasions may arise. Specialists, veterinarians, neighboring agriculture teachers, and others may be used for some jobs in which the local teacher does not feel himself well qualified.

*Length of the course:* The course may be of the short intensive type, held probably once or twice a week during the winter months; or it may be of the long intermittent type, meeting monthly or bi-monthly thruout the year; or it may be a combination of both. I prefer the latter. This is the type where the class meets weekly during the winter months when work is slack, then monthly during the rest of the year as new jobs arise. These monthly meetings may be a seasonal review of some of the jobs discussed during the winter just before these jobs are to be taken up on the farm. Some teachers have the classes meet more often than once a week but my preference is for only one meeting a week. This gives the teacher more time to prepare for the next meeting and believe me he needs time.

*Time of day to hold the class:* Some teachers hold the classes during the day if time permits either during a vacant period or two or after school. I think, however, that during the evening is the best time. The preference of the boys should be considered as well as the convenience of the instructor. We have had both at Geneseo and much prefer the evening meetings.

*Organization:* Boys like to feel that they are part of a group and nothing does that better than for them to elect a set of officers. We have done that and found that the group stays better and is ready for the next year. You will need a president who opens and closes the meetings, appoints committees, introduces speakers, if any, and does all of the things any club president should do. The secretary calls the roll and may, with some help, keep a record of the jobs studied. The reporter handles all publicity or appoints some one to cover certain phases of the publicity.

*What to teach:* The boys themselves should have their say as to what they want. Of course, the teacher probably can very diplomatically guide them to the enterprise he thinks they should study and still let them think it is their own choice. It should be one enterprise, however, such as swine production, poultry production, feeding of farm animals, or the like; not just a series of meetings on different subjects. The least successful of our part-time schools have been the latter type.



# Farm Mechanics

L. B. POLLUM

## Shop Projects

H. T. SHIELDS, Instructor,  
Prairie du Sac, Wisconsin

THE agriculture department in the high school has established the custom of stamping each farm shop project which goes into the community with the name of the department and the name of the boy who did the work. In this way, everyone in the community sees what the department is doing in shop work, and one practical phase of the work of the department is advertised.



The F.F.A. members also displayed the shop projects they had made at the parent and son banquet this winter. The exhibit consisted of wagon boxes, hayracks, feeders, doubletrees, forge work, soldering, bolt and pipe threading, rope splices, halters, belt lacing, harness repairing, and oiling.

## The University of Hawaii Completes Its First Farm Shop Class

G. C. COOK, Assistant Professor of  
Agricultural Education, University of  
Hawaii

THE first university course in farm mechanics to be held in the Territory of Hawaii has just been completed. The class was conducted by the writer of this article. This work was given for the teachers of vocational agriculture and cadet teachers on the island of Maui. The meetings were held twice weekly for a period of 13 weeks. The 12 members of the class received two credits in the University of Hawaii for the course.

Since this was the first university course in farm shop work held in the territory it was divided into two parts, namely, methods and practice. The meetings in methods were held on Thursday nights and the practice work on Saturdays. A period of three hours was devoted to each meeting. The teachers were very much interested in the course and eager to learn, since, with the exception of one or two members from the mainland, it was their first training in this work. They were also much interested in the course because they want to start some farm shop work for their classes in vocational agriculture.

ods: determining the importance of farm mechanics and qualifications of teachers, choosing a farm shop, securing farm shop equipment, securing and storing tools, arranging the farm shop, choosing and filing teaching materials, determining the course content, organizing the course content, making out schedules and planning the lesson, classroom teaching phases of farm mechanics, conducting class in the shop, grading farm mechanics work, making the shop self supporting, providing a home farm shop, and organizing part-time and evening classes in farm mechanics.

Organized class discussion was held on each of the above jobs using reference books. Following the class discussion of each job the teachers were given practice in shop on the doing of the job. For example, the jobs in selecting hardware were followed by having the members of the class select and mount samples of hardware. The jobs on painting and finishing were followed by practice in finishing. Class discussion on soldering was followed by practice in soldering. All jobs were conducted in this way. The teachers not only received experience in farm shop methods and skill, but also had a nice collection of illustrative materials to use in their teaching.

## Planning a Farm Mechanics Course

F. E. CARPENTER, Instructor,  
Topeka, Kansas

THAT a course in farm mechanics must be well-planned if it is to be effective and worth while is generally accepted. Such a course may not be followed strictly; but it should serve as a valuable guide thruout the year as to content of the course and methods to be used.

In preparing a course of study in first year farm mechanics, I set up the following objectives as a guide:

1. To provide for adequate instruction in mechanical skills along with practice on shop jobs
2. To secure a balance in the student's shop program with precision in each enterprise
3. To provide for needed equipment in connection with the student's project program
4. To promote and begin the establishment of a home farm shop.

The first step in planning my course was to select the enterprises to be studied and decide the relative importance of each. In doing this, consideration was given to the student's needs in connection with home project work, type of farm mechanics work done by farmers in the community, and probable future developments in farm mechanics.

After selecting the enterprises to be studied and allotting the approximate amount of time to be spent in each, a study was made of the skills involved in

A list of these skills was organized in the order to be taught. The most important point to watch here was to time the lessons, as far as possible, so as to precede actual work on projects in the shop.

The next step was to work out the procedure to follow in actually organizing and teaching shop work. The following is a brief summary of the plan which I am now using:

1. At the beginning of the year an outline of the enterprises to be studied was made with the students, and the approximate amount of time to be spent in each enterprise was determined. This is called a "Student Guide for Study and Practice." The following is the outline that we are using this year:

Enterprise	Weeks
Home Shop	2
Tool Fitting	4
Forging	5
Rope	2
Leather	3
Sheet Metal	3
Cold Metal	4
Pipe Fitting	1
Glazing	1
Painting	1
Drawing	1
Carpentry	8
Total	35

2. Each student selects the enterprises in which he needs to do immediate work, and, thru shop enterprise surveys made at home, he selects his first list of project jobs. The first surveys are made by the end of the first six weeks of school.

3. Jobs selected are organized into a six weeks' shop program. This process is to be repeated for each succeeding six-weeks' period.

4. As outlined in the teaching calendar, instruction in basic skills is timed so as to precede, as far as possible, the actual work on the projects.

5. A student notebook is kept which parallels instruction and practice. The notebook includes the following:

- (1) Notes on completed lessons
- (2) Plan sheets for each major shop job
- (3) Individual shop program and record of work done in the shop.
6. In presenting lessons in the basic shop skills the following procedure is used except where lessons do not lend themselves to it:
  - (1) Demonstrations
  - (2) Notes on each lesson written up for notebook
  - (3) Practice by students on worthwhile projects
  - (4) Review of skills taught.

Approximately 30 minutes of each shop period is used in presenting lessons in the basic shop skills. This instruction is given to the class as a whole and individual instruction supplemented on shop projects.

The following is a teaching calendar or course of study for first year students. The jobs are followed in about the order listed.

General: introduction to course, home farm shop, enterprise surveys, identification of hardware  
Carpentry: selecting materials, figuring bills of material, reading drawings, making sketches

Sheet Metal: generating blow torch, heating copper, tinning copper

Carpentry: measuring, squaring, sawing, planing, chiseling, boring, using hammers, setting nails

Sheet Metal: cleaning work, selecting flux, running solder, sweating on a patch

Harness Repair: making waxed threads, stitching leather, riveting leather

Cold Iron: drilling iron, grinding iron, riveting, punching

Forging: building a forge fire, maintaining a forge fire, heating stock, measuring stock, cutting stock

Carpentry: assembling and adjusting planes, countersinking, setting screws, leveling and plumbing

Rope: whipping, crowning, making eye splice, useful knots and litches, making short splice, making straight line sketches

Drawing: lettering, drawing to scale

Forging: annealing, tempering tools, upsetting and enlarging tools, squaring stock, bending stock, drawing out stock, twisting stock

Tool Fitting: jointing a hand saw, filing a hand saw, setting a hand saw

Harness Repair: knowing parts and fittings, cleaning harness, oiling harness, using rivets

Painting: selecting paints, calculating quantities of paint, preparing surface for paint, priming, applying paint, repainting, caring for brushes

Carpentry: gluing, shelacking

Pipe Fitting: measuring pipe, cutting pipe, threading pipe, selecting proper fittings, assembling pipe fittings, bending pipe

Glazing: handling and measuring glass, cutting glass, fastening glass

General: home farm shop and equipment.

I have found that a course, organized as I have outlined, helps to accomplish objectives and saves time for the teacher.

## Part-Time Suggestions

(Continued from page 31)

teacher will make or break his part-time school, so it should be a good one. The boys will either go home with a feeling that it is time wasted and not come back or they will go home fired with enthusiasm and when they come back to the next meeting probably bring a new member. As an example, 46 attended our first meeting last year and 81 the second. That attendance, by the way, held up almost to that mark right thru the course.

The first meeting might be carried on something as follows: The teacher should get there early. Have the tables arranged in a hollow square, if possible, with a desk and plenty of blackboard space at the open end of the square. As the boys arrive let them talk in groups or mill around as they please but be sure there is none of the formality of a regular classroom. Start on time, and close on time. Never let a meeting drag. Seat the boys and proceed to get acquainted. I like a stunt we use which has another object besides getting acquainted. The boys each stand up and give their name, their age, the size of their farm, whether it is owned or rented, the crop acres in each crop, and the number of head of each kind of livestock kept. As this information is given it is written into a special form prepared before, either on the board or on large sheets of paper tacked on the wall.

Anyone can see the value of this information to the teacher as a basis for the subjects taught. We also use a special survey blank with additional information which the teacher himself fills in for his own information.

With this information on the board before them let the boys choose the subject for the class. As I said before, guide that choice diplomatically but let them think it is their choice. Then show them the possibilities in the subject with leading questions or any other device you may use.

They are pretty well acquainted

wish to meet. List on the board all the reasons for and against each night suggested, taking into consideration church organizations, regular school functions, and other regular meetings. The boys know then they are being considered and so do the organizations about town.

Then spend a half hour of good recreation and I am sure the boys will go home satisfied.

*Teaching methods and procedure:* The educational needs, individual needs, age variation, and differences in education and training of part-time students compared to all day students, makes lesson planning a particularly difficult matter. Complete lesson plans usually cannot be made far in advance of teaching the job. I do not mean the teacher should not make a teaching plan without job outlines, etc., before he starts teaching. But I do know he will have to change his plans more frequently than with his all-day classes. Therefore, I favor making of lesson plans from week to week.

*Recreation:* Boys all like some supervised organized play. Some time should be devoted to this phase of the boys development at each meeting. The officers of the organization should appoint a recreation committee at each meeting to meet the teacher and plan the recreation for the next meeting.

*Supervised farm practices:* Here is where the teacher will run into difficulties if he insists on a regular project similar to the all-day students. Good as supervised farm practices are, I do not think we can insist upon them with our part-time classes and do the most good. I am in favor of keeping a record of new and improved practices carried on the farm.

*Characteristics of part-time students:* The following are some characteristics of part-time students that, if recognized by the teacher, will help him to conduct a better class.

1. They do not like formality
2. They do not like formal classes with study, recitation, and notebooks.
3. They may lack confidence in themselves.
4. Most of them are out to really learn and are not interested in grades or credits.
5. They have acquired considerable operative skill but lack managerial experience and training.
6. They like to recite their own experiences.
7. They like particularly to participate in sports and games. This may be the only reason some of them attend a part-time class but if it is they still cannot help getting something out of the class discussions.

### Helpful Hints:

1. Use a survey blank.
2. Have someone take down the full proceedings of the class. Edit this, condense it, have it mimeographed, and hand it out to the class at the close of the next meeting. Punch holes in the mimeographed sheets so they can put them in a notebook.
3. Have plenty of bulletins for distribution. Show them how to bind and index them for future reference.
4. Have plenty of blackboard space and use it.
5. Use plenty of illustrative material.

They like to know you are interested in them.

## Starting New Types of Farming

(Continued from page 29)

chicks (1935-36) raised 290 hens; remodeled old house for temporary use as chicken house, raised grain pasture for green feed; cost of producing pullets, 51c, cash costs 32c.

Second year—1936-37; 290 laying hens, 500 pullets (sexed) chicks; will have a flock of 700 hens this fall; built permanent brooder with lumber from old building, new foundation and roof; is building 500 hen laying house; supplementary practice in dairy with father who plans to build up to ten cow dairy by renting some additional land for feed.

Third year; increase the size and quality of laying flock by rigid culling and additional chicks; build a second 500 hen laying house; strawberries, 1 a.; supplementary practice in dairying.

Fourth year and thereafter; have and maintain a flock of 1,000 hens; strawberries, 3 a.; supplementary work in dairying with father; a specific written contract sets forth project arrangements and relations between Dad and boy.

Evald Westlund

### Farm Survey, 1935

Total acres in farm: 12; cultivatable: 10; uncultivable: 2.

Farm animals: 3 dairy cows, 1 heifer, 50 chickens, 1 horse, 2 feeder pigs.

Farm crops: 5 a. clover; 1 a. corn; 2 a. oats; 1 a. loganberries and raspberries; 1 a. fruits for home use (apples, cherries, peaches, prunes, walnuts, pears, filberts, strawberries); Father works for wages part-time.

### Project Program

First year—1935-36; 200 pullet (sexed) chicks; repaired and remodeled buildings on place for brooder house and laying house; raised kale and grain crops for pasture and green feed; established one acre of Red Heart strawberries.

Second year—1936-37; 500 pullet chicks plus last year's laying flock; 1 a. of Red Heart strawberries; built large but portable for brooder house; building laying house.

Third and fourth year; increase laying flock to 2,000 hen size with necessary buildings, equipment, and range; 3 to 4 acres of strawberries.

### Summary of Recommendations for Reducing Costs Based on Analysis of Individual Project Practices

1. Reducing labor costs by:
  - a. reduce the amount of hired labor.
  - b. raising chicks in larger units.
  - c. purchase sexed chicks instead of straight run.
  - d. using an electric brooder with wire screen frames under it, automatic water fountains, and permanent brooder house instead of colony houses.
  - e. increase use of range.
2. Reducing feed costs by:
  - a. purchasing feed in large quantities.

# Studies and Investigations

E. C. MAGILL

E. R. ALEXANDER

## Study of Out-of-School Young Men

HOWARD MARTIN, Teacher,  
Vergennes, Vermont

IN ANALYZING the problem of providing programs in Vermont for the young men who are out of school and living on farms, a group of 100 young men was studied. The group studied was located within the patronage area of the Vergennes, Vermont, High School.



Howard Martin

Ninety-six young men were located in an area of 105 square miles. The ten additional young men were located in towns whose entire area was not included in the patronage area of the school. (Records were secured on 100 only.) The study was limited to young men between the ages of 14 and 24 who were not in school and also who were living or working on farms in the area. The study was designed to secure data essential to the establishment of a program, to be administered by the teacher of agriculture and adapted to the needs of the part-time group.

A brief summary of the methods employed, findings, and conclusions follow.

### Methods

**Locating Young Men:** Names were secured from the 1930 census of each town by school districts. Names of young men known to be in school were eliminated. Young men residing in the several school districts and known by the author assisted in the location of young men on specific farms.

**Interviewing Young Men:** (Approximately 160 hours of time were spent in interviewing the young men. The distance traveled was about 600 miles.) In securing the data the co-operation of the young men's parents was solicited.

### Findings

**Age of Young Men:** The number of young men in each age group was as follows:

Age Group	Number Boys	Age Group	Number Boys
14	2	20	16
15	6	21	10
16	4	22	9
17	13	23	11
18	15	24	7
19	7		

The average age of young men studied was 19.6 years. The medium of the ages was 20.

men had attended school 10.66 years and completed 10.53 grades. Fifty-two young men completed one year or more of high school, 32 graduated from high school, and 38 young men had studied vocational agriculture an average of 3.15 years.

**Reasons for Leaving School:** The five major reasons indicated by young men ranked as follows: (1) to work at home; (2) completed school; (3) to work out; (4) failed in work; and (5) expense.

**Distance From Center (Vergennes):** The average distance was 6.6 miles. Forty-nine percent of the group was within a five mile radius, 83 percent within a 10 mile radius. Little or no relationship was found between high school attendance and distance to school. Sixty-one percent of the group either owned or had the use of a car.

**Membership in Organization:** Membership of young men in 11 organizations was 57. Membership in types of organizations: religious, 40; adult agricultural, 11; fraternal, 2; and miscellaneous, 4.

Table I. Farming Status of 100 Young Men in Relation to Age

Farming Status	Total 100	AGE GROUPS												Average Age		
		Number in Age Groups														
		14	15	16	17	18	19	20	21	22	23	24				
At home with allowance.....	33	1	5	3	8	11	1	2	1							17.4
Wages at home.....	27	1			3	3	4	7	2	2	3	2				19.96
Wages not at home....	17		1	1	2			4		4	2	3				20.64
Enterprises at home	6					1		2	3							20.16
Partner at home.....	8						2	1		3	2					21.25
Renter or operator....	5								3		1	1				22.0
Related farm occupation.....	3									1	2					22.5
Manager of farm.....	1											1				24.0

**Farming Status:** The farming status of young men is shown in Table I. The percentage of time spent in each farming status and the percentage of young men engaged in each farming status is shown in Figure 1 and Figure 2.

Figure I: Percentage of Total Months Spent in Each Farming Status by 100 Young Men

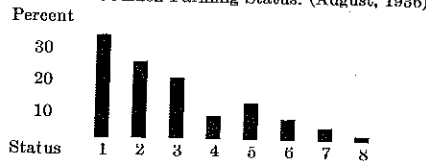


KEY TO STATUS

Status	Percent
1. Allowance.....	34
2. Laborer at home.....	19
3. Laborer (away from home).....	26
4. Partner at home.....	9
5. Non-farming occupations.....	7
6. Enterprises.....	1.5
7. Renter or operator.....	1.5
8. Manager of farm.....	1.5
9. Advanced education.....	1.5

Young men spent 79 percent of 4,088 months in the allowance or farm laborer status.

Figure II: Percentage of 100 Young Men Engaged in Each Farming Status. (August, 1936)



KEY TO STATUS

Status	Percent
1. Allowance.....	33
2. Laborer at home.....	27
3. Laborer away from home.....	17
4. Enterprises.....	6
5. Partners at home.....	8
6. Renter or operator.....	5
7. Related farm occupation.....	3
8. Manager of a farm.....	1

Of the young men, 77 percent were engaged in farming either on the allowance or farm laborer status.

**Home Farms of Young Men:** Eighty-three percent of the young men were either sons of parents who were operating a farm in the area or were operating a farm for themselves. The farms were all dairy farms. The size and efficiency of the farms were studied in relation to the number of brothers of the young men who were out of school and working on the home farm. The findings are listed in Table II and Table III.

Table II. Size Factors of the Home Farm

Table II: Brothers Out of School at Home

Number of cases	Brothers Out of School at Home		
	(40)	(35)	(8)
Number of brothers	0	1	2
Size factors			
Acres tilled.....	121	156	199
Acres rented.....	46	99	36
Acres owned.....	210	213	304
Dairy cows.....	28	30	41
Hens.....	48	47	34
Man equivalent*.....	2.4	3	4

\* Adjusted for (1) work done off the home farm (2) months young men were in school

Table III. Efficiency Factors of the Home Farms of 83 Young Men in Relation to Number of Brothers at Home

Table III: Brothers Out of School at Home

Number of cases	Brothers Out of School at Home		
	(40)	(35)	(8)
Number of brothers	0	1	2
Efficiency factors			
Tons of milk per man.....	33	29	24
Dairy cows per man.....	11	10	10
Crop acres per man.....	49	53	50
Production per cow.....	5900	5800	4700
Crop acres per cow.....	4.3	5.2	4.8

**Family Households:** The average family household of the young men was 4.9 members. The average age of fathers of young men was 55. Nine young men were married.

**Income and Investment:** The income and investment of young men for a period of 30 months is shown in Table IV.

Table IV. Income and Investment of 100 Young Men in Relation to Age\*

Table IV: Average Investment

Age	Total Number	Average Income	Agricultural	Non-Agricultural
14	2	\$ 69	\$.....	\$ 17
15	6	145	.....	.....
16	4	140	.....	.....
17	13	346	74	34
18	15	432	13	82
19	7	594	21	43
20	16	518	99	187
21	10	1151	214	219
22	9	1013	44	202
23	11	973	156	236
24	7	1108	185	254
100	641		83	134

\*Covering the period from January 1, 1934, to July 1, 1936.

### Conclusions

1. The primary problem confronting young men is to make advancement in farming status. Educational programs to meet the real needs of the group must be designed to assist young men to make advancement in farming status.

2. The age at which young men tended to make significant advancements in farming status was 19. Programs should prove most beneficial to young men 18 years of age or over.

3. The large percentage of young men engaged in the farm laborer status indicates that evening is more suitable than daytime for holding organization and educational meetings.

4. The size of the home farms on which young men work, measured in terms of cows per man, tends to be the same for groups having one or more than one young man per farm. A careful study and analysis of the home farm business is indicated as a basis for determining what opportunities exist for advancement.

5. Incomes per young man were low. Ways of increasing cash income should be stressed.

6. Agricultural investments per young man were low. A definite need for guidance is indicated. Guidance in securing credit should be provided.

7. Successful advancement in farming status is dependent on many factors. The experience, education, ability, opportunities at home, and family relationships of young men should receive careful study by young men before selecting and deciding upon a farming program.

8. Training in the responsibilities and opportunities of membership in organizations should constitute an important phase of a program for the group.

9. A study of the efficiency of enterprises on the home farm and problems of farm management should be included in the program. But such study should be secondary to problems of the individual young men which are centered in becoming established in farming on a definite and worth-while basis.

10. Special provisions should be included in the program to make it worth-while and functional to young men who have no opportunities on a home farm.

## Can We Predict Teaching Success?

PROFESSOR S. S. SUTHERLAND,  
Teacher-Training,  
Davis, California

AN EVER present problem of the teacher-trainer, the supervisor, and the school administrator is that of the teacher selection. To the teacher-trainer each year comes a group of junior and senior students who wish to prepare for teaching vocational agriculture.



S. S. Sutherland

Whom should he advise to enroll and whom should he discourage? The supervisor and the administrator receive dozens of placement folders from applicants for teaching positions. Which of these men should he recommend, and on what should he base his judgment?

What information regarding a candidate will enable us to look into the future and predict how successful this man will be as a teacher of vocational agriculture? Do the objective things which we can learn about a candidate give us a basis for this prediction, or must we delve into the realm of that well-known intangible "personality" for our answers?

From a study of the records of some 30 vocational agriculture teachers in California, we have some information on these problems which may be of interest. The study which has been made of these records is not complete and includes those of only a comparatively small number of teachers, but some of the findings seem significant. The 31 teachers included in this study have each been

this state. The state and regional supervisors rate four of these teachers as "outstanding" and 11 as definitely "above average" as compared to the some 250 teachers in the state. This rating is not entirely subjective, as these supervisors use a rating scale in evaluating the work of agriculture teachers for the purpose of pro-rating reimbursement.

For the placement data on these men, we find eight of them who had distinctly more farm experience before entering the teacher-training program than the others. The typical teacher in this group was "born and raised" on a farm, carried three years of supervised farming in vocational agriculture, and worked on farms during summer months while attending high school and college. These eight, however, had more than that. Each had owned or managed a farm of his own for at least a year sometime after graduating from high school; several had worked as cow testers, county agents, horticultural inspectors, or farm foremen.

Now, before we give you the results of our findings, would you expect to find your successful teachers in this group? Can we predict success on the basis of farm experience? The answer should be "yes," but our results say "no."

Only three of these eight developed into above average teachers, while twice that many—six of the eight—with the poorest farm experience records, have turned out to be superior teachers. In addition to this, two of the most successful teachers in this better-than-average group were not farm reared and had barely the minimum farm experience required of teacher-training candidates.

Since we cannot find the answer in farm experience, let us look elsewhere. How valuable is a good scholastic record? How much weight should we attach to the evidence in the transcript of record? Will the Phi Beta Kappa or the Alpha Zeta keys open the doors to success in teaching vocational agriculture?

From the transcripts of these 31 teachers, we determined their grade point average in their upper division work—courses taken during their junior and senior years in college. We allowed three points for each "A" grade; two points for each "B" grade; one point for each "C" grade; no points for each "D" grade, etc., and by dividing the number of points earned by the number of credits completed, we obtained grade point averages for each. From our analysis, we found these facts:

1. Eight of the teachers were in the "honors" group with grade point averages from 2.00 to 2.72. Six of these eight were above average teachers.

2. Seven just "got by" with averages from 1.0 to 1.4. Three of these were above average teachers.

3. The grade point average for the 15 superior teachers was 1.86; for the other 16 teachers 1.57.

A little better relationship here. If we pick teachers with high scholastic records in their last two years in college, made in subjects dealing mostly with technical agriculture, the chances are three to one we will get a superior teacher. The man who made low grades during these years has a little less than a 50-50 chance, three to four, of making good. If we were to eliminate, however, these



## Before School Opens

(Continued from page 23)

beneficial programs of work cannot be carried out in a single year. The annual program of work can be developed in detail after the long-time program is planned.

It will be possible for the instructor to carry out certain phases or activities of his annual program of work before school opens. He will need to obtain and equip a suitable agricultural classroom. Equipment to obtain for the classroom may include furniture, books and bulletins for use as references, illustrative materials for teaching purposes, and tools for the farm shop where farm shop is a part of the agricultural program. The furniture must be arranged, the equipment arranged for use, the reference materials classified and filed, and other necessary supplies checked and ordered.

It is true that the activities of agricultural instructors in various communities will differ; nevertheless, in every case a great deal of time should be spent in carefully planning these activities in advance of the opening of the school session. The time spent by the instructor in planning before school opens will save many hours during the school session, and enable the instructor to push his work instead of letting his work push him. —Roy L. Davenport, Louisiana.

## Farm Census

(Continued from page 25)

the school children, and in turn, to the farmers in the school area. This will help to overcome objections which might otherwise be offered when the school children wish to secure the farm records.

## Starting New Types of Farming

(Continued from page 33)

- d. home mixing of scratch.
- e. use of home-grown feeds and skimmed milk.
- f. maximum use of range.
- g. reduce waste of feed.
3. Reducing mortality and culling loss as follows:
  - a. purchase of blood tested chicks only.
  - b. purchase of strong healthy chicks.
  - c. maintaining sanitary conditions in brooder house.
  - d. use of clean range.
  - e. prevent cannibalism by not overcrowding or overheating and by brooding in lots of not over 250 to 300.
  - f. have brooder house large enough, corners screened off, and protected against predatory animals.
  - g. precaution against fire.
  - h. use caution when working around chicks.
4. Purchasing straight run instead of sexed chicks providing there is ample equipment. The cockerels are removed at the age of 4 weeks, and the opera-

- care of the greater number of chicks.
5. Reducing the chick cost per pullet by:
  - a. purchasing straight run chicks.
  - b. purchase of chicks in quantity.
  - c. purchase of chicks during later part of hatching season.
6. Reducing building and equipment cost by using to capacity.
7. Reducing interest rates by borrowing from the Production Credit Association.
8. Increasing deductable credits by purchasing straight run chicks and fattening out cockerels for the market.

## Film Strips

(Continued from page 27)

be of great value in showing educational slides to Future Farmer groups, short course members, and Grange meetings. Students enjoy participating in these meetings and explaining the slides as they are shown.

At the present time, we have a Dewey small folding type film-strip machine and 32 film strips furnished by the United States Department of Agriculture. These film strips all pertain to the agriculture of our region, and cover the fields of dairy, poultry, animal husbandry, crops, and farm management. Our school has at least one film strip in each unit of work, and I feel that the film-strip machine is one of the most valuable teaching aids in the classroom.

## Teaching Success

(Continued from page 35)

averages, we would have lost three good, and in this case, outstanding teachers, so there must be other factors to consider.

On every placement data folder, we find a line or so for the candidate's experience in extra-curricular activities in college and in high school. Probably we all give this item some attention, but how much does it deserve? Should the man who was active in athletics, judging teams, clubs, student governing bodies, etc., develop into a better teacher than one who was not? Just how much value, if any, should we attach to participation in these activities in selecting teachers?

In evaluating various types of activities, we made use of a scale developed by the students at the branch of the college of agriculture of the University of California. In this scale, each activity is given a value, based largely upon the amount of time and responsibility involved, for the purpose of making "activity awards."

Nine of these teachers had activity records which were well above average—rating from 29 to 51 points—the office of student body president carries a rating of 25 points in this scale. Of these nine men, every one was a better than average teacher. At the other end of the scale were eight men, with activity records ranging from 0 to 8 points. Of this number, not a single one developed into more than an average teacher. The 15 superior teachers had activity ratings ranging from 10 to 51, with an average of 30.6; the other 16 teachers rated from 0 to 27, with an average of 9.7. Only college activities were considered in this analysis.

even suggest a final conclusion. However, the facts presented point in the direction that a student's record in extra-curricular activities is the most significant factor we have available on which to predict his success as a teacher.

Some day the time may come when we can measure personality, can determine a candidate's "personality quotient" in the same way that we now measure his intelligence. Until that day comes, we may have to depend largely on the three factors studied. Perhaps, and this is just a guess, a good record in extra-curricular activities is a definite indication of a good personality. It is quite likely that college students do a pretty good job of selecting their own leaders, and it is also probable that activities not only measure but also develop personality.

## His Goal a Tractor

ROBERT HARSHBARGER, of Columbia City, hopes to "earn" a new Farmall tractor by virtue of having the best farm business record in the United States this year. Robert is a quiet and unassuming lad but was able to win the regional prize of \$225 worth of International Harvester machinery in the National Farm Accounting contest last year. Eligible only for the National prize of a new F-12 tractor, this boy has submitted his complete farm business record and analysis again this year. This year's record is the sixth completed by this boy under the supervision of T. M. Grabill, teacher at Columbia City, Indiana.

## New Book

*Rural Trends in Depression Years*, a survey of village-centered agricultural communities, 1930-1936, published in May, 1937, by Edmund de S. Brunner and Irving Lorge. Price: \$3.25. Publisher: Columbia University Press, 2960 Broadway, New York City.

The book opens with a summary of the basic changes in and adjustments of agriculture from 1930 to 1935 as shown by the census and illustrated in the communities studied. There follows an analysis of changes in population and in communities as such and in the relations of village to country. The discussion then turns to changes in institutions such as those of trade, industry, banking, education, religion, and school life. In connection with education, special attention is given to the rise of adult education during the depression years. Finally, consideration is given to the question of relief, a phenomenon previously almost non-existent in these communities.

Contents: (1) Changing Agricultural Backgrounds; (2) Agricultural Adjustments in Rural Communities; (3) Population Changes; (4) Village-Country Relations; (5) Business and Industry; (6) Rural Banking; (7) Rural Schools in the Depression; (8) Adult Education: Agricultural Extension; (9) Adult Education: All other Agencies; (10) Social Organizations; (11) Notes on Government and Health; (12) Rural Religion;

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J. F. Williams, Jr., Tallahassee

Georgia

L. M. Sheffer, Athens

Hawaii

W. W. Beers, Honolulu

Idaho

Wm. Kerr, Boise

Illinois

J. E. Hill, Springfield

Indiana

Z. M. Smith, Indianapolis

Iowa

G. F. Ekstrom, Des Moines

Kansas

L. B. Pollom, Topeka

Kentucky

R. H. Woods, Frankfort

Louisiana

S. M. Jackson, Baton Rouge

Maine

H. S. Hill, Orono

Maryland

H. F. Cotterman, College Park

Massachusetts

R. W. Stimson, Boston

Michigan

E. E. Gallup, Lansing

Minnesota

Leo Knuti, St. Paul

Mississippi

F. J. Hubbard, Jackson

Missouri

J. L. Perrin, Jefferson City

Montana

Herschel Hurd, Helena

Nebraska

L. D. Clements, Lincoln

Nevada

R. B. Jeppson, Carson City

New Hampshire

E. H. Little, Concord

New Jersey

H. O. Sampson, New Brunswick

New Mexico

Frank Wimberly, State College

New York

A. K. Getman, Albany

North Carolina

Roy H. Thomas, Raleigh

North Dakota

F. H. Jones, Fargo

Ohio

R. A. Howard, Columbus

Oklahoma

J. B. Perky, Stillwater

Oregon

E. R. Cooley, Salem

Pennsylvania

H. C. Fetterolf, Harrisburg

Puerto Rico

Antonio Texidor, San Juan

Rhode Island

G. H. Baldwin, Providence

South Carolina

Verd Peterson, Columbia

South Dakota

H. E. Urton, Pierre

Tennessee

G. E. Freeman, Nashville

Texas

P. G. Haines, Austin

Utah

Mark Nichols, Salt Lake City

Vermont

Kenneth Sheldon, Burlington

Virginia

W. S. Newman, Richmond

Washington

J. A. Guitteau, Olympia

West Virginia

John M. Lowe

Wisconsin

I. M. Sasman, Madison

Wyoming

Sam Hitchcock, Cheyenne

{ S. L. Chesnutt, Auburn

{ A. Floyd, Tuskegee (c)

{ L. D. Klemmedson, Tucson

{ K. L. Holloway, Fayetteville

{ C. S. Woodard, Pine Bluff (c)

{ S. S. Sutherland, Davis

{ G. A. Schmidt, Fort Collins

{ C. B. Gentry, Storrs

{ R. W. Heim, Newark

{ E. W. Garris, Gainesville

{ R. L. Reynolds, Tallahassee (c)

{ J. T. Wheeler, Athens

{ F. M. Staley, Industrial College (c)

{ F. E. Armstrong, Honolulu

{ H. E. Lattig, Moscow

{ A. W. Nolan, Urbana

{ S. S. Cromer, La Fayette

{ Barton Morgan, Ames

{ C. V. Williams, Manhattan

{ Carsie Hammonds, Lexington

{ E. M. Norris, Frankfort (c)

{ Roy L. Davenport, Baton Rouge

{ Cornelius King, Scotlandville (c)

{ H. S. Hill, Orono

{ H. F. Cotterman, College Park

{ F. E. Heald, Amherst

{ Robt. Linton, East Lansing

{ A. M. Field, St. Paul

{ V. G. Martin, State College

{ P. S. Bowles, Alcorn (c)

{ Sherman Dickinson, Columbia

{ R. H. Palmer, Bozeman

{ H. E. Bradford, Lincoln

{ R. B. Jeppson, Carson City

{ E. H. Little, Concord

{ H. O. Sampson, New Brunswick

{ H. M. Gardner, State College

{ P. J. Kruse, Ithaca

{ L. E. Cook, Raleigh

{ S. B. Simmons, Greensboro (c)

{ E. H. Jones, Fargo

{ W. F. Stewart, Columbus

{ D. C. McIntosh, Stillwater

{ D. C. Jones, Langston (c)

{ H. H. Gibson, Corvallis

{ H. S. Brunner, State College

{ Nicolas Mendez, Mayaguez

{ G. H. Baldwin, Providence

{ W. G. Crandall, Clemson College

{ J. P. Burgess, Orangeburg (c)

{ R. R. Bentley, Brookings

{ N. E. Fitzgerald, Knoxville

{ W. S. Davis, Nashville (c)

{ E. R. Alexander, College Station

{ S. C. Wilson, Huntsville

{ T. A. White, Kingsville

{ Ray Chappelle, Lubbock

{ C. H. Banks, Prairie View (c)

{ L. R. Humpherys, Logan

{ Kenneth Sheldon, Burlington

{ E. C. Magill, Blacksburg

{ G. W. Owens, Petersburg (c)

{ Everett Webb, Pullman

{ Roy A. Olney, Morgantown†

{ D. W. Parsons, Morgantown†

{ J. A. James, Madison

{ S. H. Dadisman, Laramie