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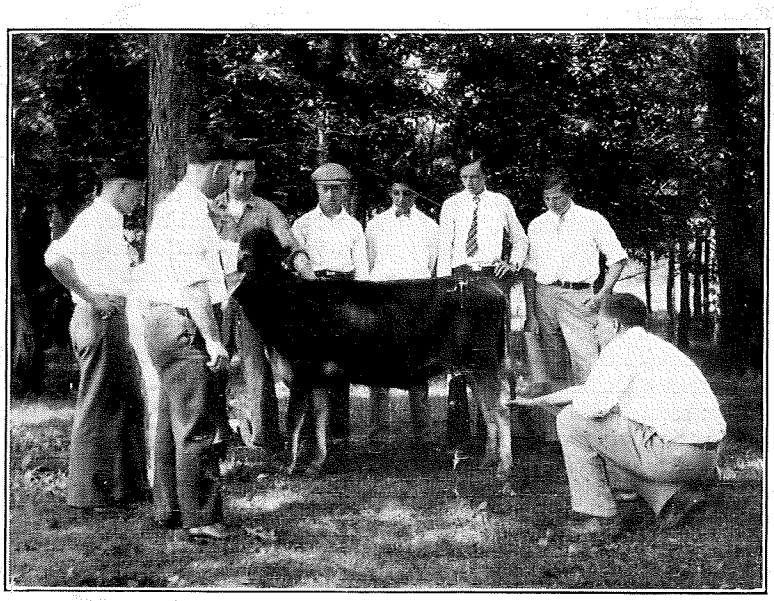
Agricultural Education



The Dairy Judging Contest this month at St. Louis will be the climax toward which many judging trips such as this have been pointed.

One of the fundamental measures of the success of the agriculture teacher is the degree to which his pupils continue to be students of the farming business thruout their lives.—A. V. Storm

EDITORIAL COMMENT

AGRICULTURAL EDUCATION

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THOSE LEADERSHIP CONFERENCES

TO DEVELOP rural leadership among the members is one of the purposes of the F. F. A. This past year, we have received reports of leadership conferences held in several of the states. The Ohio, Georgia, New York, and Virginia conferences are excellent examples.

We quote from the July issue of "Chapter Chats," the bi-monthly publication of the Future Farmers of Virginia: "A new feature of the 1931 Rally was the establishment of schools for leadership. Schools were organized for presidents, vice-presidents, secretaries, treasurers, and reporters. These classes continued for two hours each during two days of the rally and an opportunity was given for the various officers to learn more about their respective duties."

Quoting again, we find in the June, 1931, issue of *Agricultural Education* that Ohio's Fourth Annual Leadership Conference committee "decided that the conference should have five purposes: first, it should seek delegates from F. F. A. chapters who could work with their home chapters a year after attending the conference thus manifesting their leadership and creative ability; second, it should give these delegates suggestions as to setting up proper aims and objectives, conducting better meetings, the use of correct parliamentary procedure, and, in general, making better chapters; third, it should provide for the inspiration of delegates by having them hear of the work done in outstanding chapters in the state and have them meet, hear and know the three American Farmers selected from Ohio last year; fourth, it should give the delegates a state-wide rather than a purely local view of F. F. A. work; fifth, it should provide participation for as many delegates as possible."

And in *Agricultural Education*, January, 1931, it is stated that the Georgia F. F. A.'s held a school for officers of Future Farmer chapters. That "the group composed of presidents and vice-presidents studied and discussed parliamentary procedure. The secretaries studied how to write minutes of a meeting, how and what records to keep, and the duties of a secretary in general. Treasurers studied how to organize and conduct a Thrift Bank. Reporters received instruction in writing news stories concerning the work of local chapters."

Such conferences are excellent to train the boys, especially the officers of the local chapters, to assume leadership among their fellows. They send the boys back to school with ideas they can utilize in carrying out the aims and objectives of the F. F. A.; they give them confidence in their ability to do things for the chapter; and they help to make the local chapters function better than otherwise. Surely, this is training in rural leadership. May we have more of these leadership conferences. It is suggested that state advisers report their experiences with such conferences to the Future Farmer Editor.—H. O. S.

MEETING NEW DEMANDS

AS A result of science, invention and the effect of the "machine" upon industry, commerce, agriculture and the home, our civilization is passing thru a series of changes, the complexity of which is unparalleled in the history of the world. When we view the modern processes of production, the methods of transportation, the means of communication and the way we amuse ourselves, it appears as if there is no limit. We frequently wonder what is "just around the corner."

As a result of research, new discoveries and economic changes, examples of apparently modern methods in business and economic changes, examples of apparently modern methods in business and industry becoming obsolete almost over night can be observed daily. Likewise, the science of agriculture is going thru a process of evolution which demands of the present day farmer abilities unknown only a decade ago. The development of farm machinery, the results of agricultural experimentation, the changing wants of a consuming public and the new conditions in domestic and world markets, have created a need for new farming skills, new knowledge, new managerial abilities and a new courage.

The importance of this situation was emphasized by Dr. Willis A. Sutton, president of the National Education Association, when he spoke at the American Vocational Association convention in Milwaukee last December. Dr. Sutton stated, that if the program in his school in Atlanta, Georgia, is so organized that the boy or girl who enters kindergarten and graduates thirteen years later is not in step with the business of that time or a little ahead of it, then the school has failed in performing its duty. Likewise, in planning our vocational agriculture programs, it is essential that the training which we provide for vocational agriculture students today function efficiently when they start farming tomorrow.

Vocational agriculture, during the short time of its existence, has apparently made contributions of value in the rural communities where departments have been established. We have faith in the future possibilities of the work. We believe that the program will continue to have a successful and permanent growth. However, if this is to be true, it is essential that vocational agriculture must always render a service which will be in keeping with changing farm problems. Therefore, it is necessary that supervisors, teacher trainers and instructors in the field of agricultural education recognize these changing conditions and plan their programs of work accordingly.

How can this be done? It is quite evident that no single formula can be given which will contain adequate plans of procedure. Possibly some general principles may be suggested. If our programs are organized in accordance with existing and future agricultural needs, then we should constantly attempt to discover what these needs actually are. Proper contacts must be maintained by all agricultural education workers with business, social, economic, marketing and agricultural agencies. Farm conditions must be carefully observed. Problems should be interpreted and analyzed in international and national as well as in local terms. Likewise, teacher training courses must be constantly revised. All practices of questionable or of no value must be abandoned. Obsolete material must be junked. New truths must be revealed as a result of adequate research. New ideals and courage must be acquired by all. Action must become a reality.

At least these things must be done if vocational agriculture is to continue to grow and function successfully in a changing economic and social order.—F. E. M.

The Use of Instincts in Teaching Agriculture

W. P. BEARD, State Supervisor, South Dakota

ANY agriculture teacher who is in any way measuring his results finds a big gap between the material that the boys know and what they put into practice. The effort in this article shall be to point out some ways in which the agriculture teacher will be able to capitalize on the instincts and sell information to the pupil to the extent that the pupil "carries on." This article is not based on results of scientific experiments but merely calls attention to some ideas which have produced results.

The human being possesses certain fundamental instincts which determine his wants and therefore his action. Our problem, then, is to hook up with an instinct, the job to be taught. In this discussion, instinct means those fundamental wants or impulses which cause the individual to act. Some will say we should not appeal to instincts to get action but that we should appeal to the intellect. As before stated, we want action and appeal to the intellect alone doesn't produce enough action for vocational agriculture. This appeal to instincts is used in advertising. An analysis of the average advertisement for intellectual appeal usually indicates but a trace, but there is plenty of appeal to various strong instincts.

Our first main problem is the recognition of the instincts or instinctive wants we find in the farm boy. These are probably little different in the farm boy than in the city boy but they may be overlaid by attitudes which seem characteristic of rural people.

Handling an Adverse Attitude

Let us suppose the agriculture teacher is interviewing a farmer and his son, trying to influence the father to send the boy to high school. The father expresses a common attitude in, "What's the use when we don't get any rain." This attitude may be used or opposed. The latter would be the doubtful choice since an argument would be sure to arise. This would be poor salesmanship. A better way would be to find an advantage of this attitude and lead from that in some such way as this, "I wish more people looked at it as you do, then we could be better prepared for drouth, storm and frost. In our project planning we aim to get the boys to look ahead and see that nature is a big factor and to realize what may happen. We find that the one who does this can be prepared and avoid much damage."

Certain instincts will tend to keep the boy home, others will make him want to go to high school. If he has an "overdose" of domesticity he will not want to come. One of the best ways of appealing to a boy of this kind is to show him pictures of the agriculture classes, letting him find boys he knows. An explanation that most of the boys in the class are farm boys and that he should come direct to the agriculture room when he comes in on the first day will all help to overcome this boy's attitude of wanting to stay home. As a matter of fact most of the instincts discussed later will be appealed to on this visit. The main point to keep in mind is to try to find the boy's wants or interests and dwell on them.

Use of Instincts the First Day of School

The first day's work should appeal to strong and common instincts such as *manipulation* and *curiosity*. A device for the former is rope work. This also appeals thru the instincts for *approval*, *acquisition* and *mastery*. The matter of rivalry should not be emphasized at first but should be reserved for the time when working for speed and retention in rope work. In making use of *curiosity*, we should take something with which the boys are familiar and show many points about it they had never before noticed. One example might be the structure of the corn stalk. The class is taken to a nearby cornfield and the teacher calls attention by means of questions to interesting features of the corn plant. Of course, in most cases he also has to answer his own questions. This type of thing impresses the boy with the fact that he didn't know these points and wonders why he had never noticed them before. One boy said, "I thought I knew all about corn but I soon found out different." It is this change in attitude we get by such appeal to *curiosity*. The instinct is also developed for further use.

A sure appeal to the adolescent boy is thru his instinct to *manipulate*. Farm shop work provides this satisfaction in abundance. This first day in class he is given rope to manipulate and he learns to do certain things with it he had never done before, again using curiosity. As a matter of fact, only a suggestion is needed to get him to go home and show father and brothers. Here we have our manipulative and curiosity instincts supported by the instinct for *approval*.

Another instinct of importance in this first day is the instinct of *gregariousness*. Many of the class will be strangers to the others, hence, this instinct is not at all strong within the new group. However the desire to be with the group should be initiated and developed rapidly that it may be used soon for other purposes.

The fact that the boy is among strangers and the whole situation is new, makes him particularly responsive to *sympathy*. Here the agriculture teacher can do a great deal to inspire confidence which will mean results later. Furthermore, the teacher owes to the boy this help for in many cases it was he who induced him to come to high school. During this first day at school the boy should be appealed to thru many instincts.

Developing Shop Skills Thru Manipulation and Rivalry

Since our boys are farm raised they have learned a lot of *manipulation* and in many cases this instinct is fairly well developed but sadly in need of direction. One of the first problems is to overcome certain wrong habits in shop work. Ordinarily shop work is very attractive to these boys. It becomes necessary to find the habits that must be broken and then replace with proper ones. To what instincts can we appeal to get the boy to break himself of the habit of "strangling the hammer"? Of course, there should be an explanation of the proper way to hold the hammer. Experience shows us, however that here as elsewhere, reason alone often falls down due to a well fixed habit. Often it helps to call attention to the fact that women take hold of a hammer near the head and try to "push" nails into the wood. In most cases little further need be said, for group censure of feminity in members is quite immediate. A nail driving contest will capitalize on rivalry and by reason of inferior manipulation "woman fashion" is defeated.

Other manipulative skills, for example caponizing, are taught with another type of appeal. First it is often necessary in a more or less complex skill such as this appears to be to deal with inhibitions. The most common one is the idea, "I can't do that." Ordinarily this is very easily overcome by merely assuring the boy that he can, especially since lots of others have. When he is once started, the manipulative instinct has full play and when the first bird is off the table and alive, *mastery* and *approval* function strongly in producing the desire to do the job again. By the time a boy has done a few jobs of this kind he has confidence in himself and does not hesitate to do difficult jobs after a demonstration. *Imitation* may have a small part, but mastery and approval are the big factors. In a class there is always the element of rivalry. In caponizing, profit may have a remote influence at first but its main use comes later in inducing boys to caponize birds at home or for neighbors, but the biggest "kick" seems to come from showing off before others. A boy will tell with great eagerness how he did a certain thing for a neighbor.

Use of Rivalry, Display, and Gain in Project Planning

The planning of a project is often one of the most difficult jobs to motivate, probably because it is so far removed

(Continued on the next page)

from any felt want of the boy. The educational value is emphasized, comparisons are made with plans of other kinds; but to get an immediate interest, a new notebook which will be eligible for competition for prizes at fairs, and the citation of approval that has come to boys who have had good notebooks and disapproval of those who had poor ones, helps wonderfully. Thus we use *rivalry* and *display* primarily, and use *profit* as secondary. In working out plans rivalry for making suggestions enters and may be greatly aided by teacher approval of good suggestions.

Selection of the project rests upon a number of instincts, namely *gain, ownership, rivalry* and *mastery*. Here again the educational value is stressed, as that is the main idea of the project. By continually associating it with the boys' felt wants he may develop an impulse sufficiently strong to result in action. A very good device for securing project selection is a chart upon which all the boys' names are printed and as they decide on their projects the entry is made after their names. This is before them and there is rivalry to have a project at least up to average. Some boy will ask another, "Is that all you're going to have?"

Records should be kept from year to year on these projects and the good ones approved and the poor ones disapproved to following classes. The class also is led to analyze the records to see where the others have failed or succeeded. Prizes at fairs, profit on projects, and trips for achievement, bring into play the instincts for gain, display and desire to travel. There is usually a very strong appeal to a boy in even short inexpensive trips. In this connection, we must be aware that such stimuli are not closely associated naturally with the project and therefore must not be played up too strongly. The natural *gain* and *profit* must be the big appeal along with *mastery* and *approval.*

Starting the Project

After the boy has chosen his project and made his preliminary plans, there comes the job of actually starting it, buying the sow or seed corn or renting the land. Often an opportune time of beginning means the difference between loss and profit. There is a tendency to postpone the starting of a project. Here we must analyze the boy's desires as well as the situation at home. Ordinarily the desire for *ownership* is a strong point in this case.

Another psychological factor to be taken into account here is how long after the start it will be until the rapid and evident progress of the project takes place. If, for example, the sow is to farrow soon after the project is started, interest increases rapidly, while if farrowing is not to take place for a couple months, interest may decrease. The satisfaction from ownership may be of short duration. *Ownership* may be a secondary motive making possible the satisfaction of a desire to *excell,* hence in the case of a long period before farrowing it is necessary to hold before the boy some future competition or the gain in weight from week to week is a means of maintaining interest and makes an immediate use of *rivalry.* If weights are taken rivalry gives way to *curiosity* and *mastery.*

The Unfamiliar Job

If the job is one with which the student has had little experience, such as buying a sow at an auction sale, the boy often has an emotional condition of mild *fear* or *timidity.* This condition should be reduced as much as possible by previous selection and setting of maximum price in conference between father, boy and teacher. If the boy is timid about bidding, the teacher may make the first bid and the boy will then more easily be able to make the next one. The boy will find it easier to bid by a motion than by speaking as he is much less conspicuous.

The Familiar Job

In case the first job in the project is a familiar one, interest is apt to be lagging and it becomes the teacher's duty to see that new phases, factors and meanings are put into it. For a homely illustration, let's take manure hauling. Certainly something of the composition and value of manure will add interest but the mastery of a situation as to efficiency of work will give a problem to challenge the boy's ability. Problems should be pointed out as to where to drive in loading and the plan of unloading so as to save the most time. The latter point, one will find, has seldom been recognized by the boy (or his father either) and it sets up a definite thing for mastery. Psychologists tell us people are curious about unusual features concerning common things. Hence pointing out the many problems relating to adjustments on a plow is often all that is necessary to motivate plowing. A rare "kick" is the one a boy experiences on being able to show his father that to set the coulter in a certain way will make the plow scour. The feeling of mastery would be greater in a case such as this than in a case like caponizing where the father is not expected to know how to do the job.

Keeping Records

The keeping of records and making a report at the close of the project is a problem similar to the one in making plans. However, the ends are more immediate and are more closely associated with gains or losses and *mastery.* The prospect of having other classes analyze his records, of *approval* thru newspaper publicity, or of being elected State or American Farmer, are most impelling motives for making proper final reports. The final report with its satisfactions may be used, but a system of grading at periods thruout the project and the inspection of the notebook by visitors appeal to his desire for *approval.* The satisfaction of grades should be so conditioned that the satisfaction is in the mastery or production of a good piece of work rather than in the grade itself

Securing Prompt Efficient Action

External pressure may eventually produce fixed habits along this line, as along other lines, but the best insurance seems to be a hook-up with some instinctive want. Ultimate gain is remote while *approval* is immediate. The praise given by the agriculture teacher on a visit to the project may be the best incentive to a thoro and careful piece of work. Another device often of use in this connection is the project tour in which the class visits each boy's home and inspects the project. The weedy field, the dirty pen, and the scabby animals bring disapproval from associates.

Adopting a Log Time Program

In getting a boy to adopt a long time program of supplementary supervised practice the instincts of *ownership, rivalry,* and desire for *approval* can be used. A record sheet containing the boys' names and a list of the improvement jobs that have been done may be kept posted in the room so that rivalry and comparative progress is evident. *Imitation* can be used in this case to develop the ideal. It will be advantageous to visit farms where certain conditions exist and to have other boys tell what they have done so that a feeling is developed that a particular thing is a general custom and therefore well to imitate.

Developing the Problem Solving Attitude

One of the most difficult jobs is to develop the problem solving attitude. Action is usually on an instinctive or emotional basis but we should aim to change more of it to an intellectual basis. In other words the use of the instincts should be the starting point for developing proper mental habits. This is necessary because analysis, except to a very superficial degree, is unnatural. Typical simple problems must be analyzed and solutions worked out. Pupils must be drilled in this type of thinking. *Imitation* of the teacher, *rivalry* with others in the group, the desire for *approval,* and possibly the desire for some mental activity all combine to make the problem solving process satisfactory and may eventually connect this satisfaction with the mastery instinct and habits, rather than those artificial ones of rivalry and approval. So far too much teaching is concerned with teaching solutions rather than methods of getting solutions.

Probably the easiest job of the agriculture teacher is to secure participation in social activities. The Future Farmer Association finds its justification here and readily finds instincts such as *gregariousness* and *play* activity securing a high percentage of response. The main feature of this social activity is that it can be used to lead to other activities associated with it so that the boy will do a piece of work connected therewith, urged on by the instincts that make the social activity satisfactory. Thru this group activity may be developed the desire to co-operate.

Summary

We might sum up the idea as follows —having given a certain objective for the boy to attain, we would consider what instinct or felt want most determines his action, then select an appropriate device to set off the urge that will lead to action. The object is, as mentioned in many cases, to condition the instinct for future usefulness so it will function without the devices of the school. This points to the problem of studying attitudes and instincts and how to modify them, of inventorying the impelling instincts in adolescent boys and providing proper stimuli to accomplish our aims.

Pacific Region Objectives and Policies for 1932

1. That we improve our publicity program by outlining a definite yearly program at summer conferences which will include special phases to receive emphasis each month of the year. Each state to present mimeographed copies of this outline at the next Regional Conference.

2. That 75 percent of the departments in each state conduct one or more evening schools. The above objective to include marketing schools in each state.

3. That one or more evening classes be organized and taught by trainees in each state maintaining a resident teacher training department.

4. That 20 percent of the project record books in each state be checked by the state supervisor or teacher trainer, and that a state-wide cost of production analysis be made of at least two major enterprises.

5. That each trainee check at least ten completed project record books for accuracy and completeness—books to be supplied by supervisors or itinerant teacher-trainers.

6. That each state formulate a set of project standards for some of the major enterprises within the state and present them in mimeographed form at the next Regional Conference.

7. That each state plan and conduct district or state project contests and make a progress report at next regional conference.

8. That a chartered chapter of F. F. A. be established in each department in the region.

9. That each contestant in vocational agricultural contests be a member in good standing in an F. F. A. chapter.

10. That every state and territory be represented at the National F. F. A. Congress in November, 1931.

11. That each state organize in its resident teacher-training department, if one is maintained, an associate chapter of the F. F. A.

12. That 100 percent membership in the F. F. A. by teachers be secured in each state of the Region.

13. That our Regional Conference be based on a personally conducted analysis of the problems found in each state by the agent on his annual inspection trip of the problems of the various states of the region.

14. That each state prepare and present an analysis showing the need for new vocational agriculture departments in their respective states during the next five-year period.

15. That 100 percent subscription to *Agricultural Education* magazine in each state be secured.

16. That the Pacific Region requests that as a part of their program for 1932 the Federal Board for Vocational Education appoint a committee representing all four Regions for the purpose of summarizing the situations existing in the various states with regard to desirable co-operative relationships with industry and the occasional difficulties encountered by vocational workers from the efforts of industrial concerns to use our program for the purpose of advertising their products; that this committee formulate a simple, clear-cut statement of policy which can be used as a guide by both vocational education workers and industrial organizations for determining future relationships.

Seventh Annual Contest at St. Louis, October 10-12

VOCATIONAL agriculture teams representing various states will converge on St. Louis for the dairy, milk, and poultry judging contests to be held October 10 and 12 in connection with the National Dairy and Poultry Shows.

Complete announcements of this event are contained in Miscellaneous Circular No. 7 just published by the Federal Board for Vocational Education. The dairy judging contest will be conducted under the supervision of R. D. Maltby of the Board and will start at 7:30 a. m., Saturday, October 10, in the main arena of the exposition buildings. Each contestant will judge a ring of four animals each, heifers and cows, including Holsteins, Jerseys, Guernseys, and Ayrshires.

Prizes for dairy cattle judging will include two scholarships in agricultural colleges of $400 and $250 each; true type dairy cow models; sets of books; gold, silver, and bronze medals; silver trophies, canes, watch charms, wrist watches, railroad trips, and official A. V. A. certificates. Approximately thirty-five teams will enter this contest.

The milk judging contest will be conducted under the direction of Mr. C. O. Henderson of Mississippi, Saturday, October 10, at 1 p. m. It will consist in scoring and criticizing seven samples of milk according to score cards to be supplied. The principal prizes to be awarded include two gold watches, sets of books, and A. V. A. certificates.

The poultry contest will be supervised by Mr. J. E. Hill, state supervisor for Illinois. It will be held at 8 a. m., Monday, October 12. Teams consist of two boys rather than three and all judging is to be on the basis of production. Each team will place eight classes according to the placing card to be furnished. Birds used will be S. C. White Leghorns, Barred Plymouth Rocks, S. C. Rhode Island Reds, and Buff Orpingtons or White Wyandottes. There will be four birds in each class, either hens or pullets.

Prizes in poultry judging include gold watches, sets of books, gold, silver, and bronze medals, and trophy cups.

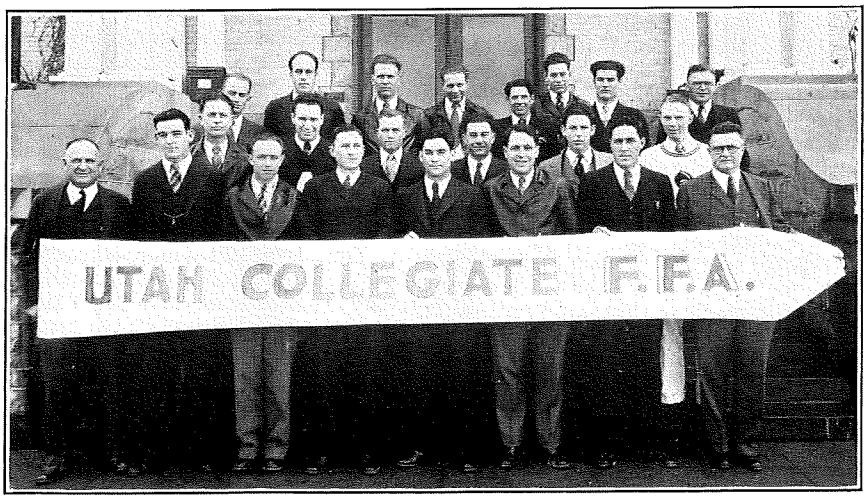
Dr. C. H. Lane of the Federal Board is chairman and manager for these contests; other members of the A. V. A. committee in charge, are H. C. Fetterolf of Pennsylvania, J. E. Hill of Illinois, J. A. McPhee of California, and L. M. Sheffer of Georgia. Mr. O. E. Allen, agricultural director for the St. Louis Chamber of Commerce, has charge of local arrangements.

Utah Organizes College Chapter F. F. A.

THE Utah Collegiate Chapter of the Future Farmers of America was recently organized at the State Agricultural College, Logan, Utah. Its membership consists of teacher training students and former F. F. A.'s now enrolled in college.

The accompanying picture was taken at the time the Regional Agent, Mr. W. T. Spanton, visited the State Supervisor, L. R. Humpherys. On this occasion the Chapter arranged a luncheon and invited the heads of the various agricultural departments of the college. Elmer Wood, state president, F. F. A., and American Farmer, spoke on the organization in the state.

The collegiate chapter was organized to promote a better understanding of the F. F. A. and the duties of the adviser. A complete set of officers was elected and a program set up. A committee worked out a schedule of visits to nearby chapters. The chapter work has been given a definite place in the methods training.



Charter Members of Utah Collegiate F. F. A.

Teaching Farm Shop Work and Farm Mechanics Thru Pupil Projects

G. A. SCHMIDT, Professor Agricultural Education, Colorado

G. A. Schmidt

FOR some time I have been convinced that much of the teaching in farm shop work and in other forms of farm mechanics can be done thru real pupil projects, or expressing the idea in other words, that the project method of teaching is especially well adapted to the type of school work just mentioned. I believe this because practically all the boys in farm mechanics classes are farm boys and all farm boys have abundant opportunities to select real projects in practically all types of farm mechanics work. Furthermore, I am convinced, for reasons to be made clear later in this article, that teaching thru real pupil projects is one of the most effective methods of instruction, this effective use, however, always being dependent upon the condition that ample opportunities for selecting real projects by the pupils exist in the subject being studied.

What Is a Project?

A project in farm mechanics is a whole-hearted, purposeful and life-like undertaking of considerable scope, conducted by the pupil and involving one or more farm mechanics enterprises in which he will actually receive the training he should acquire in regard to the enterprise or enterprises involved, were he to learn thru some other experience.

A project in farm mechanics is a definite piece of purposeful farm construction, repair, or overhauling work of considerable scope, involving one or more of the farm mechanics enterprises which are made the basis of instruction for the year's work, entered upon wholeheartedly by the pupil, and in the execution of which the pupil is going to acquire the educational growth—knowledge, skills, habits, attitudes and appreciations—needed to master the undertaking, and essential to the abilities which should be acquired from such an undertaking.

I should like to mention right here that the psychology and pedagogy underlying teaching thru pupil projects is exactly the same in every educational subject regardless of whether or not the subject lies in the field of general education, of prevocational education, of industrial arts education, of vocational education, or of farm shop work or some other form of farm mechanics. In other words, a project is a project, and has all the elements characterizing a real project, regardless of the educational subject in the study of which the project happens to be chosen. The following definitions of projects, formulated by educators in the field of general education, are here quoted to illustrate the point in question.

1. "A project is a whole-hearted, purposeful activity proceeding in a social environment or more briefly, a hearty purposeful act."[1]
2. "A project is a definite and clearly purposeful task, and one that can be set before a pupil as seeming to him vitally worth while, because it approximates a genuine activity such as men are engaged in real life. The project method is the solution of problems on the plane of real activity."[2]
3. "The project, as used in teaching, is a unit of activity carried on by the learner in a natural and life-like manner, and in a spirit of purpose to accomplish a definite, attractive and seemingly attainable goal. In the project the learner participates in the planning and direction of his own activities toward the accomplishment of the goal, and for that reason experiences a feeling of ownership and responsibility for the success of the activity."[3]
4. "The project conceived and executed by the pupil on the ground of his own experience is a still better basis for our educational efforts because it sets up in pupils self-determination and purposeful activity in a complete, natural, and well-rounded unit of effort. The project has the merit of a self-directed organization of mental and physical resources to achieve a well-considered result."[4]
5. "A project is a teaching device and a learning device. It is a name for what happens when an individual sets about accomplishing a purpose and in carrying it out brings about changes in his knowledges, skills, habits, or attitudes. If the undertaking is worthy and the changes are desirable, we call the activity educative. In teaching by projects the attention becomes focused upon the activities of the pupil rather than upon those of the teacher. The project method means providing opportunity for pupils to engage in living, in worthwhile enterprises so that they may reap, to the full, these possible benefits."[5]
6. "To teach thru 'projects' means, in essence, to bring knowledge and skill to the learner thru the medium of problems for which he earnestly desires a solution. The word, problem, as used here, means real problems of actual life such as those that the farmer, the mechanic, the business man, and the housewife must meet and solve. Only when problems of this latter type become centers about which to organize skills and ideas is one truly applying the 'project method' of teaching. The important feature of project-teaching lies in the attempt to make skill and knowledge dynamic from the outset. The materials of education are taught and learned in their immediate application to the solution of real problems or to the realization of whole-hearted purposes."[6]

Characteristic Features of Projects

The essential elements or characteristic features found in all definitions of projects are as follows:

1. *A definite undertaking of considerable scope by the pupil himself.*[7]

   This implies that a project is not a little job nor a mere exercise, but a real, complex, and more or less difficult undertaking extending over a considerable period of time. The statement further implies that the pupil assumes full responsibility for all the activities involved in the planning and in the execution of the undertaking. A project is a self-directed activity.
2. *An undertaking entered upon wholeheartedly by the pupil.* This simply means that the pupil is vitally and intrinsically interested in engaging in the undertaking. It means that he is eager, and desirous to do the task. It means that his heart and soul are wrapped up in it; in other words, he himself wants to undertake the task because he has an inner urge or a whole-hearted desire to do so.
3. *A purposeful activity.* This means that the pupil has clearly visualized, definite aims, objectives, or goals in mind which he wants to attain in conducting the undertaking, or, expressing the idea differently, that he has strong, gripping or challenging purposes or ends in view which he wants to accomplish. He knows what goals he wants to reach. He approaches the task in an attitude of purposefulness. It is not an activity imposed upon the pupil by the teacher.
4. *A life-like undertaking.* This means that the undertaking is true to life that is natural and resembles similar undertakings done out of school

by men engaged in the real work of life. In other words, the work of the project is devoid of academic artificiality.

5. *An educative activity.* This implies that in the proper execution of the project the pupil will acquire the skills, habits, attitudes, appreciations and knowledge which he would acquire if he followed some other means of learning. Every project must be an educative device and bring to the learner those outcomes of the educative process that should be acquired by the pursuit of the subject. In other words, the learning that takes place must be such as contributes to the aims of the instruction; however, the educational outcomes always come to the project workers as a by-product as he strives to attain his purposes.

An Example of a Real Project

Before going further into this discussion it may be profitable to pause briefly, and to consider a specific project. The following situation is therefore described: In the first year's work in a farm mechanics course an instructor has included the following farm mechanics enterprises as the basis for the year's work:

1. Farm Sketching and Drawing.
2. Making Small Wood Appliances.
3. Tool Sharpening.
4. Handle Fitting.
5. Harness Work.
6. Rope Work.
7. Farm Soldering and Allied Work.
8. General Repair Work.

This year's plan of work offers possibilities for four or five real farm mechanics projects which every boy in the class could select if he so desired.

In explaining the year's work to the boys in the class, the instructor has decided to show the boys the possibilities of a good project involving two of the farm mechanics enterprises included in the year's work; namely, Handle Fitting and Tool Sharpening. Let us assume that he did this somewhat as follows:

"Boys, I think I can safely say that on the home farm of every one of you there are many tools and small implements either with loose or broken handles or with no handles. I think I can also safely say that many of these home tools, including saws, chisels, planes, axes, hoes and the like, are also dull and in other ways unfit for efficient use. According to our outline for this year's work in farm mechanics I have tentatively allowed you six weeks of shop time to acquire training in fitting handles to tools and implements and in sharpening farm tools. You boys may either choose a project involving these two farm mechanics enterprises, or you may bring to the shop a few jobs with which to keep yourselves busy and I will also assign you other jobs and exercises to use the time set aside for this type of work.

"For those of you who wish to choose a project covering these two enterprises I have here a mimeographed list of common farm tools and small implements found on farms, which may suggest possibilities for your project. I would suggest that you check on this list those articles you know you have on your home farm which have broken handles, which are dull or in other ways unfit for efficient use, and which you would like to have in good condition for your own personal use. Then, I should like to suggest that you each take the list home and show it to your father, if you wish, and perhaps he can check other articles on the list which he would be pleased to have put into good condition. Perhaps your mother, also, has some articles, similar to some of those listed, which she would like to have put into good shape. I am quite sure your fathers and mothers would greatly appreciate the services you boys could render them along these particular lines; here is a fine opportunity to do something for them. Think this proposition over and if you decide to make a project out of your work in these two enterprises, begin to organize or plan your project, and be prepared to discuss your plan with me within a few days."

I think I am safe in concluding that most of the boys in the class will want a project involving these two enterprises. I think I am also safe in predicting that most of the boys will come back, after their home consultation, with a list of articles which they *want* to repair so long that it will take more school time to get these articles into good condition than there is time tentatively set aside for this type of work. Furthermore, I firmly believe that if the instructor asks all the boys to bring to school all the articles they wish to repair as work in this project, the school shop will be so cluttered with articles brought in that there would be no room for the boys to work. Contrast this situation with that which most farm shop teachers describe when they say: "My biggest problem in shop work is to keep the boys busy because of a lack of productive work."

The project suggested above to the boys, that of fitting handles and of sharpening farm tools, is typical of projects which could be suggested for other farm mechanics enterprises in the year's work previously outlined; it is also typical of projects which could be selected in the second year's work, in the third year's work, and in the fourth year's work, if the farm mechanics courses involves these successive years of work.

I should also like to repeat that I believe that there is no subject in the school curriculum which can so easily be put on the project basis as that of farm shop work or of farm mechanics because the boys in these classes are farm boys and opportunities for excellent farm mechanics projects, in all types of work, occur on practically every farm.

The Psychological Effects of Project Teaching

The following more or less generalized statements contrast the effect upon the attitude of mind of the learner when he learns thru the execution of real projects and when he learns thru some other experience.

1. In performing miscellaneous shop jobs or exercises, generally superimposed upon pupils by the instructor, most pupils lack an impelling motive to apply themselves vigorously to the tasks. Such tasks, as a rule, do not appeal to the average farm boy; he does not find them absorbing or purposeful. Contrast this attitude toward school work of boys so employed with that which results with boys occupied by project work such as previously outlined.
2. The boys too often show little or no interest in the ordinary shop work where the project method is not used, but wherever boys in shop classes are engaged in good projects and whenever these are well managed, the attitude of the boys change to one of interest, intense application, whole-hearted desire and ambition and they have a more wholesome attitude toward school work.
3. Whenever the pupils are engaged in real projects they assume a great deal of the responsibility of their work.
4. Quite often, after work on real projects has been introduced into the shop course, the boy regarded as stupid, very slow, or even almost helpless, begins to show much common practical sense, considerable power of self-direction, skill and an understanding of facts and theory to an astonishing and almost unbelievable degree.
5. Half-hearted efforts, attitudes of indifference, inattention, boyish mischievous conduct and disrespect for the instructor generally disappear in shop classes when opportunities to learn thru real projects are substituted for the "prescription method" of attempting to keep the boys busy in the shop.
6. Boys engaged in good projects want to learn; they ask for much related and supplementary reading material, and ask for extra time in the shop the moment they identify themselves wholeheartedly with their tasks as they do when they are absorbed in real projects.
7. As a rule, the ordinary farm boy has no real need and feels no immediate need for what is ordinarily taught on the exercise basis. Every real project in farm mechanics immediately creates real needs for knowledge and skills and the project worker wants those.
8. Problems confronting boys in their projects challenge the boys to solve them because they are the boys' own problems. It is natural for boys to take an indifferent attitude toward problem solving when those problems are not definitely their own, but are assumed ones, or in other words, are the "other fellows problems."

1—W. H. Kilpatrick in "The Project Method."
2—M. F. Stormzand in "Progressive Methods of Teaching."
3—Harl R. Douglass in "Modern Methods in High School Teaching."
4—Hosic and Chase in "Brief Guide to the Project Method."
5—Charles A. McMurry in "Teaching by Projects."
6—From Bagley and Keith in "An Introduction to Teaching."
7—It should be mentioned here that in this discussion only individual pupils projects are being considered, and that group and class projects are being ignored.

[This article will be continued in November.]

"Our part-time program in Wisconsin seems to be going forward in splendid shape. I had before the end of December reports from 21 part-time schools with an enrollment of 479 farm boys."—L. M. Sasman, Supervisor of Agricultural Education, Wisconsin.

Evening Schools

Specialists in Evening Class Instruction

M. J. FIELDS,
Vocational Agriculture Teacher,
Crawford, Texas

WE BEGAN our evening class in dairying early last January. The school was scheduled to run for 12 nights, meeting on Tuesday night and Thursday night of each week. The meetings grew in interest and continued regularly, with the exception of one night which was too rainy and cold to meet. The subjects taught were as follows:

1. Feeding the dairy cow.
2. Feeding the dairy cow (continued.)
3. Winter feeding and pastures.
4. Handling and sanitation of milk.
5. Housing and care of cows.
6. Bull circles.
7. Cow testing work and results.
8. Grading up of a herd.
9. Judging of dairy cows.
10. T. B. and contagious abortion.
11. Marketing of dairy products.
12. Purina dairy show.

The lessons were conducted in the nature of round table discussions and were led from time to time by men of wide reputation on a given problem. Mr. Paul G. Haines and County Agent J. B. Snider assisted in teaching the feeding lessons. The discussion on handling milk was led by Mr. Clyde Hays, city chemist of Waco. Cow testing led by Dr. Collins. He gave a lantern slide talk. It was rather unusual in that the slides were of his own herd. Dr. T. T. Christian gave a lecture on T. B. and contagious abortion. All other lessons were handled by myself.

At the close of the evening school a banquet was given in the high school gymnasium, at which 200 people were seated. Besides the members of the school and their instructor, there were present for this occasion other farmers, business men of the town, Borden Milk Company officials, and a number of agricultural workers. A program which was educational as well as entertaining was carried out during the evening.

The average attendance maintained during the evening school was 26.4 exclusive of the night the Purina Dairy Show was put on, and the night of the banquet.

Subject Matter Important

FRATE BULL,
Jackson, Tennessee

THE factors to be taken into consideration in selecting a course for an evening class are the same as should be considered in selecting a course for an all-day class. However, we are not sure that quite a number of courses for all-day students have not been poorly selected. In many cases all-day students must attend school and they are required to take a number of high school subjects that they may or may not want and in some cases may or may not need. If they do not like the information that the teacher of agriculture gives them, they have to take it and continue to come to school just the same.

Such is not the case with adult farmers. Dr. H. O. Sargent, Federal Board for Vocational Education, makes this very plain when he says: "A horse will not stand up to the manger unless there is hay in the rack and neither will a farmer attend an evening school unless there is something there he wants."

"The secret of success in this evening school seems to be that the course was based entirely on the needs of the farmers in the community," said Mr. J. H. Pearson, part-time and evening school specialist, Federal Board for Vocational Education, after a two hours' conference with Mr. W. S. Baldwin, Milan, Tennessee, Master Teacher, 1929. Mr. Baldwin's school ran two nights a week for 12 meetings with a total enrollment of 128 adult farmers. As supervised practice work, these farmers terraced 214 acres of land, applied 535 tons of ground limestone, home mixed and applied 112,400 pounds of commercial fertilizers on 375 acres of land, increased their number of livestock by 65 head, put out successfully 45 acres of clover, and improved 50 acres of permanent pasture. The increased earnings of the farmers due to this evening school were estimated at $16,906 for the first 12 months after the school started.

Mr. Baldwin used the following methods in deciding what information farmers need and want in evening schools: (1) he made and studies farm surveys; (2) had personal talks with farmers in the community; (3) studies results that have been obtained on farms in the local community and nearby communities; (4) studies results that have been obtained at the nearest experiment stations; (5) studies available markets; (6) held conferences with groups of farmers.

Teaching Thru Farmers' Clubs

T. M. DEAN,
Turbeville, Virginia

IT IS possible to do evening class work thru farmers organizations. Indeed, it is often more simple than going out and organizing a group solely for an evening class. The problem is getting the farmers' organization first, or finding the community with a local farmers' club.

Since in a majority of rural communities there is no such club many instructors will find it necessary to lead their farmers into the formation of a purely local farmers' club which may or may not become affiliated with a national farmers' organization. That there is a need for such organization goes without saying. The instructor need not worry for lack of support if his farmer patrons are meeting with him at regular intervals in his department provided he is a teacher capable of leading his group thru others and can accept the responsibility of planning a community farming program and lead his group to set up very definite annual objectives within this program.

There exists at Turbeville, Virginia, a "Men's Social Club" thru which the instructor has been able to conduct evening class work for the past several years. This club was organized by the agricultural instructor with the assistance of the very able high school principal. We read in their constitution that the purposes of the club are to (1) promote a spirit of friendship and mutual understanding among the farmers of the community and their neighbors, (2) to provide wholesome entertainment and social intercourse for its members and the community, (3) to promote the interests of the schools and churches and all other agencies for good in the community, (4) to develop better agriculture in the community by means of fostering organized instruction in both the night school for men and the day school for boys; and by being mutually helpful. Another article declares that it shall be strictly non-partisan in any political, religious, economic, or other controversy that may arise within its sphere.

This club has its objective committee which is a part of the instructor's advisory committee. Each year definite objectives are set up and these always include plans for an evening class on some farm problems. It is true that other activities take up the time of many of the meetings, but thruout the year ample time is found on the bimonthly programs for the instructor to do good teaching. In fact, he finds himself largely responsible for the programs of the club, and if he does not include an evening class program in his plans it is his own fault.

Not all the members of the club can be enrolled as evening class students.

Only those who carry out the improved practices taught are designated evening class students.

This club serves the same purpose for these farmers as the several civic clubs serve for the business and professional men in our towns and cities, and at the same time offers a splendid opportunity for the agricultural instructor to teach the improved farming practices needed in the community. This particular type of club has spread to five other communities of Halifax County, Virginia, since the one at Turbeville was organized some ten or twelve years ago. Much could be said about the many benefits of this little organization but the purpose of this article is merely to indicate that evening class work can be conducted easily thru permanent farmers' clubs and that the problem of organizing the class becomes a simple matter from year to year. The club may be organized first or the evening class may be organized first, with the permanent club growing out of the evening class group. In either case, there are certain rather definite rules which must be complied with.

Variety in Evening School Instruction

W. B. McDOUGALL,
Director, Atlantic County, (New Jersey)
Vocational Agricultural Schools

EVENING class work as conducted in Atlantic County, New Jersey, where there is a County Vocational Board of Education and a county unit for operations, is and has been for several years a major operation. Approximately 90 percent of the enrollment is comprised of adults.

An entirely different type of instruction may be prepared for these men than must be organized for high school pupils. There are several reasons for this, two of which are of prime importance: (1) These adults have the entire farm and family responsibility on their shoulders, and may be more thoroly familiar with certain ordinary farm operations than the average agricultural instructor, but are weak in a few of the operative or managerial skills; (2) They wish to receive help only with their known or proven problems.

The use of farm surveys of practices in the district is perhaps the best way to determine the individual weak spots. Regular supervisory visits bring out many of them, but by carefully listing practices on a survey sheet, a real picture of the situation can be made. In order to present the information in a practical, concise and interesting way, there are numerous methods which may be used. The experience gained in Atlantic County after 16 years of evening classes showed that not any one method of presentation can be followed thruout a course or group of courses. Methods must be adapted to the men in the class and to the outside aids and information available.

By and large the combination of instruction and conference type of evening session has proven valuable and popular. Film strips where available, selections from lantern slide sets, charts, specimens, and some few movie films can be used to advantage in presenting instructional material dealing with specific problems. Occasionally, well-known farmers, experiment station specialists, or state department of agriculture men may be secured to present certain specific matters to the farmers.

Two other methods of teaching used very successfully are the observation tour and the demonstration class held on the farm of one of the members where an operative job is taught and each man has an opportunity to perform the operation himself. Skill may not be developed at this meeting, but a reason for the operation and a knowledge of the steps are obtained.

To illustrate the nature of problems used for meetings, a list of problems in the evening class courses in 1929–1930 in Atlantic County is given.

A. Course Sweet Potatoes.
   1. Organization and Plans for Meeting.
   2. How to Grow A-1 Sweet Potatoes.
   3. Fertilizers for Sweet Potatoes.
   4. Sweet Potato (Movie) and so on.

B. Poultry Course.
   1. Organization and Plans for Course.
   2. Care of Laying Flock.
   3. Vaccinating of Chickens for Pox.
   4. Controlling Lice and Mites, and the like.

If the instructor is really on the job and presents year after year those topics which the men want to learn about, he can continue to draw an attendance at each meeting. Some of our groups have been meeting for a number of years and each year discussing the same farm enterprises. There are records of men attending these classes for eight and nine years, some even longer. New men in the district are visited and invited to attend classes. One of the drawing cards for good annual attendance is supervision which has produced results on the individual farms.

Evening Class Essentials

J. H. SIMS,
Teacher of Vocational Agriculture,
Lyons, Georgia

MEN may be reached in many different ways. Some like entertainment; others will travel for miles for a "feed," but all men are appealed to when the problem of making a living is to be studied. This is the secret of the success of evening classes everywhere; and the classes in the Marvin-Yancey school in Toombs County, Georgia, are not exceptions. That this is evident is shown by the fact that the farmers attending these classes insisted on having a meeting every night for the duration of the classes.

The evening class on "Increased Crop Production Thru the Use of Winter Legumes" held in this school in September, had an average attendance of 30 farmers from an enrollment of 40.

The class so influenced board members who were present that this winter they authorized the use of the school trucks to bring farmers to an evening class to be held on "Hog Production." This evening class had a total enrollment of 122 farmers with an average attendance of 60.

In conducting these classes I found that there were several essentials of success in an evening class.

First, it is necessary to advertise the meetings. This I did by making personal visits to each farmer in my school area; by announcements in the school; by placing posters at the main gathering places of the farmers; by use of the telephone, and mimeographed reminders and thru the co-operation of the Future Farmers chapter and the school trustees.

A comfortable location for the class is one of the main essentials; good lights, a warm room, a clear blackboard, and attractive charts, I find are most necessary in conducting a successful class. A cold room means a cold class and poor lights dim the enthusiasm of what would otherwise be a bright class.

A third essential to success is that each meeting be conducted towards a definite end. A meeting without an objective does much to kill the interest of evening class members. *Facts* are necessary in order to proceed to an intelligent solution of problems. The first responsibility is that the teacher get the most pertinent facts available on the enterprise with which the class is to deal. These facts must be of such authority that the farmer is willing to accept them. It is necessary to chart local facts on the blackboard as drawn out by conference procedure as well as those facts drawn from controlled experiments. After getting the facts, and correlating his own experience with the results of controlled experiments, the farmer is able to arrive at a very definite conclusion.

From the results obtained from my classes in the Marvin-Yancey school these factors of success have proven to be guarantors as well as essentials.

Winter Study of Fertilizers Prepares for Spring Planting

BODE HUGHES,
Petal, Mississippi

THE farmers of the Petal community interested in evening class work met once a week during the months of January and February to study fertilizer problems of cotton and corn.

There was a total enrollment of 25 adult farmers. The meetings were held from 7 to 8 p. m. in the agricultural building under the direction of the Smith-Hughes teacher. The information and data used in most cases was obtained from the local experiment station, however, the experiences of the farmers themselves proved to be very helpful in finding solutions to many of their problems.

The farmers chose the problems that they were most interested in. This choice of problems was determined thru leads obtained and recorded by the agricultural teacher in his individual visits to the farmer. The first visit was made entirely for the purpose of obtaining these leads and stimulating interest in studying problems. Before the second visit this information was summarized and the first problem was selected. On the second visit the problem for study was announced along with the place, time, and length of meeting.

After each meeting the farmers were visited for the purpose of supervision, obtaining more leads, creating more interest and making necessary announcements for the next meeting. The supervision was of such nature as to explain to the farmer any question that was brought up and studied at the meeting which he did not understand. These follow-up visits were received with much interest and were a big factor in holding up and increasing the attendance.

Encouragement was given to the prospective members to attend thru visits made by the teacher after each of the first three or four discussions and giving him the results of each problem studied. Interest was usually aroused and questions were asked which led to an invitation given him to attend the next meeting where such questions would be studied and conclusions made. In this way and thru publicity given by those attending, 70 percent of the farmers in the Petal community were enrolled in organized evening class instruction this year.

Wanted—A Full Meal

V. Y. CRAIG in the October issue of the Texas Outlook—"It is becoming increasingly apparent that the much talked of farm relief is inseparably connected with the problem of rural education. Our custom of serving the country children with the fragments which fall from the cities' educational table is not calculated to make ambitious boys and girls satisfied with rural life."

Recent Developments in Farm Records

JOHN A. HOPKINS, Jr. Department of Agricultural Economics, Iowa State College

FEW branches of agricultural methodology have undergone more profound changes in the past 10 years than the methods of keeping and using farm records. Ten years ago attention was focused on figures showing the financial cost of production per bushel of corn or per hundred pounds of gain on hogs. If, for instance, the cost of corn was found to amount to 60 cents per bushel as compared to a price of 75 cents, while the cost of oats was 40 cents as compared to a price of 35 cents, then the inference was that the farmer should grow more corn and less oats.

In order to obtain these "cost" figures it was necessary to keep elaborate cost accounts which were troublesome beyond the patience of the great majority of farmers. If the farmer desired to keep a simpler record he found there were no methods which would give him any important facts beyond his gross expense and gross income for the year. By such simple methods as were then available he could ascertain whether he was making a profit or a loss, but could hardly locate the specific weaknesses in his farm business that were responsible for the loss unless he resorted to cost accounting, and this he could not well do without a trained accountant.

It was not long until agricultural economists began to point out that the "cost" per bushel of corn or of oats meant very little, and in fact that it was seriously misleading. At the same time farmers shook their heads over these figures and looked decidedly dubious. The farmer might well say, "But how can I raise more corn and less oats? In order to get even my present yields, I must keep my rotation which contains a legume to help maintain fertility of the soil. To raise the clover I need the oats as a nurse crop. Further, I am already raising all the corn I can take care of with my present supply of labor. It is true that the oats add very little to my income, but without them I would not have enough to keep me busy after the corn is laid by in the summer. I would be put to a greater trouble and expense to maintain my soil fertility, and my loss would be greater than it now is."

The economist would admit the objections of the farmer and would reinforce them by pointing out the large number of arbitrary allocations of expense necessary to computing the cost per unit of any individual crop. Why should corn and the dairy cows be charged for labor at the same rate per hour, when the dairy may be kept largely to provide something to do in winter and other slack seasons? Why should corn and oats be charged the same rate of rent per acre when the oats are raised partly to aid in maintaining fertility for the benefit of the corn? How to distribute the interest and depreciation on the buildings among various enterprises? Indeed, why try to distribute this expense at all? The barn has, perhaps, been on this farm for many years. Its original cost has been forgotten. The farmer's practical problem is simply to make the most profitable use of it that he can. In short, the entire farm business must be treated as a unit. Since each of the different enterprises is so closely related to the others, attempts to analyze one at a time are very largely fruitless.

To answer the need for a method for choosing between enterprises, as between oats or wheat, or between feeding a carload of cattle or breeding several more sows, a budgeting method has been developed. In the application of this method, a budget for the probable farm expenses and receipts is drawn up as it may be expected to appear if the cattle are fed. Then a similar budget is drawn up without the cattle and with the extra number of hogs contemplated. If the anticipated net income for the entire farm promises to be larger with the cattle than the hogs, then the cattle feeding enterprise may be adopted.

The budget will compare not simply the expenses on cattle in one case and on hogs in the other but will show how the expenses for the whole farm will be affected. Thus, one enterprise might take more labor than the other, but it might still be unnecessary to hire *additional* labor, since it might require the labor at a time when other farm work is slack. Or the cattle might need roughage which the hogs do not, and yet it may be possible to provide part of their requirement from corn stalks which are at present being only partly utilized.

In order to obtain the specific information needed in making up such a budget, and in order that the information may pertain to the specific farm under discussion, it is necessary to keep various farm records. The information obtained from the farm records, however, is of use in other regards than simply in making up an occasional or a yearly budget. The records give us an opportunity to compare the performance of the farm with the plans which we have been attempting to follow. They should show us the gross income, the expenses, and the net income so that we may be able to appraise the success of each year's operation. They should also, if carefully planned, enable us to analyze the technical operation of the different sections of the business in order to locate elements of weakness, and work out methods of correcting them.

It may be of interest to sketch briefly the general process by which students in farm accounting at Ames analyze the records of farms with which they work in class. First the organization of the farm is examined both in its physical and its financial aspect. The record of crop acreages, numbers of each type of livestock, the supply of labor, and the equipment on the farm is examined. Next the financial standing of the business is examined from the financial statements or balance sheets at the beginning and end of the year. Not only the net worth of the business but the sources of borrowed capital and the proportion of the total capital invested in each type of asset is studied and criticized in the light of the conditions and purposes of that particular farm.

Next the operation of the farm during the year is examined. In this analysis use is made of both the financial records of receipts and expenses and the records of physical production of eggs, butterfat, gains on hogs or cattle. In this analysis the first step is to study the performance of the farm business as a whole. Such figures are used as the gross income from the entire business, the ratio of expenses to total income, rate of turnover on capital, income per crop acre, income per 12 months of labor used on the farm, and of course net farm income, and profit or return to management.

After appraisal of the outcome of the farm as a whole, the next step is to examine each important section of the business in greater detail to find whether it is performing as effectively as it should and whether it articulates smoothly with other parts of the business. The crop system is usually examined first since the crop production conditions livestock production to a considerable degree. In this connection we need to consider the selection of crops and whether they are combined into the most productive rotation that the farm is able to support. The yields, of course, serve as the principal indication of success of the soil management program.

Next the livestock system comes in for a careful examination. Here again the first question is whether the livestock enterprises articulate well with the crops and with the labor and equipment available and whether they yield a satisfactory return per hundred dollars' worth of feed consumed. The next step is to look inside each separate enterprise to see whether its returns could be improved. Here again resort must be had to physical rather than financial records. Thus in studying the hog enterprises we will be interested in the number of pigs weaned per litter, the gain per day on fattening pigs, the composition of the rations, whether the pigs were raised on clean pasture, and a number of other facts showing the

(Continued on page 64)

The Place and Use of Supplementary Farm Practice in Teaching Vocational Agriculture

EARL H. MARTIN, Teacher of Vocational Agriculture, Pratt, Kansas

[This article is the first in a series summarizing researches in the field of Agricultural Education]

(Contributions to this series should be sent to the Research Editors: Dr. Wiseman for Pacific and North Central; Professor Magill for the Southern and North Atlantic Regions.)

TO IMPROVE and expand the supervised practice program has been the endeavor of leaders in vocational agricultural education since the passage of the Smith-Hughes law. Marked advancement has been made with the productive project, which has come to include the major and the minor individual project, the continuation project, the group project, and the class project. Supplementary farm practice work is a form of supervised practice, organized to supplement the project activities of the student on the home farm. Because of the absence of studies on this subject, or at least due to the lack of reports on the same, the present study was undertaken by the writer.

Data were collected by means of a questionnaire from 300 teachers of vocational agriculture in 24 states, and from 18 teacher-trainers and state supervisors representing 11 states. By reviewing the statements of supervisors and teacher trainers, together with the printed and mimeographed literature furnished by them, six general concepts of the place of supplementary farm practice work in the vocational agriculture program are found. They may be briefly stated as follows:

1. No attempt is made to secure any supervised practice to supplement class activities and the project program.

2. Some supplementary farm practices are secured thru interest stimulated in class and project activities.

3. Supplementary farm practices are stimulated thru community improvement contests.

4. A few major activities are included in the program of supervised practices in addition to project activities. They are studied, planned, and executed as are projects and include such activities as pruning the orchard or testing the dairy herd.

5. An entire enterprise is taken over as supervised practice work and becomes a minor project except that the student has no financial obligations.

6. Numerous activities are planned, executed, and supervised as a part of the program of supervised practice. Some activities in all enterprises studied are included, if these enterprises are found on the home farm of the student.

Reactions From the Agriculture Instructors

Space will not permit the presentation of any considerable amount of the data secured. The questionnaire was divided into four parts with 20 questions to each part. Responses to some of the most pertinent questions are noted below. The percentage of teachers in each state replying affirmatively to a question was determined:

MEDIANS OF TWENTY-FOUR STATES FOR QUESTIONNAIRE STUDY OF USE OF SUPPLEMENTARY FARM PRACTICES.

	Percent
Requirements and Presentation—	
Require supplementary farm practice in some form	69
Require a minimum amount of supplementary farm practice	33
Require all supplementary farm practice outside of school time	50
Require students to outline a program of supplementary farm practice work early in the school year	18.5
Teach the jobs and test the students' learning thru supplementary farm practice	80
Require supplementary farm practice work to follow immediately after teaching the job	20
Analysis and Supervision—	
Have supplementary farm practice jobs analyzed by the class	65.5
Have supplementary farm practice jobs analyzed by students individually	67
Have students write plans for doing supplementary farm practice jobs	21.5
Have students submit a report of completed supplementary farm practice jobs	44.5
Have a form for students to use in making reports on completed supplementary farm practice jobs	10.5
Have parents sign reports of completed jobs in supplementary farm practice work	3.5
Supervise the student in performing supplementary farm practice jobs	86.5
Inspect completed jobs of supplementary farm practice work	86
Recording and Crediting—	
File a student's report of completed supplementary farm practice work	30
Have students keep a record of completed supplementary farm practice work in own notebooks	31
Have a special form for their record of completed supplementary farm practice work	15.5
Include supplementary farm practice work as a regular part of the students' credit	35.5
Give added credit for supplementary farm practice work	29
Fail students who do not have a minimum amount of supplementary farm practice work	14
Encourage and instruct in supplementary farm practice jobs for which no credit is given	86
Give credit on regular chores	10
Give credit on regular field work as supplementary farm practice work	17
Outcomes—	
Say supplementary farm practice work intensifies interest in class work	100
Say supplementary farm practice work makes the instruction more vocational	100
Say supplementary farm practice work approaches the project as a teaching device	79
Say they are enlarging upon the use of supplementary farm practice work	80
Say they do considerable teaching to parents thru supplementary farm practice work	100
Say supplementary farm practice work is an efficient method of improving local farm practices	100
Say supplementary farm practice work attracts attention outside the students' families	62.5

The findings presented above indicate that supplementary farm practice work is a form of supervised practice possessing potentialities scarcely realized and surely not developed. Supplementary farm practice seems to have two distinct purposes. It supplies the final step in instruction on jobs that are not a part of the project program of the student and it serves as a means of introducing improved practices on the home farm and into the local community.

Certain Recommendations

The whole program of supervised practice will be expanded by enlarging upon the use of supplementary farm practice work. Certain apparent weaknesses when corrected will render this activity much more effective.

It would seem expedient to provide a definite place in the program of vocational agriculture for supplementary farm practice work, and provide more school time for this activity. It seems advisable to develop a program of supplementary farm practice work for each boy early in the course, arranging the teaching order, thereby facilitating the application with or shortly after study of the job.

Jobs that merit the attention of class and individual analysis would appear to be worthy of carefully planning their execution; and jobs worthy of supervision and inspection by the teacher when completed, to merit a complete and accurate report by the student. One would assume that reports made by students should be filed by the teacher and proper provision made for keeping these records.

It is evident that work definitely a part of the course would be given due recognition and a definite part in the student's grade in the course. When supplementary farm practice work is graded as a part of the instruction, chores and regular field work would have no place in the program.

Activity Double Plus

WALTER BUTE, Vocational teacher at Licking, Missouri, took over his job a few years ago without previous teaching experience at an initial salary of $2,750. This was pretty good for an inexperienced young man just out of college and Bute determined to show the folks that he was worth it.

This last February he turned in the following report of his activities for the month. As you read it, keep in mind that it is not in complete detail and that all this time he was handling two classes of country boys from 9 to 3 daily. He is also operating a small farm at the edge of town, with chickens and hogs as major enterprises. You may not approve of some of these activities, but he seems to be accomplishing a great deal.

Sunday, February 1.
Went to church in the morning.
Drove to Reece after dinner for leghorn roosters for a special breeding pen of Mrs. Chas. Nord.
Visited the Junior Project of Opal Brigman while in the Reece Country.
Copied minutes of last month's Vocational Teachers Association meeting in my secretary book.
Wrote a Bovine Tuberculosis article for the Mountain Grove Journal to help Joe Flint put over the T. B. campaign in Wright County.
Prepared 90 circular letters announcing the Farmer's meeting here.
Total miles traveled, 31.
Farmer inquiries, 2.

Monday, February 2.
Taught school 9 to 3.
Talked Bull Blocks with Ot. Johnson during the noon hour.
Immediately after 3 went to Cabool to a meeting of the Texas County Vocational Teachers Association.
Got home at 12:30 and wrote article on farmers' meeting for Friday's paper.
To bed at 2:30 a. m.
Total miles, 73.
Farmer inquiries, 1.

Tuesday, February 3.
Began 7 a. m. Explained government seed loans to the three feed dealers, before school.
Taught school until 10:30.
Went to Jefferson City for interests of a larger T. B. appropriation.
Interviewed various legislators and met with appropriations committee until 11:30.
Talked with state supervisor for vocational agriculture until 1 a. m. and back in the hotel talked over day's events until 2:30 a. m.
Total miles, 95.

Wednesday, February 4.
Drove from Jefferson City to Licking arriving here at noon.
Held my afternoon class as usual.
Filled out my first farm loan application, 3 to 4:30 p. m.
Drove to Houston for a business conference, with Mr. Gibbs.
Got home about 7 p. m. and wrote an article for the paper on seed loan Monday for farmers.
Addressed 88 envelopes for farmers meeting circular letters.
Total miles, 124.
Farmer inquiries, 5.

Thursday, February 5.
School 9 to 3.
Tested milk samples 3 to 5:30.
Sorted M. F. A. check book stubs from August 1 to January 1 and brought them home.
Looked up and recorded the daily price of eggs to be used in my poultry survey work.
Wrote a business letter to W. W. Hoy, Cabool, Missouri.
Total miles, 3.
Farmer inquiries, 1.

Friday, February 6.
Filled one seed application before school.
School 9 to 3. Wrote lesson plans during noon hour.
Tested 9 samples of milk after school.
Visited Junior Project of Austin Stevens, north of town.
Culled 54 chickens for Mr. Mosier.
Looked at a Jersey heifer at P. B. Bennetts for Lynn Cameron.
Wrote, typed and dittoed a constitution and by-laws for the South Central Dairy Association.
Total miles, 20.
Farmer inquiries, 7.

Saturday, February 7.
To Bert Thornton's on business.
On to Davis Stark's to doctor a sick cow.
From there to J. R. Wilson's to doctor a sick steer.
Didn't take time for dinner as farmers were wanting seed loans when I got back to town. Wrote seed loans from 11:30 to 7 p. m.
Came home and chored and got a call to visit a sick project animal at Kessler's.
Went to a party from 8:30 until midnight.
Total miles, 16.
Farmer inquiries estimated at 40.

Sunday, February 8.
Graded animal husbandry notebooks.
Cleared up letter writing and other incidental jobs that had piled up during the week.
Wrote article for Licking News.
Worked on data collected in the poultry survey.
Mr. George Kessler came for advice on a sick cow and to get information on a government seed loan. Spent about 2 hours here.

Monday, February 9.
School at regular time filled seed loans during the noon hour and again from 3 to 5.
Talked to two merchants regarding the sale of oleomargarine and got their verbal agreement to quit.
Finished filling out and checked the seed applications up to this date.
Prepared new postoffice building for tomorrow's meeting.
Total miles, 2.
Farmer inquiries, 6.

Tuesday, February 10.
Built fire and otherwise finished preparing for the meeting.
Taught school until 10:15.
In meeting until 4:15 except an hour at noon during which the other vocational teacher had dinner in our home.
Wrote seed applications until 6 p. m.
Didn't get to eat supper as Collier Jennings came to talk bull blocks and applied for a seed loan which took until midnight to write up.
Farmer inquiries, many.

Wednesday, February 11.
One crop loan written before school.
Cleaned up from the meeting yesterday, and taught school until noon.
Wrote another seed application during the noon hour.
At 3 p. m. went to O. O. Taylor's to get another seed blank. Broke car on trip and while it was being fixed got another merchant to agree to sign up for cow butter.
Had a rather important conference with Mr. Potter of the Frisco railroad until 6:30.
After supper wrote two business letters and studied until 10:30.
Total miles, 2.
Farmer inquiries, 4.

Thursday, February 12.
School from 9 to 3.
Visited projects until 4 p. m.
Got the remaining merchants, hotel and restaurant keepers to agree not to sell oleomargarine.
After supper wrote the oleomargarine agreement to be signed tomorrow.
Had callers who stayed until 10 p. m.
Wrote a letter regarding some project cattle thereafter.
Ready for bed at 11:30.
Total miles, 8.
Farmer inquiries, 8.

Friday, February 13.
School as usual.
During noon hour signed every available source in Licking to stop selling oleo.
Helped John Gross figure a Missouri brooder house from 1 to 1:40.
Came home and got Mrs. Nord's roosters and went out there and picked 65 hens out of 300 for a breeding pen.
Got back in town at 6:30 and arranged for a seed loan committee meeting tomorrow.
Worked on seed loans, wrote two business letters and to bed.
Total miles, 8.
Farmer inquiries, 3.

Saturday, February 14.
Wrote crop loans from 9 a. m. until 4 p.m. and then held a meeting of the local committee until 7 p. m.
Attended a party after 8 p. m., got there late.
Total miles, 4.
Farmer inquiries, 31.

Sunday, February 15.
One farmer here before breakfast for a crop loan.
Culled Lynn Cameron's chickens and helped him pick out a breeding pen.
Wrote two business letters after supper.
Total miles, 10.
Farmer inquiries, 2.

Monday, February 16.
School as usual.
Two applications for crop loans during the noon hour.

Went to Jim Nichol's store and signed him up for cow butter.
Conference with Mr. Halbert about trip to Jefferson City for tax reduction.
Worked on lesson plans after supper but retired rather early.
Total miles, 18.
Farmer inquiries, 5.

Tuesday, February 17.
Three crop loans today.
Signed up Oscar and Slicerville for cow butter.
Visited project of Mark Wilson.
John Gross came about dark and talked project.
Just as supper was ready Mr. Evans came to talk cattle and stayed until midnight.
Total miles, 18.
Farmer inquiries, 9.

Wednesday, February 18 and Thursday, February 19.
Started to Jefferson City at 6 a. m. and spent the day in interest of tax reduction.
Left Jefferson City at midnight and got home in time to eat breakfast and to go to school.
Went to Summersville for a Fathers, Mothers and Sons banquet.
Got home at 1:30 a. m.
Total miles, 272.

Friday, February 20.
School as usual.
Crop loans until 5 p. m.
Basket ball game at 7:30.
Crop loans after the ball game until 11 p. m.
(The nice thing about the federal crop loans is the fact that it gives me a chance to introduce improved seed and the proper kind of fertilizer—and can discuss lime and legumes.)

Saturday, February 21.
Crop loans from 9:30 a. m. until 7 p. m. without time for dinner.
(At one time there were over 20 farmers waiting to see me.)
Checked crop loans after supper until 10:30.
Farmer inquiries, 45 estimated.

Sunday, February 22.
Started to W. L. Clouse to cull chickens, couldn't cross the high water so went on to Ben Helton's and culled 106 hens.
Stopped at Elmer Ward's regarding his loan, on the way back.
Graded advanced class notebooks Sunday afternoon.
Wrote five business letters Sunday night.
Total miles, 16.
Farmer inquiries, 10.

Monday, February 23.
Built on two Missouri type brooder houses at school today.
Held a conference with Mrs. James regarding the agricultural play.
Wrote two seed loans during the noon hour.
Went to Davis Stark's at 3 p. m. for a sick cow.
Worked on crop loans after supper getting them ready for the committee tomorrow.
Total miles, 11.
Farmer inquiries, 7.

Tuesday, February 24.
Dictated 12 letters to a stenographer during the afternoon.
Wrote a seed loan at noon.
Went to Davis Stark's at 3 p. m. to doctor a sick cow.
Worked on lesson plans after supper.
Total miles, 11.
Farmer inquiries, 4.

Wednesday, February 25.
In Summersville to an all day farmers' meeting there. (I talked on the 1931 poultry outlook and related poultry problems.)
Got a supply of seed blanks from Summersville and filled in three of these after supper.
Total miles, 68.
Farmer inquiries, 1.

Thursday, February 26.
School as usual.
Two crop loans at noon.
Culled and picked out a breeding pen of chickens for Will Clouse after school.
Visited the project of Vincil Stevens.
Went to church that night.
Total miles, 14.
Farmer inquiries, 4.

Friday, February 27.
Worked on crop loans during the noon hour and until 5:30 in the afternoon.
Dictated two letters after supper.
Transferred nine crop loans to the yellow paper.
Farmer inquiries, 3.

Saturday, February 28.
Was in the bank at 8:30 and filled out crop loans until 4:30 in the afternoon.
Arranged for a committee meeting Monday.
After supper worked over crop loans until 10:30.
Answered one business letter and turned in.
Farmer inquiries, 40 estimated.

Co-operative Effort Among Agricultural Instructors

W. R. CRABILL,
Herndon, Virginia

FOR many years it has been apparent that a real need exists for closer co-operation and assistance among vocational agricultural teachers, especially where departments are closely located.

The district supervisor of vocational agriculture has so many demands made upon him that it is utterly impossible for him to be present at every school fair, community day, agricultural assembly, Father and Son banquet, evening and part time classes and various other similar activities. It is hardly fair to ask the district supervisor to teach evening classes for instructors due to the fact of his multiplicity of duties, not being familiar with each community, not knowing the members who constitute the classes and not being familiar with community practices.

In view of the facts mentioned above, two instructors in Northern Virginia saw that they could materially assist each other in the major community activities, such as evening class instruction, judging at community fairs, talks at Father and Son banquets, and so on. This idea arose some two years ago between the instructors of Floris High School and the Manassas High School. These departments being located only 15 miles apart on hard surface road made conditions ideal for such co-operative effort to exist. During the fall of 1928 this experiment was started in a small way by J. P. Pullen and H. D. Seal of Manassas and Floris High Schools respectively. This experiment was further continued and expanded by J. P. Pullen and W. R. Crabill of the above high schools.

Ways assistance was rendered:

1. During summer months worked out annual plan together.
2. Worked out community objectives.
3. Visited projects.
4. Acted in capacity of official judge.
   (a) Community day.
   (b) Community fair.
   (c) Corn and grain show.
5. Aided each other in evening class instruction.
6. Talked at Father and Son banquet.
7. Talked at agricultural assembly.
8. Made farm tour to Beltsville together.

Benefits derived:

1. Interchange of ideas.
2. Acts as a stimulus in creating a concerted effort in promoting a well rounded department.
3. Assists in locating apparent weaknesses.
4. Conservation of time and effort.
5. Promotes co-operative effort.
6. Means of securing better response from community.
7. Aids in selling and keeping sold the department.
8. Avoids the possibility of getting into a rut.
9. Develops new ideas.

This comparatively new experiment of co-operative effort resulted in a desire on the part of the F. F. V. members to carry this idea of co-operation into their clubs, and it has been shown in the following ways:

1. Outstanding members of each department were present at their Father and Son banquets and took an active part in their program.
2. By participating in the initiation ceremony of each chapter.
3. By aiding other chapter in conducting community fair and community day.

In summing up the value derived from the two departments we concluded that this is a most excellent device in promoting co-operative efforts among F. F. V. members, it promotes good feeling between departments, gives rise to leadership, offers opportunity for self expression and creates initiative on the part of the boy.

[Editor's Note.—County or district organizations of vocational teachers is an established policy in Missouri. Such co-operation has proved to be extremely effective.]

Some News

PROFESSOR G. A. Schmidt, head of the agricultural education department at Fort Collins, Colorado, and Special Editor for Supervised Practice, is again on leave for graduate study at Columbia University. His address is Bancroft Hall, West One Hundred Twenty-first Street, New York City.

Professor S. H. Dadisman, for many years in charge of agricultural education at Laramie, Wyoming, will be on leave of absence this year and taking graduate work at Harvard.

Professor G. J. Dippold of Missouri has returned to his work after a year's leave at Cornell. He has completed all requirements for his degree and is now privileged to use the coveted letters Ph.D.

Future Farmers of America

Organization and Management of a Future Farmer Chapter

E. I. ROSENBERGER, Woodbine, Iowa

THE first step in the organization of a Future Farmer chapter is to sell the idea, that is, the Future Farmer program, to the boys. To do this the instructor must first be convinced that the Future Farmer program is a worthwhile one.

The following are just a few of the benefits derived from a Future Farmer chapter:

Through a Future Farmer organization the agricultural teacher can place the management of many departmental activities in the hands of the students. This serves to motivate these activities.

The Future Farmer chapter serves as an excellent agency thru which the instructor is able to advertise his department without appearing in the "spotlight."

The F. F. A. chapter is of great help in developing leadership, by giving the boys a chance to shoulder responsibility. In connection with this point I wish to quote a statement made by my superintendent to the president of the school board. "The Future Farmer organization is doing more to develop leadership than any other organization in our high school." The Woodbine high school has four very active organizations sponsoring extra-curricular activities.

Thru the Future Farmer chapter the instructor can utilize the play instinct in creating and maintaining interest in school work. Of course this play instinct must be definitely tied up with a worthwhile program of work as I will try to point out.

In selling the F. F. A. program to your boys take sufficient time to arouse in them the desire for a chapter. Don't start out to organize a chapter by simply saying, "Well boys we are going to organize a Future Farmer chapter." When the desire for a chapter reaches a point where the boys demand action toward organizing, then appoint a committee to work out a yearly program and a committee to make a study of the F. F. A. organization which is found in the national manual. A study of what some of the Iowa chapters have done will help in planning a program of work.

Following this preliminary work a meeting should be called for the purpose of electing officers, adopting a constitution, program of work, etc. Then have the officers hold an executive meeting to discuss what standing committees should be created. The president may appoint these committees. His appointments should be subject to the approval of the executive committee. In organizing the Woodbine chapter last year the following committees were appointed:

Constitution committee.
Corn and Grain Show committee.
Publicity committee.
Finance commitee.
Community Demonstration committee.
Program committee.

Coming back to the idea of utilizing the play instinct I believe too many of us dismiss the play idea with the thought that we already have too much play in our high schools. I believe the chief thing wrong with our high school recreation is not that we have too much but that we do not have the right kind or do not have our play tied up with a worthwhile program. *A program having proper balance is essential!* "All work and no play makes Jack a dull boy." On the other hand all play and no work makes Jack a worthless boy. Somewhere in between these two extremes will be found the ideal combination.

Planning a worthwhile program of work seems to be one of the most difficult problems of managing a Future Farmer chapter. I am going to outline briefly some of the points handled by the Woodbine Future Farmers in working out their program of work. These points are far from ideal but will serve as a working base for new chapters.

The program committee consisting of three members worked out a skeleton program for each of the twelve monthly meetings. No two programs were alike. The details of each monthly program were worked out by a different committee, for example, a Parent-Son banquet was scheduled for March. The committee which worked out the annual program of work named a refreshment committee and an entertainment committee for each month. The March committees handled all the details for the banquet. These committees were named in the yearly program booklet published by the boys. This gives the boys plenty of time to prepare all arrangements for the monthly meetings. In case a boy named on a certain committee cannot serve it is his duty to trade with a boy who can be present, then later serve for the boy who took his place.

At regular monthly meetings 90 minutes are used for recreation, 30 minutes for business and educational features, and 30 minutes for refreshments.

The following items are included in the Woodbine chapter program of work:

1. Hold boar and gilt sale.
2. Parent-Son banquet.
3. Project tour.
4. Give community program and hold box supper.
5. Purchase purebred gilt and rent her out for a project.
6. Entertain eighth grade graduates.
7. Conduct potato, landscape and terracing demonstrations.
8. Camping out trip.
9. Organize F. F. A. glee club.
10. Edit a Who's Who in Woodbine chapter.

The following Don'ts may be helpful in organizing and managing a Future Farmer chapter:

1. Don't underestimate your students' ability to shoulder responsibility.
2. Don't fail to have both short time and long time objectives in your program of work.
   a. Short time objectives that the members may soon experience the thrill of successful completion.
   b. Long time objectives to hold the interest of the group over from one year to the next.
3. Don't assume the leadership of the chapter. That is the officers' job.
4. Don't fail to enlist the support of the parents in boosting the F. F. A. chapter.
5. Don't map out too large a program at first. It is better to add a feature or two later than fail to complete work started.
6. Don't leave your superintendent out of the F. F. A. affairs.
7. Don't fail to give every member a chance to shoulder some responsibility.
8. Don't grab the credit for the success of the F. F. A. activities. Let the F. F. A. members enjoy the praise.
9. Don't criticize the members too sharply for their failures. There is usually another time.
10. Don't work with too large a group in planning your program of work.
11. Don't fail to boost the other high school organizations. This boosting usually pays big dividends.

the Local School

DARWIN REICHLING, President,
Iowa Association of Future Farmers

A VOCATIONAL agriculture department in a local high school without an F. F. A. chapter is like a farmer without legumes. That's the way I like to think of the value of an F. F. A. chapter.

There are many values: First, it brings the schools in the state more closely together. We know what our fellow student and fellow farmer are doing, how they are doing it, and what success they are having.

Second, it brings a closer relationship between the school in which there is a well established chapter and its community. You know that our farmer fathers like to see and hear what we are doing, especially for them. They appreciate it if they can see what we are accomplishing in reward for their time and effort spent on our behalf. In our local Maquoketa chapter we give them a banquet once in a while, have a program including a few jokes on them and show them some of the improvements that they might care to use on the home farm.

Third, the individual receives many values from a chapter. It creates in him a spirit of getting ahead—leadership, in other words. From the ranks of the Green Hand he works hard to obtain that degree in the ranks of the F. F. A. known as the "American Farmer." Requirements between these two ranks turn him into a farmer that we all like to see—one that doesn't stand back and watch the other fellow.

In conclusion, I wish to say that those schools who have chapters know the values to be received, and those that haven't, should endeavor to find out what a real organization we have.—From "The Iowa Future Farmer," February, 1931.

Future Farmers in New York Write Young Farmers in Germany

LOCAL chapters of Future Farmers of America in New York are deriving a great deal of satisfaction and pleasure by their correspondence with young farmers' organizations in Germany. During the summer of 1931 Mr. Getman made the acquaintance of Dr. Carl Brandt, a supervisory officer in education for the German government. Before Dr. Brandt returned to Germany it was agreed that he would send the names of officers of young farmers organizations in his country. Upon arrival, these names and addresses were forwarded to a selected list of secretaries of local Future Farmer groups. Several letters have been exchanged by the young men with the development of some real friendships. The exchange of photographs and special reference to local, state and national problems in agriculture have proved especially helpful, in developing this new and wholesome relationship across the Atlantic.

Following the annual meeting of the Association of Young Farmers in August of the present year excerpts of these letters will be prepared and made ready for publication in this magazine.

Limestone

VERNON WEAVER,
Vocational Teacher,
Princeville, Illinois

IN A DISCUSSION of the agricultural outlook for 1931 we decided that alfalfa had a quite favorable position. Several of the boys said they would like to try an acre or two in case they could obtain limestone in small amounts, limestone being quite essential in this locality as most of the soils are somewhat acid. We met the limestone problem by finding out just how many tons were wanted and then ordering a carload of this amount. Each boy was asked to sign an agreement stating that he would be responsible for the amount ordered. A 40-ton car of the material was ordered and now each boy has the amount wanted and is started on a real project—alfalfa.

The Princeville Chapter has held several successful meetings thus far this year. The attendance at each meeting has averaged around 90 percent, which is accounted for by the fact that we always have something the boys like. The main drawing cards for our meetings are the farm films which are obtained from a producer in Peoria. We do not have a projector here but are loaned one thru the kindness of the Peoria County Farm Bureau. These films are nearly always pertaining to some phase of agriculture, altho once in a while we get one real comedy.

A question was once asked of all the boys in the club as to what part of the F. F. A. meetings they liked best and they all said it was the films. These films put over a message in a way which can hardly be surpassed by any other method. Besides the picture part of the program we carry out the formal meeting and also have discussions on some timely agricultural topics by two or three club members. Several of the parents have responded to invitations and have attended our meetings. We feel that our F. F. A. Club has been quite successful this year and we hope to add several new features to it during the coming months.

Future Farmers in County Organization

EVERETT GIBBS, Reporter

BOONE County, Arkansas, under the supervision of H. L. Cochran, took the initiative in organizing a county-wide chapter of the F. F. A., Thursday evening, July 23. The enrollment from membership of the newly organized chapter, about three hundred. This county is one of the few counties in Arkansas to have a F. F. A. chapter in every junior and senior high school of the county.

The supervisor, Mr. Cochran, briefly outlined the activities of the county chapter, two of which were an annual encampment and a F. F. A. fair, both to be held this year.

The following officers were elected: Curtis Barton of Bergman, president; Floyd Morris of Harrison, first vice-president; Walter Norman of Bellefonte, second vice-president; Doin Burnes of Harrison, secretary; Charles Maylor of Omaha, treasurer; and Everett Gibbs of Alpena, reporter.

The various officers were charged as to their respective duties by the supervisor and a few remarks were made by the president. The next meeting of the chapter will be held at their annual encampment on Buffalo River near Jasper, Newton County, beginning July 31, 1931.

Figure It in Dollars and Cents

J. G. SMITH, Instructor,
Plant City, Florida

VOCATIONAL agriculture has been in the schools of the United States sufficiently long to demonstrate its value to a community, county, state, or union. Training for the occupation of farming is just as essential as training for the banking, merchandising, or any other type of business.

We have approximately 150 students enrolled in agriculture in the Hillsborough County Agricultural School and if they average $100 per student from their project work it brings $15,000 into our county.

Thirty-eight students taking strawberries as a project last year made 45,197 quarts of berries on 19 acres, or an average yield of 2,373 quarts per acre; and a total profit of $5,822.92, or an average acre profit of $206.47, or an average profit per student of $155.86. They grew these berries at an average cost of 12 cents per quart. Their average yield per acre exceeded the average for the community by 300 quarts.

The agricultural students last year made a total profit from their projects, while going to school, of $11,249, or an average per teacher of approximately $3,800. Agricultural education is profitable from the standpoint of the student, not considering its value in the future life of students and citizens.

Working in the Strawberry Demonstration Plot on the School Farm at Plant City, Florida

Farm Accounting Book

Farm Accounting, Frank L. Dils, Lexington, Kentucky. The Agricultural Service Corporation of America 1931. 100 pp. Price $1.90. The author is a public accountant and professor of accounting and his discussion of accounting appears scientific. Much of the information given will be helpful to the teacher whether or not the text is suited to his pupils. This book answers several questions recently raised in connection with our special study of estimates and accounts. The teacher should examine the text with care to discover how far it will fit the needs of his pupils. The principles are briefly explained and illustrated. Standard tables of "depreciation" and so forth, are used. The basis for both simple accounting and complex cost accounting is given. A "model" is set up for illustration. The supplementary booklets are listed below.

A. S. C. Record Book. F. L. Dils. About 60 sheets of forms for practice in connection with the foregoing. Looseleaf with paper cover. Price $1.20. Standard forms printed in black only. The forms correspond to the exercises laid out.

Reports and Business Transactions. To accompany the preceding text. Copy examined, (mimeographed to be printed later), 24 pages of tests, 18 pages practice sets of transactions. Price 85 cents. "Teacher's Key" for same. The "reports" or tests fit general conditions. The "transactions" do not fit average Massachusetts conditions. Massachusetts Staff Letter, July, 1931.

Gentry Resigns, Hahn to Be State Supervisor

MR. C. B. GENTRY has resigned his part-time work as state supervisor of vocational education in agriculture, under the Connecticut State Board of Education, in order to accept full-time employment at the Connecticut Agricultural College as director of instruction and to continue his work as dean of the division of teacher training. Mr. Gentry will continue his connection with vocational education thru the training of teachers of agriculture and home economics.

Mr. R. L. Hahn, formerly teacher of agriculture at Willimantic, Connecticut, has been appointed state supervisor of vocational education in agriculture. Mr. Hahn's address is State Board of Education, State Office Building, Hartford, Connecticut.

$1,000 at Graduation

"A PRACTICAL agricultural education and a thousand dollars at graduation," is the slogan that has hung in the front of the agriculture room at the Madison, Ohio, high school since 1924.

David Dunlap was one of the first boys in the state to make this amount of money in project work. David lives on a 30-acre farm. As he did not have the money to buy chicks his freshman and sophomore years he took advantage of a financing plan offered by a hatchery.

David is working at home this year but hopes to start to the agricultural college next year where he intends to specialize in poultry.

First Year:
- 1½ acre celery
  - Labor income $ 91.15
- 500 chicks
  - Labor income 111.15

Second Year:
- 250 pullets
  - Labor income 705.08
- 500 chicks
  - Remodeled part of barn for poultry

Third Year:
- 220 pullets
- 1,500 chicks
  - Labor income $1095.92

Fourth Year (1926–27):
- 670 pullets
- 3,100 chicks
  - Labor income $2346.47
- Built new laying house and brooder house
  - Total labor income 4 years.....$4349.

The school is the steering gear of a democratic society. Whatever is put into the school program of any generation will come out in the social program of the next generation.—*Ross L. Finney.*

"The man who knows *how* in life is usually a success, but the man who knows *why* is usually his boss."—*Tony's Scrapbook.*

Send news stories and other F. F. A. copy to Professor H. O. Sampson, College of Agriculture, New Brunswick, New Jersey

F. F. A. Chapter of Bear River, Utah—a livewire bunch of boys—with 77 active members

Recent Developments in Farm Records

(Continued from page 58)

methods actually used. These things not only tell us whether the farmer in question is using approved practices, but by observing the financial income per sow, and the returns per $100 of feed fed to hogs, he will also see how successful these practices have been in raising the farm income.

With each different livestock enterprise, of course, it is necessary to modify the procedure to some degree. Thus with the dairy the pounds of butterfat per cow will replace the pounds of pork per litter, and with poultry it will be the eggs per hen. But the general principles will be the same. In any case the method must be sufficiently thoro not only to show the financial success of the enterprise considered as an integral part of the farm, but must also show, or at least suggest, *which* practices need to be changed in order to improve the returns.

The final step is to examine the use of labor, power and equipment. Here we must consider whether the power and equipment outfits are adapted to the farm in question, and if not how much it may be feasible, under the present financial situation, to change them. The measures we will use here include such figures as the number of acres of crops handled per man, the acres of crops handled per horse, the value of horse feed plus expenses for the tractor per acre of crops, the equipment cost per crop acre, and so forth. If a certain change in equipment seems desirable we need to consider not only how many additional acres of crops it will enable the farmer to handle, but also whether profitable use can be made of any labor saved, and what the change is going to cost.

Finally, having examined all important aspects of the farm business, the next step is to make use of the information we have obtained. This calls for more or less revision in the farm budget for the next year to avoid errors of the past and exploit the advantages we have uncovered.

In general it may be said that this method of dealing with farm records is intended to be as clearly objective as possible. The purpose is not merely to *keep* records but to obtain desired information on specific problems connected with the profitable management of the farm. Second, the records must be tied in with the practical operation of the farm, and no effort should be wasted in obtaining data which have no practical bearing. In the third place the method of analysis must deal with the entire farm as the unit and not with disconnected fragments of it. This consideration is followed, paradoxical as it may sound, even to the analysis of the individual enterprises. The question is not, for instance, whether the dairy is satisfactory merely as a dairy but rather whether it fits in well with the farm business as a whole. The real problem is how the enterprise may be made to contribute as much as it is capable of doing to the net income of the entire farm.

The eternal triangle in vocational agriculture—the boy, his dad, the teacher.