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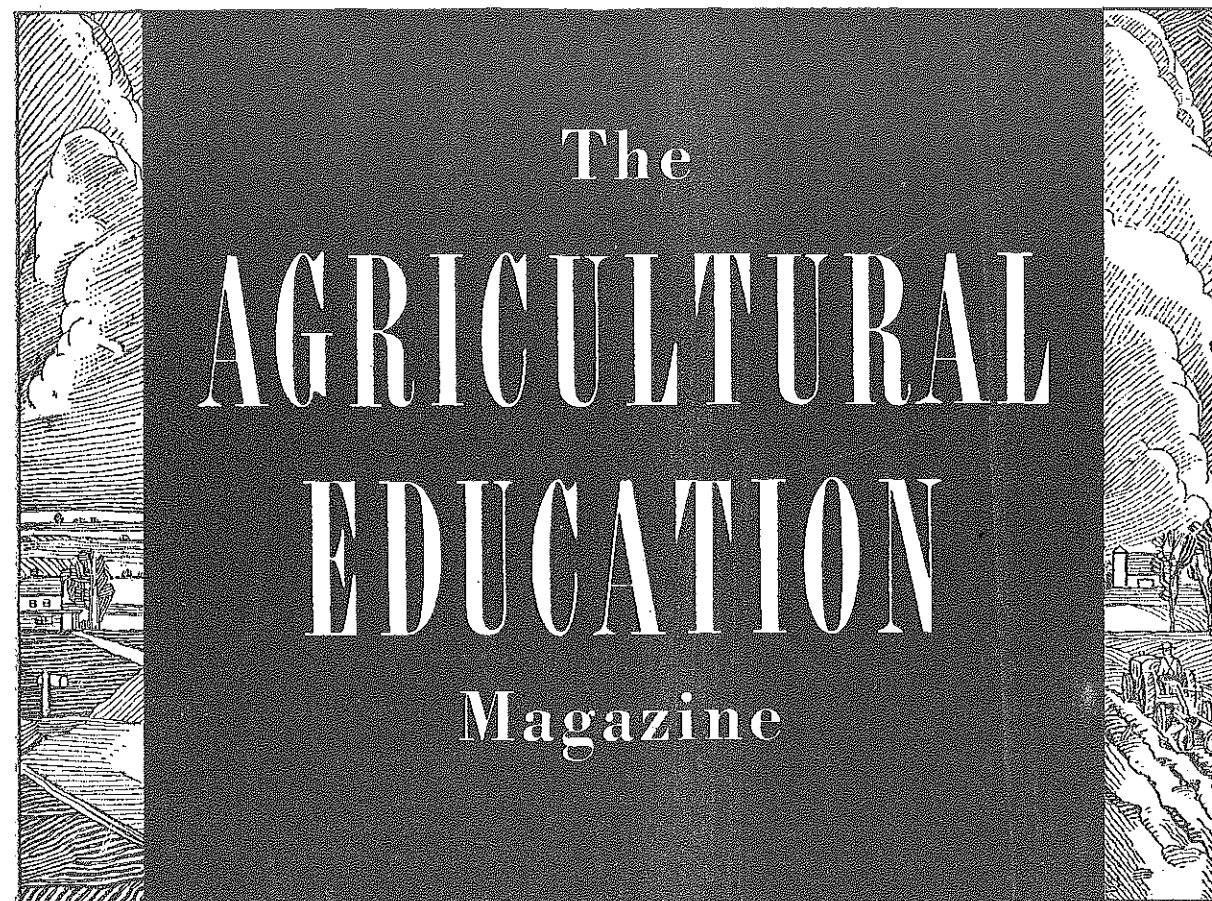
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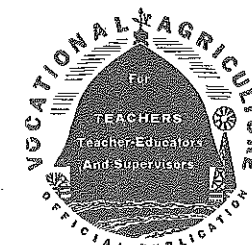
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*LEARN to act with and for others
while you learn to think and to judge
for yourself.—John Dewey*



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Editorial Comment

Adjust or Adjourn

LAST February 23 marked the twenty-fifth anniversary of the signing of the Smith-Hughes Bill by President Wilson. Born in a period of national emergency, vocational education in agriculture has weathered the storms of prosperity as well as of adversity. Now, after a quarter of a century, it faces another test that is perhaps more severe than any that has been previously experienced. Our success in meeting past difficulties justifies the belief that we shall meet the present crisis with equal success, provided we are capable of doing one thing—adjusting ourselves as teachers, teacher-trainers, and supervisors to the conditions imposed upon us by a nation and a world at war.

Those who cannot or will not make this adjustment quickly and effectively will find themselves in the position of those who are "too late with too little." They will have to "adjourn" in favor of the ones who are "on time with all it takes."

But it is not the traditional practice of workers in our field to surrender or retreat when the fight grows hard. At the same time, it might be well for some of us, especially a few of the younger teachers, to remember several fundamental principles as a means of stabilizing our efforts. Among such principles might be included the following: (1) The teacher of vocational agriculture who has a real program is in a position to render very vital service in the war effort and need not feel that he is a slacker, while he is waiting to be called to the military service. In modern wars there are no slackers except those who fail to do their dead level best in the occupation at which they can best serve. (2) The present emergency has confirmed the soundness of our program. Let a good teacher check his program with the "Food for Freedom" program and he will find that it is in close conformity. That program has emphasized especially soil conservation, increased and more efficient production, introduction in certain communities of new crops required to meet our war needs, farm-machinery repair, and victory gardens. Lo, they have been with us always! (3) Having recognized the war aims of agriculture it becomes our duty to make every lick count toward the attainment of these aims, for there is no more important responsibility placed upon anyone at this time than that of helping to win the war.

This is the time for the thoughtful teacher to put first things first and to give his undivided effort and attention to these "first" things. In so doing he will not only enjoy the satisfaction of knowing that he has done his bit for democracy, but he will also find that he will be in a better position to make a contribution to the winning of the peace.—H. W. S.

Research With Scope

THE last few years have made many workers in the field of vocational education in agriculture more conscious of the value of comprehensive research problems than they have been in the past. Perhaps a changing conception of research may be considered as one of the outcomes of the work on the National Standards Committee for Vocational Education in Agriculture thru its evaluation of 10 percent of the departments of vocational agriculture in the United States. In contrast to the evaluation study, one may find many studies in agricultural education that are even narrower than one phase or area of a teacher's program. No doubt there have been many causes for certain restricted research problems, a few of which are: the apparent academic training and background of several workers in the field of research; the prevailing conception that dignified research studies must always lend themselves readily to statistical treatment, as in the field of pure science where one factor may need to be eliminated and treated scientifically; the availability and use of data at colleges and universities; the requirements of graduate schools and the necessity for completing research within specified periods; the dependence of immature graduate students upon others for supplying them with the data for their studies; and the modification or reduction of former studies without recognizing the purposes or the scope of the original studies.

Several research problems have reminded the writer of one

of those meaningful remarks of the late Professor G. F. Warren, "Too many people give more attention to the shoestrings than they do to the shoes." In other words, Professor Warren would have said, "Study the whole business." There seems to be no parallel to the evaluation study, as applied to vocational education in agriculture, unless one might compare it with the National Chapter Contest which measures the results of a program for vocational education in agriculture thru the activities and accomplishments of the Future Farmers of America, or the Master Teachers' Contest of the Southern Region, which gives the teacher recognition for the entire accomplishments of a department of vocational agriculture. As another illustration, the California plan for rating or classifying all departments of vocational agriculture within the State recognizes the importance of measuring or evaluating entire programs.

It seems that all should be looking forward to the results of a wider use of the revised form for the evaluation of departments of vocational agriculture, and to areas of broader research that will measure the results of at least one part of a program for vocational education in agriculture, rather than more studies to measure one or two isolated factors which might have some bearing upon a phase of a program. Teachers of vocational agriculture work with human beings in a broad field, productive of many tremendous economic-social problems, the solutions of which are dependent upon scores of related or dependent factors. If our teachers are to be big enough to tackle big problems in this field of human relationships, the workers in the field of research should also be able to locate, define, and help in the solution of man-sized problems of our day as related to our entire program for vocational education in agriculture.—E. R. H.

Indigenous Community School Program

A NOTICEABLE shift in emphasis is occurring in public education in the South. Problems indigenous to the local community are receiving more attention in public-school curriculums, especially in rural areas. There is some tendency for instruction on both the elementary and secondary school levels to recognize the value of using local community problems and resources in the teaching of the fundamental processes, the sciences, and even mathematics. Conservation of natural resources in the community, preservation and processing of commodities produced in the community, and the installation of facilities for personal enjoyment and profit are included in units of work used in instruction on several grade levels.

This type of instruction has resulted in school services not ordinarily found in public education. Canning and other processing plants, freezer-lockers, incubators, curing houses, barber and beauty shops, repair shops, medical and dental clinics, school banks, recreation equipment, and other facilities are included as a part of the plant and equipment of some public schools. Ordinarily, these services are provided by the school either because they are not available in the community or because the school patrons for some reason cannot avail themselves of these services unless they are provided by the school.

Teachers of vocational agriculture are afforded a unique opportunity for service in these indigenous school programs in rural areas. As a matter of fact many of the programs had their origin in the work of agriculture teachers who, for a number of years, have emphasized the importance of community enterprises and problems in the instructional program. Many of these same rural farm problems may well be used by other public-school teachers in the teaching of reading, writing, arithmetic, and other public-school subjects. For example, the Plum Bayou Arkansas Public School used the problem of *Providing Permanent Pasture for the Local Community* as a unit of work in the elementary and secondary grades. The unit was selected by teachers and other representative citizens of the community as a community problem of primary importance. The farmers, the teacher of vocational agriculture, and the other agricultural workers supplied interesting facts to the teachers. This emphasis has resulted in much interest in local pasture improvement and will eventually result in many im-

Professional

A. K. GETMAN

R. W. GREGORY

Changes in the Emphasis on Certain Objectives of Vocational Education in Agriculture to Meet the Present Situation

Carsie Hammonds, Teacher Education, University of Kentucky

THERE are three things in the statement of the subject which I wish to call to your attention: (1) The question is not raised as to whether or not we should have objectives. That we should have objectives is assumed, tho it must not be assumed that all of us do have objectives. (2) The subject refers to objectives of vocational education in agriculture. The word *education* is in the statement. (3) The subject refers to changes in emphasis "to meet the present situation." Is there anything odd about the possible need for change in emphasis on objectives? Do those who truly have objectives keep them as they were tho the situation radically changes? Never. To keep objectives just as they were is not to have justifiable objectives. Always, there must be the possible need of changes in the emphasis to meet the situation that exists. This is the heart, soul, and center of a philosophy of objectives.

To interpret our subject further, let us look at the phrase *vocational education in agriculture*. Education always implies a contemplated product in *learning*; it is always purposeful, never merely accidental. The process of education always must go on with reference to direction or end sought. Education is always purposefully directed to produce desired effects upon the behavior of the *learners*. When learning does not result, there has been no education. Education takes place only when there is definite provision for learning—definite provision by the educator for *what* shall be learned and *how* it shall be learned. Teaching is directing the learning process. No more is possible of a teacher, as a teacher, than to direct the learning process. Directing implies *direction*. There is no directing anything in the absence of aim or purpose or objective. There is no vocational education in agriculture; there is no *teaching* vocational agriculture unless the teacher knows the learnings he is attempting to secure.

In this discussion we cannot sidestep or ignore the *aim* of vocational agriculture, for the simple reason that objectives must get their sanction from the aim. All objectives to be justified must contribute to the attainment of the aim. Is the aim of vocational education in agriculture to train present and prospective farmers for



Carsie Hammonds

proficiency in farming and related occupations? There can be no agreement on changes in the emphasis on objectives unless there is agreement on aim, whatever the aim may be.

What learnings should we secure? What learnings are relatively significant and important in the present situation? Let me say here that the present situation includes not only the external situation that might be read into it on the surface; but the boys, young men, and adult farmers, and what they and their families face, are a part of the total situation.

What learnings to secure is now, as always, the most baffling problem in education—in agricultural education or in any other kind of education. Here we must use the criterion of *value*. We, human beings, must judge what ends are desirable. The ends are *desirable* that meet personal desires. Science would hope to ascertain truth without regard to personal desires; it deals with judgments on which it is possible to obtain universal agreement. But values such as those involved in arriving at changes in the emphasis on certain objectives belong not in the realm of science, but in the private domain of personal convictions. They call for wisdom, which being strictly private does not accumulate thru the ages.

The Situation

May we return to discuss somewhat more fully what is included in "the present situation." No one has ever listed all of the elements in any situation, and no one ever will, because it is impossible to do so. But we can get at what seem to be some of the most significant aspects or features of a situation. Today we are engaged in an all-out war. It seems safe to assume that we face a long war and then a long period of postwar adjustments. We need to produce more animal proteins and more plant and animal fats and oils. It is now thought that however much we produce, we shall not have enough. While most of the emphasis of the Food for Freedom program falls upon livestock production, we must not lose sight of the fact that profitable or efficient animal production is based very largely on profitable crop production. Profitable crop production cannot be divorced from soil conservation, and soil exploitation is encouraged by war conditions. All of this is only part of the present situation. Farmers in many sections of the country face labor shortages; there are shortages of tires and of new farm machinery. The equity which all farm people have in all

the farms does not exceed 40 percent. In some of the states represented here the equity is far less. (In 1935 it was 23.9 percent in Iowa and 27.5 percent in Illinois.) Thus we have pauperized owners, insecure tenants, and disfranchised share-croppers.

Another aspect of the present situation, tho not new, is that thousands of farmers simply do not comprehend what accepted production standards mean. In our own beloved Kentucky, farmers are much too well satisfied with 26 bushels of corn per acre and 66 eggs per hen for the year.

Nor is this all of "the present situation." Farmers are affected more and more by remote events and conditions. That things do occur across 4,000 miles of water is no longer a myth. Also, a period of war is a period of rapid and radical change. War conditions produce certain strains upon community life. A part of the present situation to be met is that boys and young men are growing up, as always. Whatever we expect to find in their future behavior must be found in their present behavior. This fact must not be overlooked. Youth cannot be neglected without disastrous consequences.

Suggestions and Points of View That Possibly Bear on Changes in the Emphasis on Certain Objectives

1. It is more important than ever that we have definite, justifiable, attainable education objectives in vocational agriculture.

2. Apparently there need be little or no conflict between war production needs in agriculture and good farming practices. But the necessity for good farming practices is more important, and the need for immediate and direct action is more urgent than formerly.

3. Waste today is more criminal than yesterday—waste of teacher and of student time in securing desirable learning because of lack of objectives, unjustifiable objectives, and poor methods of teaching-learning; waste of soils; waste thru inefficient farm organization and management; waste in the enterprises thru inefficient animals, improper feeding, poor crop varieties or unadapted or otherwise inferior seed, failure to inoculate seed, poor seeding practices, diseases of crops and livestock, insects, weeds, rodents, unproductive pastures; waste of the community's man labor supply thru failure to mobilize it; waste thru unwise use of surplus funds from larger net earnings

(Continued on page 7)

The War and Vocational Agriculture's Responsibility*

D. M. CLEMENTS, Regional Agent, U. S. Office of Education

THIS is no time to make a report to you on the progress and development of the program of vocational agriculture since last we met in regional conference. It is the time to plan the part we are to play in winning this war. It is the time to formulate plans to overcome the forces that are trying to destroy us. There has never been so much at stake. Never so little time in which great changes must be made and important accomplishments achieved if our American way of life is to be saved. Still, we should develop our plans so that we will not lose sight of the fundamental, long-time objectives of our program of vocational agriculture. Our job right now is to assist the farmers we serve in providing food for our armed forces and for those employed in war industries, not overlooking the fact that for the sake of a virile people we must help our farmers provide nutritious food for our general population. We also have the responsibility of providing the facilities that are necessary for the proper repair and care of the farm machinery and implements used by the farmer in meeting the goals of the program of Food for Freedom.

While we are here the most important thing we can do is to work out ways and means of getting all of us into a well-planned organization and of setting up for each of us a definite responsibility. I think our vocational agricultural forces in each of the states must form a council of war of their own for the purpose of deciding the most effective ways of doing our part in helping to win this war. We have been attacked by forces from without that have as their objective the utter destruction of our nation and the death of all democracies in the world.

Replanning the Vocational Program

All of this means that we may have to revamp our program completely. It may mean less emphasis on the all-day instruction and much more emphasis on the part-time and evening instruction. It may mean less pre-employment teacher-training and much more in-service training of teachers. It will mean a change of the objectives in instruction with more emphasis on the Food for Freedom program. It will certainly mean a temporary change in our present standards of qualifications for teachers in order to provide a teaching force sufficient to meet our needs. It may mean less actual instruction on the part of the regular teacher of vocational agriculture and more management and supervision of the special teachers of the community evening classes. It will mean concentrated work on a specific problem with the view of actual step-up in production in the least possible time. It will mean the necessity of constant field work on the part of supervisors and teacher-trainers to see that those who are employed are taught how to teach. Less detail service of a professional nature can be expected from head supervisors, as administrative matters will pile up on them more and more. It is therefore necessary that the head supervisor call together his state staff of

supervisors and teacher-trainers for the purpose of deciding on the responsibilities of each member of the staff; once this decision is made every member should be given to understand that he has a job to do, and that he is given full authority and freedom to use his own initiative and ability in meeting this responsibility.

Many Responsibilities

Our responsibilities will extend outside our jobs as teachers, supervisors, and teacher-trainers. There are War Bonds to be sold; there are Red Cross drives to be put across; there are air raid warden responsibilities to be met. The morale of our people must be kept high in time of adversity; and there are a thousand and one voluntary services which must be rendered if this job is to be done. Every one of us occupies a position of leadership among our people. The sooner we find our place in the whole order of things and become active in doing our part, the sooner will those who look to us for leadership begin to take their places in the ranks with the determination to follow till the job is finished.

After the War

Not only do we have the responsibility of meeting the immediate emergency, but we have the further responsibility of looking far ahead in order that we may prepare our people for what is sure to come. We know that one of these days this horrible war will come to an end. We must be sure that our country and our people also do not come to an end. We cannot afford to lose the peace after we have won the war. Winning the peace involves the wartime hardships and privations for a long period after the end of the war. We must prepare our people for the things that are to come. We must establish in their minds the fact that heavy costs must continue in order to adjust our own people and the people of the world. They must be willing to accept this further sacrifice cheerfully. We must continue to pay heavy taxes in order to meet the reconstruction and rehabilitation costs of the world. If only we could create within the minds of our people the willingness to make the same material sacrifice for a just and lasting peace that they are willing to make to prosecute a successful war, then we would have no trouble in bringing about an enduring peace. We must create work that will be a constructive investment in order to adjust our country for what is ahead of us. Surely we can provide types of work that will result in a prosperous and happy people as easily as we can provide work to produce the implements of destruction. We need to begin now to think and plan so that when the time comes we will be able to act. Some nation is going to have to rebuild the fleets of merchant ships of the world that have gone to the bottom of the sea. The commerce of the world must move on an equitable basis among the nations of the earth. We must provide much of the material that will go

into the physical reconstruction of the devastated cities of the Old World and perhaps of our own nation. We must provide better social and medical opportunities for all the peoples of the earth. We must rehabilitate our natural resources which have been drawn on so heavily. We must provide constructive work for those who fought on the battlefield in order that we might live. We must provide the best of comfort for those disabled in the great cause for the redemption of the world.

Farm Family Achievement Program

The defense of our nation is built upon the health and strength of our people. The health and strength of our people depend on how well they are fed and how well they are taught to take care of themselves. All of us have a farm family responsibility that some of us have not realized. To meet adequately our responsibilities to the farm families we serve, we must plan and work with our home economics people. Because teachers of vocational agriculture have a longer tenure of service and a longer annual employment, and are better acquainted with farm people, it is their responsibility to take the lead in our farm family achievement program. This program covers health, income and expenses, home food supply, conservation practices, facilities, conveniences, and the social activities of the farm family. It provides teachers of vocational agriculture and home economics with the best available information for use as a basis in developing a good instructional program. Thanks to you, this is the work of your hands and the hands of the homemaking people. You have made an outstanding contribution. It fits perfectly into the program of Food for Freedom. I hope you will give it your earnest attention. If, thru our knowledge and efforts now, we are able to help our farm families get on a self-sustaining basis, we will make a great contribution to the health and strength of our people.

I do not want to overlook the importance of our farm, school, and community gardens. I want us all to assist in this program in every way we can. Let us not forget that to the extent we get our farm families to provide wholesome, nutritious food without buying the things they can produce; to the same extent are we helping make available to our armed forces, to our industrial workers, and to the peoples of our allied nations that same amount of vegetables and fruits full of vitamins for the development of vitality.

There is one more service that I want to call on you to perform. Our nation needs all the unusable scrap metal that can be found on the farms of our country. There is on record a case of a group of farmers in North Carolina who brought in 300,000 pounds of scrap, sold it, and gave the proceeds to the Red Cross. What a fine opportunity for service on the part of our F.F.A. chapters! These boys will clean our farms of scrap metal, and if they are induced to give the money earned to the Red Cross or use it to buy War Bonds for the chapter, our nation will get the benefit of the proceeds, and the boys who worked to make this money will feel that they have a part in the defense of their country. Just one warning—do not let your enthusiasm or the en-

Methods

A. M. FIELD

Methods and Results

F. W. LATHROP, Specialist in Agricultural Education, Washington, D. C.

THOSE who have discussed the evaluation of vocational agriculture with in the past few years have disagreed on whether we should evaluate methods (procedures) or results. In my opinion it is essential that we evaluate both, but I think the reasons for evaluating results are different from the reasons for evaluating methods.



F. W. Lathrop

By results I refer particularly to ultimate results. I assume the major result of vocational agriculture should be the establishment of young men in farming. When you break this result into its component parts you very soon get to methods. For example, the development of a strong supervised farming program is one of the methods of getting a young man established in farming. However, some would say that the supervised farming programs are themselves results. For purposes of this discussion I am going to discuss supervised farming programs as a result of vocational agriculture. Any further breakdown is likely to give us methods.

One group of persons, if I may classify our leaders in vocational agriculture into groups, emphasizes the results and minimizes the methods of obtaining results. This group of persons says that the main thing is to get results and they are not interested in how these results are arrived at.

A second group would find teachers who have obtained outstanding results and set them up as examples. They reason that the methods of these teachers are perfect because they have obtained good results. This greatly simplifies the study of methods because all we have to do is locate outstanding teachers.

Obviously those who look at results and nothing else are not very much help to teachers who would like to find out where their weaknesses are in order that they may remedy them. Perhaps the second group which validate methods thru results will be of some help. Unfortunately, this second group overlooks a principle which renders its theory invalid.

The principle referred to is that most results, in the field of education at least, are a product of variables. Some variables affect the results more than others. An example of this may make clear what I mean. For the sake of argument let us say that developing strong supervised farming programs is a result. There are many variables which affect this so-called result. Supervision is one; planning is another; the relationship between the

parents is another, and proper records, another. According to the principle of variables, no one of these methods is by itself responsible for the result. Moreover, a teacher may be very weak in one or more of these methods and still his teaching may obtain an excellent result; that is, his students may develop strong supervised farming programs. The students may keep atrocious records but this weakness may be offset by some other variable, such as a strong supervisory factor. This means that we cannot be sure that all the methods used by outstanding teachers are good.

We might, by rather complicated statistical devices such as partial correlation, study the relationship between one of the variables and the result. This, however, resembles going around Robin Hood's barn. I believe there is a much shorter route.

In other words, results are not the best guides to good methods. The study of results has its best value as an indication that the teacher is following proper objectives. If I were a teacher of agriculture in search of help to improve the record-keeping habits and abilities of my students, I think I should short-circuit any study of results. Rather I would go to those who have a sound philosophy of record keeping and to other teachers whose students keep careful records which function. These teachers may or may not get outstanding results in the farming programs of their students.

What I have tried to say in brief is that if a teacher wishes to improve his methods he should go direct to a study of these methods, and not attempt to improve by the roundabout way of studying results.

Production

Production of grains fluctuated widely during the last 33 years, but showed no pronounced upward or downward trend. Production of cotton also fluctuated widely, and in the last 10 years averaged nearly 10 percent less than in the period 1909-14. But the production of truck crops has tripled, and of fruits and nuts doubled, since 1909. There was a pronounced increase in the production of vegetables other than truck crops, of soybeans, peanuts, sugar crops, and tobacco.

Production of meat animals in 1941 was the largest on record—120 percent of the 1935-39 average. Production increased about 25 percent during the last 33 years, as contrasted with an increase of about 60 percent in the output of poultry products, and of 70 percent in production of dairy products. Production of all types of livestock has increased sharply since 1935. National goal calls for further increases in production in 1942. Agricultural Situation, Jan. 1942.

A Substitute for Field Trips

R. LANO BARRON, Assistant State Supervisor, Austin, Texas

VOCATIONAL agriculture without field trips is much like a cart without a horse—there just isn't any drive there. Yet, today, the agriculture teacher is faced with cutting down the number of field trips his classes will make. An efficient field trip practically always requires more planning than a satisfactory lesson in the classroom, and the agriculture teacher will now want to be even more careful in planning the necessarily limited amount of field work.

Film strips seem to be the nearest substitute feasible for some field trips. Many departments are already putting them to good use, but for the benefit of those who are not familiar with them, film strips are made up from a series of related still pictures on film strips 35 mm. wide. Most of them cost 50 cents for single copies, but if two or more copies of any one film strip are ordered, lower prices are charged. Film strips may be shown on a screen by a projector, which is a compact little machine not much larger than pocket-size, costing in the neighborhood of \$35.

The film-strip pictures have decided advantages over movies in that they are still pictures and can be studied at length, are accompanied by complete, explanatory lectures, are much more economical, are available from authentic sources on almost any subject, and are usually prepared much more logically for our work. Also, film strips often show the results of several years of improved practices.

Care should be taken in making selections, however; for certainly some film strips are better adapted to a particular locality than others. Then, too, there is the possibility of duplicating some of the material. The titles are usually a good guide to the contents of the film strip and a little careful consideration of these should suffice as a purchasing guide. One general suggestion seems important. If you are beginning on a very limited budget select those films showing how to do a certain job, for example, "Selecting Hens for Egg Production."

The film strips, with moderate care, will last several years and a department may soon build up a very worth-while library of film strips. Excellent film strips may be procured from the United States Department of Agriculture, Washington, D. C.

I feel confident that the old standards have had their day. They did their service nobly at a time when secondary schools were emerging out of the darkness. The new standards will have to be different because the whole social structure is different. We are outliving formalism and petty regard for trivialities. We have learned to think in terms of function rather than in terms of structure.—C. H. Judd

Teaching Farm Accounting

CHARLES E. WILCOX, Teacher, Dunkerton, Iowa

BECAUSE such a small percentage of farm boys ever makes effective use of farm records, I decided to try something different this year by setting up the whole farm-management course on the basis of farm accounting.

We started by discussing the efficiency factors of members in the farm record association and of a summarization of swine projects developed at Iowa Falls. These summaries made clear the great differences in farmers in various enterprises. Also, mention was made that a farmer might rank low in his ability in a certain enterprise, but not necessarily low in all enterprises. Thus he should cut down on his low-profit enterprises and increase his high-profit enterprises. After considerable discussion, I asked the group how a farmer could tell in what enterprises he ranked high and in which he ranked low. The answer to this question was unanimous—that a set of farm records would do the job.

Use of Farm Account Books

We were not yet ready to put into the student's hands a farm account book, as so many of us have done. There is nothing that bothers a student more than to find he has a blank page in a record book. He thinks he has made a mistake. Also, an even more important reason is that the student should decide on what is the best form in which to keep his records, and what records he wishes to keep and summarize. After discussion on what records should be kept, I asked what form would best fulfill these needs. The students then wrote to different companies, Iowa State College, and the F.S.A. to secure one copy of each of their record books. From these the majority of our students decided that a multiple column record with an amount column as a double check had many advantages not offered by other types of accounting systems. It was brought out that each of the columns should be the same as those items to show on the net income statement; thus the totals of the columns could be carried over to the net income statement. Also, we decided that these same columns should be the items that we wished to summarize as efficiency factors. The columns should then be entitled butterfat sales, egg sales, hog sales, machinery repairs, gas and oil costs, etc. The best form for inventory, which required the least work and showed all desired information, was worked out. The students ruled their own forms and were now ready for a set of data which they could work out. Everyone working on this one set of data showed that some of the students needed extra mathematics and practice in measuring hay, grain, land, and in evaluating machinery.

After completing this set of accounts I asked the students if they would obtain data from home on the number of eggs per hen, butterfat per cow, number of crop acres, number of pigs per litter, etc. Each student ruled a sheet of paper with efficiency factors along one side and the names of the students at the top of the vertical columns with the last column marked average. The various efficiency factors from each individual farm were then filled in on the sheet and the averages

ages for the group were figured. Some of the factors were not too accurate, but the purpose of the work was well served. I let the students do all of this, each working individually. I then asked the individuals that were extreme what factors they considered responsible for their position. From this point we led into a discussion of how the efficiency factors could be raised.

The students decided to work out a check sheet on good production factors that are imperative in order to attain high efficiency. The students were divided into groups to work out good production practices, each group taking one enterprise. Mimeographed sheets then are to be made of these good practices which each student is going to use in a study of his own home situation. A column will be left at the side of the sheet which the student can mark when the home situation is up to the standards set up in the good production practices worked out by the groups. These sheets will be kept in the record books and I will check them with the student when at his home. I believe this to be a good method of motivation; however, care and diplomacy must be used.

I plan to follow this by asking the students to look at their efficiency factor sheets again and to discuss number of crop acres, percent of crops in legumes, and percent of land in crops. Thus we can tie-in with rotations and field layout. I will also ask them to check on their machinery investment per crop acre. This material will be related to the selection of one or more enterprises.

In this method I found that the things which I wanted to teach came into the discussion naturally. Real problems involving the students' farms will be brought into use. A check sheet of topics that should be taught served to avoid missing important factors.

I believe that this method will be an improvement in my teaching in getting students to see the actual value of keeping farm records and in using actual problems of their individual farms.

Changes in Emphasis

(Continued from page 4)

than usual; waste thru undue depreciation of farm and home improvements; waste thru failure to provide essential home conveniences and decent surroundings.

4. Vocational education tends to become more specific in times of war. This need not be bad for vocational agriculture if we keep our objectives educational and do not fall for mere prescription.

5. As Dr. Hamlin has said, "A period of war is one of rapid and radical change. It is highly important that farmers anticipate, as much as possible, the changes which will affect them and that they adjust to these changes speedily."

6. Apparently the war with its accompanying income tax program should increase the necessity for the keeping of accurate farm records. Thus we may need to emphasize records more.

7. The care and repair of farm machinery and equipment may well be

emphasized more than formerly in many parts of the country, for reasons which I do not need to mention. Also, the popularity of the OSY program would seem to indicate the need for more farm shop in general.

8. The national program calls for more production of food for home use—for more gardening and the like. To the extent that this food can be produced without lessening the amount of commercial production, larger amounts of commercial food products will be released to non-farmers, so this may be a category that justifies change in emphasis.

9. No program of vocational education in agriculture can be most effective unless it is in step with other programs. Our efforts must be correlated with the efforts of other agencies. However, this does not call for our encroaching upon the proper fields of other workers nor for undesirable duplication of effort.

10. Agriculture should make and will make three great contributions to the all-out effort: Agriculture should furnish men to the armed forces; it should contribute workers needed in the factories; and it should utilize with all possible efficiency the remaining man power so that agricultural production goals can be achieved. Rural areas produce young men—approximately twice as many as need to find employment in agricultural pursuits. It seems likely that for some time to come, as many as a third of a million farm-reared youth a year will be looking for nonfarm careers. I mention these three contributions of agriculture to raise this question: In areas of population pressure and poor resources where most of the workers could be given up to the factories or to the armed forces with a negligible effect on total agricultural production, what shift of emphasis on objectives of vocational education in agriculture should be made at this time? I leave this question without comment, except to raise another perhaps larger question: What will be our future attitude and responsibility toward the boys and young men on the farms who will not become farmers?

11. We must meet the situation that is. Not to face the present situation is to be cowards; it is to be un-American, un-Christian; it is to attempt to escape reality itself—the reality of experience, the reality of struggle, the reality of the only kind of life worth living. We must behave valiantly.

In closing, I should like to say that no teacher or no state can attain all possible worth-while objectives on any level. Always there is the question of relative significance. In time of emergency, rigid selection of objectives becomes an absolute necessity. When we have decided on all of the most justifiable objectives of vocational education in agriculture that we can attain on the all-day level, on the part-time level, and on the evening-school level, we will have no room for other educational objectives in agriculture—the emphasis on other categories will be zero.

Presented before the recent conference of workers in agricultural education in Chicago—Carsie Hammonds, Teacher Education, University of Kentucky.

Thinking is past experience guiding present effort. Thru thought man is self-directive and effective in a sense and degree true of no other organism.—William Kilpatrick

Supervised Practice

C. L. ANGERER

Supervised Swine Program

P. J. HOLLAND, Teacher, Austin, Minnesota

IT IS necessary that every effort be exerted to fulfill the goals set by the government in the Food for Freedom program. Each teacher engaged in youth and adult agricultural education should pledge his full co-operation in making the increased food quotas possible. The teachers of agriculture must lead the way in this important and necessary move.

Anyone who has any dealings with swine, either in the production of pork and lard or in the educational field, is much concerned at present as to whether the swine raisers of America can improve on their methods of securing economically the increased production of quality pork which is desired.

Austin's Swine-Improvement Program

The method of swine improvement here described is quite different from that which has heretofore been practiced. It is essentially the production of better hogs by keeping detailed records of the individual sows in every herd. It means earmarking of litters at birth or shortly after, weighing individual hogs at 56 days and perhaps again at 160 and by these records selecting the breeding stock from litters that prove to be the fastest and most economical gainers.

After having made these selections, the carcass cutout of the litter mates must be checked, for it is not enough to have litter identifications and litter weights. The hog men are encouraged to follow this plan not only because it is a common-sense method, but also because it is proving superior to any other plan or method of increasing the productivity of sows and the quality of product.

Adult Instruction Pays Dividends

During the past four years two methods

have been in operation in an endeavor to reach this objective. The first and foremost has been the *adult supervised farm practice program* carried on by evening-school members. Four evening schools have been held each year in various communities of the Austin public school district. Thru the evening-school enrollees in 1938, 53 members carried on a supervised sow-testing program; in 1939, 82 members; in 1940, 101; and in 1941, 108



Hogs are carefully weighed

members had projects.

Now as to some figures that have been obtained which will give some idea of the scope of the work: 2,544 hogs were in the program in 1938; 4,706, in 1939; 6,901, in 1940; 7,343, in 1941. In 1938 the litters reported per farm were 7; in 1939, 8 litters; in 1940, 8.5; in 1941, 9.5.

Over one-third of the members actively co-operating have had the low feed costs of slightly over four cents per pound.

The improvements in herds in the adult supervised farm practice programs are: (1) increased individual pig weights at market time, (2) increased litter weights at market time, (3) improved carcasses, and (4) greater economy of production.

Supervised Practice Proves the Program

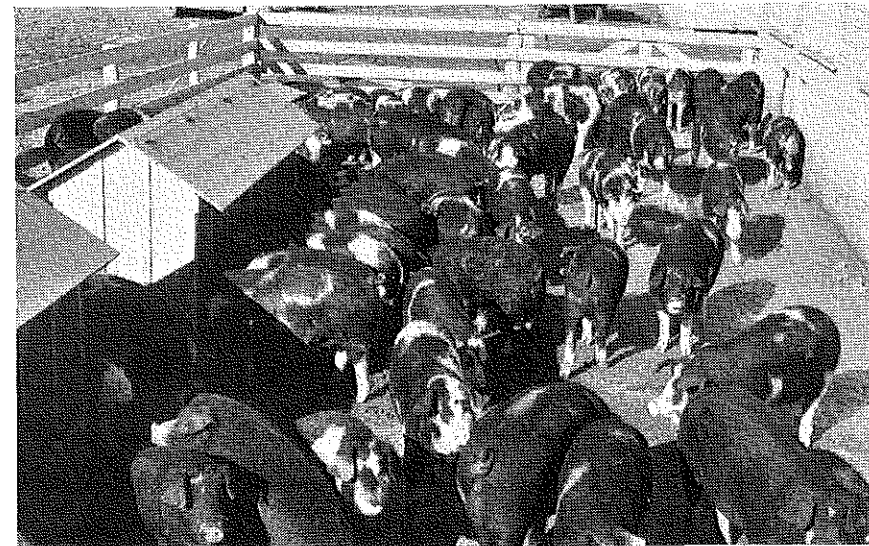
The program has clearly shown that: (1) better hogs are produced by keeping sow-testing records, (2) tested-production purebred swine proved better because of

heredity factors, (3) fast-growing pigs command a better price, (4) fast-growing hogs are most economical producers, (5) sow-testing is the only common-sense method at present devised for hog producers to increase the size of the litters, (6) as a rule, the better the production-tested stock used by the commercial or pure-line swine raiser, the more effective the management and feeding practices become, (7) successful swine raisers not only practice improved sow-testing methods but feed balanced rations and practice sanitation.

The swine raisers are taking advantage of the adult supervised swine-improvement program to build up their herds. Each July a registered list of the purebred herds of the district is prepared. The requirements for the list increased each year. In 1938, the litter weights of a herd had to be a minimum of 250 pounds; in 1939, 255 pounds; in 1940, 260 pounds; in 1941, 265 pounds; and in 1942, 270 pounds. The boars sold at the test-boars sale, held annually, are selected from the registered list.

The Swine-Improvement Council

A number of activities that have attracted scores of hog men from near and far are sponsored by the Swine-Improvement Council organized in 1930. The



Members of evening class grow excellent hogs

Developing a Supervised Farm-Practice Program

E. M. OTT, Instructor, Crawfordville, Arkansas

HOW should the supervised farm-practice program be related to classroom instruction in the teaching of vocational agriculture? Practice without instruction could not be called good teaching and would be a "hit or miss" procedure. Both supervised practice and classroom instruction are necessary to develop the attitudes, abilities, and skills necessary for farming, and must be closely co-ordinated.

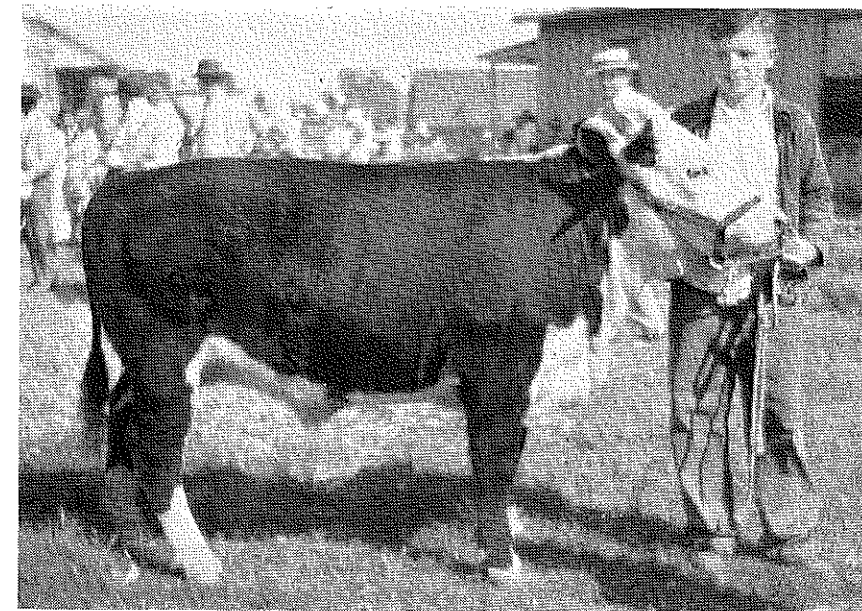
With these fundamentals in mind the writer relates how he has co-ordinated classroom teaching and supervised farm practice in developing a feeder-calf program.

At the beginning of school in September, 1939, a study of the probable labor

returns from different farm enterprises was begun. This involved determining the estimated cost of and probable receipts from one acre of cotton, one feeder calf, and so on until all enterprises that the students would likely select for their supervised farm-practice program had been covered. The boys then made their selection.

Livestock Program

This was the first year vocational agriculture had been taught in the Crawfordville school and before this time very little livestock was had in the community. The first year 19 of the 35 boys enrolled in all-day classes took feeder



F.F.A. boy and his championship calf

Council is composed of eight swine men, of whom six are purebred breeders and two are commercial swine raisers. Annual activities that it has initiated are: (1) the Annual Swine Touring Festival held the latter part of June, during which visits are made to 10 farms yearly to study growth impulse, litters, and pasture feeding of swine; (2) the weekly radio Swine School of the Air; (3) sow-selection demonstrations held the latter part of July; (4) record of performance swine show held in August; (5) swine clinics held in September; (6) tested-boar sale held in October; and (7) the Annual Swine Institute and Corn Show in December.

TWO efficiency trophies are awarded each year—one trophy to the owner of a purebred herd producing the most pounds of pork at 160 days from a five-sow herd or more; and the other trophy to the commercial swine raiser who produces the most pounds of pork from a seven-sow herd or more at 160 days. The *Porkopolis*, the local swine news sheet, is prepared bi-monthly. Much credit is due newspapers, national agricultural publications, and the radio for their co-operation.

One other activity of improvement in swine raising is known as Pork and Lard Educational Days. It is a community enterprise participated in by civic and agricultural organizations and swine raisers of the Austin public-school district. The three campaigns already held have done much to bring out the merits of lard as a shortening and pork as a Food for Freedom meat.

Since the association was formed the fastest growing litters have been two-, three-, and four-breed crosses. These results in crossbreeding are not alarming to our purebred men, for they have a good demand for their boars that are out of litters having the highest production records. The purebred men realize that a choice market is being saved for them if they can produce pure lines of high-producing stock, either for crossbreeding, commercial pure-line breeding, or inbreeding.



High school boys raising new herd of feeder calves

calves as a project.

After "Financing Feeder Calves" was studied, the local banker and other loan agencies were contacted, and arrangements for the necessary credit were completed. "The Job of Selecting Beef Cattle" was taught and the feeder calves were selected and purchased. These animals were bought the latter part of September and marketed in May. All other work in connection with the beef calves—such as feeding, testing for diseases, and showing was first studied in the classroom and then in the field.

In the meantime the "Feeder Calf Program" sponsored by the all-day boys was encouraged with adult farmers. The local Business Men's Club provided security for money to finance the projects, and sponsored a spring calf show. This show is the climax of a year's work and creates a great deal of interest. It also serves as a means of educating the entire community in this enterprise.

The first year 19 boys fed 19 calves. The second year 24 boys fed 54 calves. This year the boys are also growing registered hogs and dairy calves on a similar basis. They now have 25 beef calves, 25

Farmer Classes

J. B. McCLELLAND

W. H. MARTIN

Farmer's Evening School Is Fun

E. W. ROWLEY, Teacher, Chicago Heights, Illinois

THE Agriculture Department of the Bloom Township High School announces the opening of its second annual Farmer's Evening School next Wednesday night. The local vocational agriculture instructor will demonstrate soil testing. This statement reached out of the past thru the "Ten Years Ago" column in our newspaper and slapped me in the face. "It's no wonder we didn't draw more than 12 or 14 farmers to those meetings," I remarked to the family—"the local instructor will demonstrate soil testing."

During these 10 years the average attendance at our series of winter meetings has grown from 13.2 to 84.9 last year. We no longer pepper the community with postcards and endless newspaper stories. Long ago we gave up our annual checker tournament, no attendance prizes have been given during the past two years, and yet they come. January 7, 1942, the official temperature on my back porch was 18 below zero. No one could possibly leave home on such a night, it would seem, and yet we had a class of 35 ruddy-faced farmers present. It is hard to account for such loyalty. Surely they don't come to hear the lectures, for no lectures are given, or to see the demonstrations, for none of these have been given for years.

On January 14, 1942, 65 farmers gathered for a meeting on sugar beet production. Undoubtedly the instructor knew less about this subject than any man in the room. Four farmers were seated facing the group. The instructor sat on a table near by. A spirit of friendliness and well-being filled the room as the discussion started. The farmers were on their toes, and the men in front were on trial. At times the discussion got almost boiled over—at other times it bubbled smoothly. It didn't cool till the conclusions were drawn, the instructor had received a liberal education in the business of sugar beet raising, and all had spent another evening in real, exhilarating fun. Perhaps a few isolated "scenes" from the meeting will help to illustrate:

SCENE I

Mr. A (Panel Member)—"I have been raising sugar beets for the past 25 years and it seems to me that seed is one of the most important factors in the success of the crop. I like to get all the home-grown seed I can."

Class Member—"I never knew there was any difference. I always took what seed the company got for me and the field men never told me about home-grown seed. What's the difference?"

Mr. A—"Well, I always use the seed furnished by the sugar company but each year I request as much home-grown seed as they can let me have. I believe this seed produces a more healthy beet which is longer and more

content."

Instructor—"How many of you men request home-grown seed?" (About 15 of the best beet raisers show hands.) "How many of you didn't know about this home-grown seed?" (About 40 farmers show hands.)

Instructor—"How many of you men who do request home-grown seed feel that it gives a better crop than foreign seed?" (All who use it raise hands.)

SCENE II

Instructor—"Mr. B. (Panel Member), will you give us a short summary of your experience as a beet raiser and tell us when and how you sow your beets?"

Mr. B. (Speaking in broken English)—"Vell, I don't tink I do so good. I been raising beets four years now and dey don't pay. I guess I will quit. But I'll tell you how I do it anyway." (Much laughter because B. is one of our really fine evening-school members and is well liked by everyone.) "I git the land all ready in the spring and put in de seed." (More laughter.)

Farmer in class—"About what month do you plant?"

Mr. B.—"I plant right after I get de oats in."

Mr. C. (a Panel Member)—"We usually plant about the second or third week in April if the soil is ready. If the land is plowed during the previous fall we can usually work it well with the disk harrow, and float during the first or second week in April and are ready to plant at that time."

Instructor—"How many of you plant the seed about the second week in April?" (Most hands in the room are raised, altho a few farmers suggest that it depends upon the type of soil you have.)

Instructor—"How many pounds of seed do you sow per acre?"

Mr. B.—"I sow about 15 pounds and I don't get a stand den. Dey don't come up even."

Class Member—"That's too thick. I sow eight pounds with an onion seeder in rows 20 inches apart and always get a good stand."

Class Member—"I think that evenness of stand depends more on evenness of planting depth than upon rate of seeding."

Class Member—"How deep does B. sow his seed?"

Mr. B.—"I usually sow dem about two inches deep so dey will sure get plenty of moister." (All farmers raise hands.)

Instructor calls on one class member who has hand raised.)

Class Member—"That's why B. doesn't get a good stand. He sows his seed so deep they can't come up." (Farmers nod heads in agreement.) "The seed shouldn't be sown over one inch deep."

for three-fourths inch and if the seed-bed is level every seed grows."

Mr. B.—"How do you get dem de right depth where de horses step?"

Class Member—"You must set your hitch so the rows come to the side of the hoof tracks."

Mr. B.—"My horses don't walk straight." (Much laughter.)

Instructor—"How many of you feel that three-fourths to one inch is about right for seeding depth?" (About three-fourths of crowd raise hands. The rest do not vote for any other depth and appear to be willing to take advice from those who have come to agreement.)

From these two actual "scenes" it is apparent that many of our farmers did not know the values of home-grown seed, and that they vary greatly in rate of seeding, and that some had no idea regarding the proper depth of planting. Problems were brought up and good sound advice was given in each case. The class was "on its toes" and all were interested in sharing experiences. No one expected the instructor to act as final authority on any point.

SCENE III

Instructor—"What kind of fertilizer do you use and at what rate do you apply it?"

Mr. C. (Panel Member)—"I use 700 pounds of 4-8-7 per acre broadcast."

Class Member—"I use 275 pounds of 3-12-12 in rows with the seed."

Class Member—"I have found that the fertilizer applied on beets is not as important as the crops that were raised the year before. Beets following tomatoes or onions which were well fertilized give a very good crop. I think that fertilizer should be applied to the previous crops in order to raise good beets." (Many farmers nod in agreement.)

Class Member—"Don't ever plant beets following corn. It won't work. You get a poor crop every time."

Instructor—"How many of you feel that beets should follow a well-fertilized crop?" (Almost all raise hands.)

Instructor—"What do the rest of you think?"

Class Member—"I never thought about it before but I guess they are right. It sounds sensible."

In this "scene" the result was different from that expected by the instructor and yet it came from the experience of many excellent beet raisers. It will undoubtedly have an effect on the location of several beet fields this spring.

SCENE IV

Mr. D. (Panel Member)—"I block and thin my beets to about 15 inches in the row. If they are any farther apart they grow too big and the field men don't like it."

Instructor—"One of our best authorities says that the greatest loss to the farmer comes thru improper thinning. How many of you feel that 15 inches is about

right?" (Very few show hands.)
Class Member—"I believe 12 inches is better. You get a longer and higher quality beet."

Mr. B.—"If you're like me and your seed doesn't come up you don't have to spend so much for thinning. (Laughter.) On my clay hills beets can be spaced a rod apart and they still don't get too big."

Mr. C.—"On our farm if beets are spaced more than 18 inches apart they get too large. I had one beet weigh over eight pounds this year."

Mr. A.—"Depending on the soil I believe beets should be spaced 12 to 15 inches apart. I spaced my beets 10 inches this year but I believe about 12 inches is best."

Instructor—"How many of you agree with our last speaker?" (Agreement about 90 percent.)

In this scene it was apparent that many did not have any real convictions on the problem and were willing to learn. In fact, it came out later in the discussion that many farmers had been accepting advice on this vital question from itinerant labor that did the thinning. Only those who had given careful consideration to the problem knew the right answer, and yet all were willing to accept advice.

Due to time and space no more "scenes" can be given. The following conclusions were drawn at the close of the meeting:

Most farmers in the South Cook area depend on the sugar companies to furnish the seed. The men at the meeting expressed a preference for home-grown seed and said that they requested as much of this seed as the company could give them. They felt that it produced more healthy beets which were longer.

Seeding is done about the second week in April and the seed is planted three-fourths of an inch to one inch deep at the rate of eight to twelve pounds to the acre. It is felt that 12 pounds gives a man greater assurance of a good stand. The soil should be in very good condition, plowed the fall previous, and disked and harrowed just before planting. Rows are spaced from 20 to 24 inches apart.

It is felt that if an onion seeder is used, the seed can be planted at the rate of eight pounds per acre because of the greater evenness in depth and rate of planting.

Fertilizer is applied broadcast at the rate of 600 to 700 pounds per acre. 4-8-7 is applied at this rate and 3-12-12 is usually applied at about 400 to 500 pounds per acre. Some of the farmers drill 275 pounds of 3-12-12 with the seed. It is felt, however, that more of the success of the crop depends on the crops that were raised previously and the amount of fertilizer that was applied in previous years than upon the amount of fertilizer which was sown with the beet seed. Beets do not seem to do well following corn, but seem to give much better results if planted following tomatoes or onions.

Blocking and thinning are done very largely by Mexican labor and the individual beets are left from 10 to 15 inches apart. The majority of our farmers space them 12 inches. The farmers who have been using Mexican labor during the past year express the opinion that such help is very satisfactory. An average yield of about 15 tons per acre is expected by good growers in this locality and they expect to net three dollars on each ton produced.

Some Things I've Learned

W. P. SMITH, Teacher
San Luis Obispo, California

THE organization, preparation, and operation of an evening school for adult farmers is no easy task. Much valuable material has been written on this type of out-of-school instruction. The fact still remains, however, that all such classes attempted are not too successful, even tho the instructor follows patterns and plans of other classes which have proved successful.

The main difficulty in following the procedure of someone else is that each class is different from every other, even tho they be held in the same region. Dairymen are different from poultrymen, owners are different from renters, and one agricultural instructor is different from another.

There are certain general practices, however, which virtually always meet with success even tho the specific procedures must be varied. Four of these keystones that stand out in my mind are listed below.

1. See that every prospective class member is notified before each meeting. We all forget, and it is not hard for a busy, early-rising farmer to forget to attend a scheduled meeting. Such notification should be of a personal type, by means of a penny postal card containing all the necessary information. Newspaper announcements are fine but very impersonal. These same cards should arrive two days before a scheduled meeting, not earlier, not later. If they arrive too early, the forgetting process will be given time to operate again, and if they come too late, another appointment may interfere.

2. After class members start attending, don't scare them away. Too much "school" atmosphere will do this. Make it a formal class and you make it a small class. "Over the head" methods used in all-day classes will not attract adults. The boys have to attend but their dads do so of their own free will. Complete confidence in the instructor must be felt by the farmer students. There are many ways to get this confidence, but appearing in front of a class with a flow of big words, technical material, and impractical advice is not one method. Be one of them, not one

The instructor was appointed to report at the next class session on the sugar emergency in the present war.

Since the meeting I have learned that B. has purchased a beet puller and a new beet drill. Instead of quitting he is going to try some of the ideas he learned. Requests for home-grown seed have increased greatly, and fertilizer orders have been canceled or decreased. Many farmers have spoken of the fine ideas they "picked-up" and of the good time they had. The instructor now knows exactly what many of the beet problems are on the farms in this locality and yet he didn't have to prepare a long lecture on beet production which probably would have slighted many of the real problems.

Some time ago a college professor said to me, "When I want to learn something about farming I go talk to a good farmer." Maybe it isn't such a bad idea. At least it makes the Farmer's Evening School a lot of fun.

above them. Know your class member, his farm, his family, and his problems. Know these things, let them guide you.

3. Give class members something to take home. Did you ever attend a meeting tired and a little on the glum side? Even if it was an important meeting and you knew it, did you get out of it all that you should have? We're all like that. If, however, we have a digest of what transpired in that particular meeting for further reference, we will eventually profit from that meeting. Many a farmer will come to class a little weary and not able to grasp all that is going on about him. Provide him with a summary of what has happened before he leaves and he will be sure to find idle moments to think over the material. Without such concrete evidence of his attendance he may never give it another thought. Each farmer comes to class to get something—don't disappoint him. Provide him with bulletins, mimeographed material, and prepared outlines or notes—these all help to make him happy and you may be satisfied that you have given him something to think about.

4. Don't schedule meetings just because they are due on the calendar. One poor subject or meeting will ruin three that follow, no matter how good they may be. When attending meetings becomes a hardship on farmers, you have two strikes on yourself. The season and the type of subject or material should govern the scheduling of meetings. Hit when the iron is hot, but when it begins to cool and the fire starts to go out, stop your pounding, or the whole job and previous efforts will be ruined. A rest for yourself and for the class members will do you all good. When you feel the pressure for another series, have it; if you don't feel that pressure, don't manufacture it.

These four points are disjointed, to say the least, but I feel that they provide a rough key to a successful evening school for farmers, even tho that key must have many rough edges removed.

Culture in Agriculture

NO OTHER human occupation opens so wide a field for the profitable and agreeable combination of labor with cultivated thought, as agriculture. I know nothing so pleasant to the mind as the discovery of anything that is at once new and valuable—nothing that so lightens and sweetens toil as the hopeful pursuit of such discovery. And how vast and how varied a field is agriculture for such discovery. The mind, already trained to thought in the country school or higher school, cannot fail to find there an exhaustless source of enjoyment. Every blade of grass is a study; and to produce two where there was but one is both a profit and a pleasure. And not grass alone; but soils, seeds, and seasons; hedges, ditches, and fences; draining, drouths, and irrigation; plowing, hoeing, and harrowing; reaping, mowing, and threshing; saving crops, pests of crops, diseases of crops, and what will prevent or cure them; implements, utensils, and machines, their relative merits, and to improve them; hogs, horses, and cattle; sheep, goats, and poultry; trees, shrubs, fruits, plants, and flowers; the thousand things of which these are specimens—each a field of study within itself.—Abraham Lincoln

Farm Mechanics

L. B. POLLOM

Co-operation in the Repair of Farm Machinery

GEORGE E. WEBSTER, Assistant to the Supervisor (OSY)
Burlington, Vermont

ON JANUARY fifth, Vermont's Governor, William H. Wills, issued a proclamation designating the week of January 19th to 24th as Farm Machinery Repair Week. Since that time local implement dealers, county and state war boards, county agents, and teachers of agriculture have joined hands in the promotion of this important work.

All-day classes in vocational agriculture, part-time and evening schools, OSY classes, farm-machinery repair clinics, and special adult groups set up exclusively for the repairing of farm machinery have all contributed to the cause. The teachers of vocational agriculture have lead the way.

All-Day Groups Co-operate

Instructors have revised their all-day farm-shop curriculum to place greater emphasis on this work, especially in the upper age groups. Regular part-time and evening-schools, already in operation, have also devoted more time to instruction along these lines than originally planned.

OSY Metal-Working Classes

Out-of-school youth classes in metal-

and are available to farmers from the entire county, with the implement dealers, county war boards, county agents, and teachers of agriculture co-operating. The first part of the clinic has been devoted to an informal discussion of a home-farm workshop where most of this type of work can and should be done. Chairs are grouped in a circle and everyone contributes to the discussion. After the discussion a mimeographed brieflet covering the farm workshop is handed out. The farmers then determine which machine of those available they wish to work on. Once this is determined a job sheet outline is handed out to all present. The names of all parts are gone over to familiarize everyone with the machine. Proper adjustment of the machine is then demonstrated in detail following the job sheet outline. Blackboard sketches, service manuals, and wall charts have been of real value as visual instruction material. The emphasis in the clinic has been primarily on demonstrations and adjustment with a limited amount of actual repairing.

Special Adult Classes in Farm-Machinery Repair

The repair clinics mentioned above



Teaching boys to adjust farm machinery

working have included farm-machinery repairing as one of six instructional units. These six units are as follows: tool-fitting, soldering and sheet-metal work, cold-metal work, forging, farm-machinery repair, and oxy-acetylene or electric welding.

Farm-Machinery Repair Clinics

Special farm-machinery repair clinics have been set up in several counties. These are afternoon or evening meetings

are, of course, definitely limited in scope. They do, however, provide an excellent opportunity for stimulating interest. Special classes in farm-machinery repair taught by the teachers of vocational agriculture and adapted to the particular needs of each group are a natural follow-up of the clinic. These special classes usually hold from eight to 12 meetings depending upon the length of each meeting. A farmer-owned workshop has proved to be an ideal place to hold such a class for a series of all-day meetings on

Saturdays, or for two evening meetings each week. In this way a group of neighboring farmers has been effectively served with a minimum of travel.

The Farm-Machinery Repair Week, during which each of the agencies co-operated, was the first step and has led to increased emphasis from week to week. The results have been very satisfactory. Implement dealers report orders for parts far in excess of those secured in previous years. The vocational agriculture shop program has had a desirable change in emphasis and the teachers of agriculture, thru this service, have gained an increased number of staunch supporters.

Farm Shop Adapted to Current Community Needs

MARVIN STOCKING, Teacher
Tipton, Oklahoma

OUR farm-shop program is outlined with the conditions of the community in mind. This constitutes a guide in determining on what shop jobs to place major emphasis in the shop program. The major divisions of our program for all-day boys are: repair of farm machinery, metal-work, electrical work, rope work, leather work, and woodworking jobs.

Repairing Farm Machinery

Due to the heavy investment in farm machinery on the average farm in this community, we give the repair and upkeep of farm machinery a major amount of shop time with the boys. As demands for National Defense have cut down on the production of farm machinery, we are now planning a more intensive program in farm machinery. We feel that when older machinery is found on farms it is going to be very necessary for those engaged in farming to have a better understanding of proper upkeep and repair.

Each boy outlines his shop program to fit the needs of his farm. He may bring in equipment to the local department, where the proper tools and materials are accessible to do repair jobs. After all necessary repairs are made, a coat of paint is added—which always makes Dad appreciate the job a little more when it is returned home. Some of the jobs which are done in the machinery division are: replacing worn parts, adjusting parts, replacing bolts, tuning up tractors, and adjusting cultivators, listers, stalk cutters, and harrows.

In addition to working during the regular scheduled class periods, many students spend two and three extra hours per day, and some spend time at night in keeping their shop program up with the needs and demands of the farm. We are now planning to have our entire shop program evolve around the repair and upkeep of machinery.

The Farm Shop in a Rural Community

D. LAWRENCE GLICK, Instructor, Millboro, Virginia

SINCE the beginning of vocational agriculture in the Millboro High School the farm shop has increased in importance. Today, the farm-shop program is the basis for agricultural service and instruction.

In this period of national stress, the farmer will have difficulty in securing and maintaining farm equipment. I have therefore tried to build a farm-shop program to meet these needs. In this program the out-of-school youth, the farmer, the agriculture student, and other boys in school who are interested in mechanics may receive instruction.

All-Day Program

In the four-year course the all-day boys receive two full years of shop training, and four years of agriculture instruction, making a total of six credits. When possible, the second- and third-year boys are permitted to take shop; the fourth-year boys have access to the shop several weeks in the year during their regular class periods.

A survey is made of each boy's home-shop needs the first part of the year, and his program grows out of this survey.

The class program is divided into the following classes of jobs:

1. Woodwork
 - a. Household furniture and articles, such as: whatnots, tables, ironing board, bookshelves, book ends, curtain stretchers, doorstops, cutting boards, dough boards, medicine cabinets, stools, step ladders, wood boxes, lamps, kitchen cabinets, bedsteads, and chairs.
 - b. Lawn furniture, such as: lawn chairs, swings, flower boxes, and rose trellises.
 - c. Farm equipment, as: single-trees, double-trees, wagon and implement tongues, hog troughs, self-feeders, chicken feeders, tree ladders, trailers, measuring boxes, milk stools, saw frames, anvil bases, tool handles, drag harrows, drags, electric brooders, and tool boxes.
 - d. Farm buildings, such as: brooder houses, poultry houses, implement sheds, outbuildings, steps, hog shelters, painting and whitewashing.
- Plans are drawn up and procedures are worked out in detail before a job is taught.
- The following are types of jobs done at home under supervision:
 2. Sheet Metal
 - a. Soldering exercises, such as: repairing tubs, and buckets.
 - b. Cutting and bending tin, such as:

making funnels, feeders, water fountains, scoops, etc.

3. Cold Metal
 - a. Cutting, drilling, fitting, threading, bending, and welding cold metals and pipes, such as: repair jobs at school and home.
4. Hot Metal
 - a. Simple forge exercises and repair work, shaping, bending, and welding, such as: tap ring, chair links, hog hooks, cold chisel, stone hook, shovel, gate hook, harrow teeth, tree climbers, punches, tire irons, and cultivator shovels.
5. Tool Fitting
 - a. Cleaning, repairing, storing, sharpening, and caring for hand tools, such as: sharpening and fitting chisel, saws, bits, draw knives, axes, hatchets, knives, plane irons, screw-drivers, and replacing handles.
6. Rope and Leather Work
 - a. Simple knots, splices, and sewing, such as: halters, repairing harness, and mending rope.
7. School Improvement
 - a. School repair jobs, athletic equipment, classroom equipment, stage articles, such as: replacing window panes, repairing locks, water faucets, shelves, athletic shoes, basketball court, football and baseball field, building walks, repairing chairs, benches, etc.

The class is divided equally into these seven groups. One boy is put in charge of a group. The boys rotate in order at intervals of approximately two weeks. This gives each boy one chance at each job during the semester.

A chart is placed on the wall with each pupil's name. After each name there are six squares or blocks in which is written the exercise or project he is to make during each six-weeks period. At the end of the year, there is a record of what each pupil has done. See chart below.

The first three weeks of this present year we conducted a unit in general electricity, during which time the boys installed a complete wiring system in the shop.

The part-time boys have enrolled in a defense class for 10 weeks' instruction in Auto Mechanics, working on tractors, trucks, and automobiles.

The farmers have been invited, by personal contact and letters, to bring any farm-repair job to the shop and do their own work with the help of the two N.Y.A. boys under the supervision of the instructor.

Home shops have been set up or improved as a result of the boys' interest in the school shop.

Name	6 Wks.	12 Wks.	18 Wks.	24 Wks.	30 Wks.	36 Wks.
Smith, James	Hog trough, funnel	One-quarter inch bolt ring, hook	Sharpen chisel, fitting saw, splice, replace window pane	Wagon bed, chicken feeder	Welding, repair plow, single-tree, harrow teeth	Replace handle, fitting auger bit, halter, building walk

The Place of Farm Shop in Vocational Agriculture

H. J. WATSON, Teacher
Fredonia, Kentucky

THE farm shop should be large enough to accommodate the students with ample room to build and repair farm machinery and other equipment that is brought into the shop.

The writer would suggest that the shop building be 30 feet wide by 100 feet long. If the school has as many as 60 boys enrolled in day classes with smaller enrollment probable, the shop should be 32 feet wide and 64 feet long.

Equipping the Shop

Just how to equip the shop depends upon the location and the type of community to be served. The following tools should be provided: a 10-inch heavy duty circular saw with tilting table, 6-inch jointer, 1½ by 10-inch emery, bandsaw (26-inch), power-drill press, 18-inch surface planer, and electric-driven forge blower.

The forge is very important for making many repairs on the farm and may be used to weld, bend, temper, and sharpen farm tools. A complete set of forge tools should be had. The hand tools will be selected to fit the needs such as: squares, hammers, saws, try squares, jack planes, wood chisels, wood bits, rasps, braces, vises, set of metal bits, hack saws, saw sets, files, wrenches, tap and dies, bolt cutters, and marking gauges.

With these tools you may build hay frames, wagon beds, sweep rakes, self-feeders, gates, troughs, feed racks, hay stackers, barn doors, tool boxes, stock-loading chutes, hog crates, lawn chairs, tables, and kitchen cabinets. All of these items can be made from rough lumber, dressed and sized in the farm shop, thereby cheapening the cost to the student.

Shop Supplies

How to keep supplies for the class is an important problem. It can be solved by the school financing a moving stock of bolts, washers, screws, flat cold roll steel, single-tree clips, and some 3,000 feet of rough lumber of various sizes and lengths. As these things are needed, the pupils may buy from the school. The money then goes to replace the stock. By buying larger quantities of material money may be saved and the saving passed on to the pupils in school.

The place of the farm shop should be to serve the all-day pupils, adult groups, and part-time groups. These shops may also be used to help boys in defense classes in auto mechanics, metalworking and woodworking.

Our American civilization still revolves around the home, and the farm family will be the unit on which our permanent system of agriculture must be built. There are numerous forces at work at the present time to increase the attractiveness and the productivity of the farm home. Here again the public school is the one agency which has the organization to meet the issue and to make a worthwhile contribution to our rural civilization.

Studies and Investigations

C. S. ANDERSON

Problem-Solving by Two Methods: the Philosophic and the Scientific

Gilbert L. Betts, Supervisor of Graduate Research in Education,

Colorado State College of Agriculture and Mechanic Arts

Part I
TRADITIONS SURROUNDING GRADUATE RESEARCH

IF THE democratic way of life is to be successful, it must be self-repairing. People who direct their own destiny must solve their own problems; they cannot depend upon pre-ordained leaders to solve their problems for them and to force upon them a suitable course of action, for this is not self-direction.



Gilbert L. Betts

American educational institutions, from the very first, have been charged with the responsibility of insuring the continued existence of an intelligent citizenry capable of successful self-direction. Since new and unforeseen problems continually arise, predetermined solutions are unavailing; problems must be solved on the spot as they arise. It appears, therefore, that training and supervised practice in the use of a generalized problem-solving procedure is one of the most effective ways in which an educational institution can discharge its primary responsibility to a democratic society—that of insuring the continued existence of an intelligent, self-directing citizenry. Higher institutions of learning usually provide this training and experience (called graduate research) in connection with requirements for a higher degree. However, its practical implications are not always clearly perceived, for the force of tradition tends to becloud the view. It may not be amiss, therefore, to describe briefly the traditional influences surrounding graduate research in higher institutions.

Altho blending must be recognized, three rather distinct idea-climates, in which American higher education arose and flourished, may be distinguished. These may be designated as the general culture, the pure science, and the applied science idea-climates. Corresponding European prototypes of American institutions were, respectively, the English college, the German university, and the French polytechnic institute. American institutional types were the liberal arts college, the state university, and the independent technological and professional schools. Again with the caution that blending is the rule, and that pure types rarely exist today as such the idea-climate surrounding instruction in each of

be described in some detail.

Liberal Arts College

The traditional liberal arts college was the place in which the cultured, well-to-do few, the preordained leaders of an essentially slave or feudal society, were educated. The program of instruction was based on the premises that all fundamental truth had been revealed to man in the past (to the authorities), that new truth and current applications could be determined thru the process of deduction, that the mind is like a muscle and could be made strong and well disciplined by doing difficult but otherwise useless things, that such acquired powers would be automatically and inevitably transferred to any task, and that the one prescribed curriculum was equally good for everyone. A candidate for a degree was required to prepare a synopsis, to read it publicly, and to defend his thesis or conclusion thru disputation. The title of one thesis, "Whether Past and Future Sins Are Forgiven at the Same Time?", disputed at Harvard in 1743, is a good example of the culminating work in a liberal arts college. The present-day oral examination in American institutions, in which the candidate must defend his thesis, stems from this practice in the first American college. Similarly, the present-day insistence upon a general, background course required of everyone in the first two college years, may be traced to the liberal arts college.

The University

The German university, after which American state universities were so largely patterned, was a place in which the professor, withdrawn from the common affairs of life and consumed with an insatiable curiosity, was free to study and teach what he wished. He rejected the idea that all truth had been revealed to man in the past; he refused to recognize any authority, human or divine. He made his own observations and tried out things for himself. He employed inductive logic and arrived at his own generalizations. Science, an organized and classified body of knowledge, flourished and grew in this idea-climate; the fund of human knowledge was expanded mightily, classified systematically, and carefully shelved in libraries. Professors and students became narrow, subject-matter

ings only. The title of this thesis, "The Bialatracity of the Pigeon's Egg," written at the University of Chicago in 1910, is a good example of mere subject-matter specialization. The present-day practices of organizing subject-matter departments for instructional purposes, of setting up major and minor subjects, and of requiring degree candidates to engage in research and to make a contribution to knowledge in his major subject (all out of mere curiosity), all stem from the German university.

Technological and Professional Schools

American technological and professional schools became established in response to the need for an institution where artisans (farmers, teachers, mechanics, surveyors, sea captains, merchants, and the like) might receive instruction to make them proficient in their chosen occupations. In these institutions (that is, in those purest as to type) departments of instruction are organized with reference to families of occupations, not with reference to compartments in which subject matter is filed. The sequence of courses is arranged with reference to greater and greater occupational proficiency, not as prerequisites to greater and greater subject-matter specialization. This is the practical, applied science, pragmatic point of view. It looks toward learning that culminates in a course of action. The title of this thesis, "Highway Traffic and Its Regulation," written at Iowa State College in 1926, is a good example of the applied science point of view.

Belief

These traditional influences surrounding graduate research may be viewed psychologically, in relation to the results or goals of learning; for learning culminates in belief, meaning, and action.

Beliefs are emotionally toned ideas, and these ideas may bear little resemblance to reality. Primitive men are dominated by beliefs, and education in a primitive society is aimed largely at the establishment of beliefs. Many persons hold that modern man also is dominated by his beliefs, and that education, in modern times, to be most effective for controlling behavior, should aim at the inculcation of beliefs. The churches and church schools of the past devoted themselves, in part at least, to this task

Meaning

Belief, however, cannot continue indefinitely to exist independently of meaning, for meaning also is a result of learning. As civilization advances, the importance of belief as a goal of learning is discounted more and more, until eventually meaning assumes primary importance as the goal of learning. Man then is regarded as a rational being who governs his behavior according to the meaning of things. Education then scorns to inculcate beliefs and seeks only to unearth meanings and to impart knowledge.

In this advance, the traditional liberal arts college arises first. Clinging to some of the earlier beliefs, new meanings are formulated thru the process of deduction and armchair philosophy. Next arises the German-type university, divorced entirely from earlier beliefs but devoted still more to knowledge or meaning as the sole aim of education. In such an institution new knowledge is acquired, not by deduction from earlier beliefs, but by induction from immediately observable data. Research, using the scientific method, is a procedure for satisfying curiosity.

There are, therefore, two methods for developing new meanings, the philosophic method and the scientific method. But in the same way that belief is not the sole end of learning and does not exist independently of meaning, neither is meaning the sole end of learning, and neither does it exist independently of use. Thus out of this horizon came the notion that knowledge is power, that it is useful or might ultimately be. This was one of the most potent of all the arguments that were advanced in favor of establishing American state universities of the German type.

This notion, as it was linked with the pure science approach to education, served as a bridge for the arrival of functional education in higher institutions. American technological and professional schools, patterned after the French polytechnic institutes, organized programs of instruction for practitioners. Here a student might take work as direct preparation for some program of action—the third goal of learning. It is commonly recognized, however, that any scene of action is continually changing, and that no pre-service educational program can be so comprehensive that a practitioner will always be prepared for every possible emergency, that he will never meet a difficulty.

Action

Thus arises the matter of problem-solving to release action. Easy problems are solved mentally with little delay in action. More difficult ones require considerable reflection with an increased delay of action. At a still higher level this reflection becomes carefully organized and formalized. As such it closely resembles the speculation and philosophy that culminates in meaning. At the highest level, speculation and philosophy are reinforced with inductive reasoning, new data, and by the verification of conclusions. As such they merge into the scientific method of arriving at meanings that merely satisfy curiosity. In this case, however, both the philosophic method and the scientific method are generalized problem-solving procedures in preparation for some course of action. This is the type of graduate research characteristic

Future Farmers Repair Farm Machinery

A. L. MORRISON, Subject-Matter Specialist, Auburn, Alabama

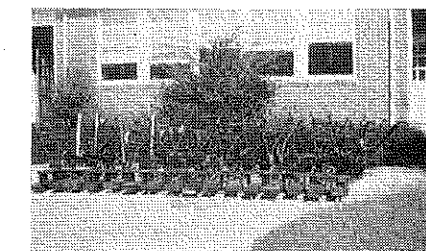
MUCH has been said in the past six months about the need for farmers to repair their farm machinery, thereby saving money for themselves and material for National Defense. Practically all of the equipment used by the farmer is manufactured from materials essential in the effort for Victory. Materials used in making plows, wagons, cultivators, tractors, planters, mowers, and the like are critical and essential material for building tanks, ships, planes, and freight cars. With this in mind the Elba Chapter of Future Farmers of America decided to change a talking program into an acting program. They set up as one of their objectives for the year to repair all the farm machinery on their farms and to help get evening-school men in the community to repair their tools.

Plans were made for each student to bring the machinery to the vocational shop. A two-week period was set up dur-

planters, one cultivator, 11 axes, nine single-trees, one drill, and two harrows were repaired and 77 scrapes were sharpened.

During the repair program 69 farmers and students took part in repairing 278 different articles at a cost of \$86.18, representing a saving of \$53.30 to the farmers.

Many farmers who did not take part in



The job completed

the night program have seen the work done by the other men and are now coming to the shop during the day and repairing their machinery and tools. Elba Future Farmers have rendered a real service by promoting the repair program and have saved much material that is needed for Defense.

The War and Vocational Agriculture's Responsibility

(Continued from page 5)

thusiasm of the boys take away from the farm some piece of farm machinery or a farm implement that can be repaired. Remove the parts of all old machines or implements that can be used in rehabilitating some other implement.

So I ask you now to turn your attention to our most immediate needs, keeping in mind long-range planning. Discard those things we can lay aside now and, with every effort at our command, show our nation that we can render a worth-while service to our whole people in this time of great and urgent need.

* Presented to the Vocational Agricultural Workers of the Southern Region by Dudley M. Clements at Atlanta, Ga.

Book Review

Permanent Agriculture, Scott and Paul, p. 614, excellent illustrations with high quality paper and clear print, published by John Wiley & Sons, list \$2.50. Subject matter presented covers not only problems of how to grow crops and breed animals but also problems such as co-operation, taxation, credit, conservation, and education. The subject matter is concise, accurate, and each chapter is followed with a suitable list of USDA references applicable to the subject treated. The book is intended for use as a text in high school agricultural courses, and should prove valuable as a reference in courses in vocational agriculture.

APD

Future Farmers of America

A. W. TENNEY

F.F.A. Chapter Has Well-Balanced Program

TAL H. STAFFORD, District Supervisor, Asheville, North Carolina

CONSTRUCTION of power dams in western North Carolina and facilities to teach agriculture in rural high schools are apparently widely separated subjects. In one instance, however, there is a direct connection, and this was brought about by the alertness and initiative displayed by an aggressive young teacher who is really doing things in the field of vocational education in agriculture.

For several years Franklin High School, in Macon County, has maintained a department of agriculture where rural boys have received excellent training in agriculture as well as in farm-shop work. Like so many other school plants in North Carolina, this school has been badly crowded. The quarters assigned to agriculture were cramped for space. The small farm shop was located in the basement and the "classroom" was the stage in the auditorium.

State and Federal officials accepted this arrangement solely because the courses in agriculture met a real need among the students, and it did not seem possible for local school officials to find additional funds to put up a separate vocational building. Here is where power dams enter the picture.

Due to the expansion of the power program in Macon and other western counties, a number of small rural schools have been abandoned in areas which will be covered by lakes. E. J. Whitmire, teacher of agriculture at Franklin, saw an opportunity to secure material for an agriculture building. He proposed that three small buildings be given to his department with the understanding that the material would be salvaged at no cost to the county. School officials agreed.

While the school was closed last fall on

account of a mild epidemic of one of the childhood diseases, Mr. Whitmire and his students tore down the buildings and moved the usable material to Franklin. Material from one building was moved more than 30 miles over the Nantahala Mountains.

Later Mr. Whitmire organized a National Defense woodworking class among out-of-school boys near Franklin. With some labor from this source, but largely thru the efforts of his own 60 stu-



Feeder calves owned by Franklin F.F.A. chapter

dents in agriculture, he built a vocational building 24' x 70'. The building provides a classroom, 24' x 30', and a shop, 24' x 40'. There is a full-sized basement for

storage. A small blacksmith shop, 16' x 20', for metalwork was built outside to eliminate the hazard of fire. To date, the agriculture department has received no direct financial help from the county in the erection of the building. Nails and other materials needed were purchased by the boys from funds raised by cutting and selling wood.

Beef Calf and Swine Projects

Under the leadership of Mr. Whitmire, the Franklin department of agriculture has an aggressive chapter of Future Farmers which is doing excellent work. Feed lots have been built near the agriculture building and five high-quality feeder calves have been purchased. The calves are fed by the students as a part of

their work. Each student contributed three bushels of corn to feed the calves. Corn stover was secured by shucking corn for farmers.

The protein supplement needed to balance the calf ration is purchased with money made by selling wood. The calves will be fed thru the summer and groomed for showing at fairs during the fall, after which they will be sold.

In addition to the five calves owned by the F. F. A. chapter, many students have calf projects on their home farms. In school they learn about feeds and feeding and each boy works out the balanced ration for his own calf, using corn, wheat bran, cottonseed meal, and sweet feed.

Five feeder pigs are kept in the feed lots to utilize all waste from feeding the steers. The chapter owns also a registered Poland China sow. She is kept at the school for the purpose of teaching the boys the proper feeds and the care of a brood sow during the farrowing period. Franklin F.F.A. members have added 12 registered Poland China sows to their home projects during the past year. These sows will begin to farrow in March.

The Franklin Chapter has rented a farm of 33 acres for the coming crop year.



Team of horses owned by Franklin F.F.A. chapter

F.F.A. Brings New Crop to Kentucky

IVAN JETT, Executive Director of Mid-South Chain Store Council

THIS is a story of the leadership and perseverance of a Future Farmers of America Chapter at Murray, Kentucky, in Calloway County. It is typical of the spirit of these rural boys thruout the United States in showing initiative and resourcefulness in increasing the income of a county. It is a job that was accomplished after the "cracker barrel" authorities and so-called agricultural leaders said that it could not succeed. The credit for its success rightfully goes to W. H. Brooks, teacher of vocational agriculture, who has been at the Murray Training School since 1939.



Ivan Jett

Calloway County is in the southwestern end of Kentucky, known as the Purchase Region. The land is level and not very fertile. A small amount of cotton is grown, but dark tobacco has been "king." Ten years ago this county was rich and thriving with over 11,200 acres of tobacco raised, but the picture is different now with only 5,000 acres being grown.

Nearly all the tobacco was exported to European countries. In the early 1930's Europe stopped buying this tobacco. The Federal Government lent the farmers money on their crops to help until the market improved, but the improvement never came. Foreign countries started raising their own tobacco and then the war stopped all exports completely. Prices dropped and even with govern-

All of the 60 students will contribute labor for cultivating the crops. This farm will be used to produce good seed; in addition, it will provide feed to continue the feeding experiments at the school. The following crops will be grown: two acres Irish potatoes, eight acres corn, eight acres lespedeza, and four acres oats. About 10 acres of the farm is in pasture. The chapter owns a team of horses and much of the needed farm equipment. Other equipment will be furnished by the students.

Project Income Used to Equip Building

The income derived this year from chapter projects will be used to provide additional equipment for the agriculture building. The chapter has in its shop more than \$1500 worth of tools allotted by the Federal Government, because the teacher has organized and supervised 13 National Defense training classes for out-of-school youth.

Chapter Buys Co-operatively

The Franklin Chapter will purchase co-operatively this year 6,000 baby chicks for boys' home projects, to help the county reach the poultry and egg goal established by the War Production Board. The chapter will invest more than \$4,000 in feeds, seeds, and fertilizers—all

ment loans the crops did not bring enough to pay the farmer 10 cents an hour for his labor. Other farming communities were enjoying medium prosperity while Calloway County was in a severe depression.

The Teacher's Part

"Hamp" Brooks, as he is known affectionately by his friends, arrived at Murray about this time. He realized that the farmers must have some new cash crop and have it quickly. He wrote letters and studied books and bulletins, trying to find that crop. While Hamp was teaching an "evening school" with a group of farmers, they decided that they could raise tomatoes if they had a market. Canneries some distance away were not paying enough to pay for the transportation.

South, in the Humboldt area of Tennessee, farmers were raising what are called green-wrapped tomatoes and making money. The Murray farmers decided to try it. They made a trip to Humboldt and talked with growers and visited a packing shed. It seemed to be an answer to the new cash crop problem.

They formed an organization, elected officers, and the members signed a marketing agreement. They purchased their tomato plants in a group from Humboldt.

Results in 1940

Their crops did well in 1940. The use of a tobacco warehouse was obtained for a packing shed, and packing tables were constructed. The farmers were ready to sell but there were few buyers. Local and itinerant truckers bought the tomatoes

purchased on a co-operative basis.

The broad supervised practice program of the 60 students will be doubled this year, due to the increase in food, feed, and garden projects in line with the National Victory drive for more production.

Buy War Stamps

Members of the Franklin Chapter are buying War Stamps at the rate of \$20 per week. The North Carolina F.F.A. Chapter has a goal of \$100,000 in War Stamps and Bonds to be owned by its members by June 30. This goal will be reached.

Franklin Chapter Wins Honors

The Franklin Chapter ranks high in competitive activities. It has won the Western District Livestock Judging Contest and placed a boy on the team which represented North Carolina in the national contest at Kansas City. Its seed-judging team has placed first in its own federation contest.

At the State Fair in Raleigh the baby beef exhibit from Franklin won many first places. In the F.F.A. group this chapter won first place for the three best steers, first for the best lightweight steer, first for the best heavyweight steer, and first for showmanship.

and hauled them to St. Louis, Detroit, etc. When the season was over the growers had netted only 21½¢ per lug or about \$0.36 per bushel. The project had not been profitable except to a few of the best growers. Everyone felt a little discouraged.

The members of the F.F.A. studied information available from the farmers' experience. The boys realized that the farmers were learning to raise a new crop and that the second year should be better. The one important fact was that the farmers had no adequate market facilities. They needed buyers.

The F.F.A. started to work. It was harder to interest people in tomatoes the second year but the boys had the answer and knew it. A public meeting was called at the county court house and a representative of the Marketing Division of the Kentucky Department of Agriculture was present. He told the growers that he thought certain stores would help them to market their tomatoes.

The farmers decided to treat tomato-growing as a business and incorporated the "Calloway County Vegetable Growers' Association." Officers and directors were elected and marketing agreements were signed. Farmers and F.F.A. members pledged themselves to raise 87 acres of tomatoes.

Better Results in 1941

The farmers prepared their soil carefully, fertilized well, and were ready for a good season. It was time to get buyers so Hamp Brooks and the officers of the co-operative went to Louisville to talk to a commercial concern and ask for assistance in marketing the tomato crop. They explained their plans and told of the trouble they had in selling during the previous year.

This concern was interested in the success of farmers and agreed to give the co-operative free market news service all over the United States daily. In addition they gave a standing bid of market price for all the United States No. 1 tomatoes. They were interested in seeing that the farmers got a fair market price from anyone that bought the tomatoes and not necessarily in purchasing the tomatoes themselves.

The first day of packing the tomatoes, this company sent one of its field men to help the co-operative in packing. A United States Government representative was in charge of the grading. The truckers were present and the highest bid offered by them was \$0.75 per lug. After getting the market news reports the tomatoes were sold to a commercial concern for \$1.25 per lug.

The co-operative's headaches were not over. The inexperienced help was not packing the tomatoes so that they would be received in good condition at distant points. An overnight trip to Humboldt brought an experienced foreman for the packing shed. Their troubles were solved.

The market was supported thruout the entire season and the growers netted \$0.47 per lug in comparison to 21½¢ cents in 1940. The average grower received \$135 per acre after deducting all packing and grading costs. Bill Handon, a member of the Hazel F.F.A. Chapter, made \$265 net on an acre and the F.F.A. Chapter Group Project of Murray Training School netted \$175 per acre, while in 1940 they received only \$76 net.

Hollister Future Farmers Organize Feed Co-operative

HAROLD STOKER, Adviser, Hollister, California

ALTHO meat, eggs, and milk prices have been going up the past year, they have been followed rather closely by advancing feed prices. The members of the F.F.A. Chapter of Hollister, California, were using feed in such quantities that they were hit hard by the rising feed prices and so they decided to do something about it. The boys organized a feed co-operative in order to make more profits by feeding cheaper feeds.

The co-operative was organized last spring. A grinder and mixer were purchased and set up on the school farm. The F.F.A. members rebuilt an old slaughter house located on the farm into a huge granary which has ample space for grinding, mixing, and storing feeds. This storage space does away with storage costs and thereby lowers the cost of operation of the co-operative. The members of the senior agriculture class rebuilt an old car to furnish the power for the grinder.

Last summer, at harvest time, the co-operative purchased 2,000 sacks of barley at \$1.50 per hundredweight. Later in the fall it was found that this amount would cover just about one-half of the needs of the members. When the "co-op" decided to purchase additional feed, the price of barley was found to be over \$2 per hundred. The members began to look around for more economical feeds that could be added to the rations and yet keep the rations well balanced.

One-half carload of yellow dent corn was bought from the Midwestern states for \$1.60, and one carload of kaffir corn was purchased from Texas for \$1.42. Rations were built from these feeds much cheaper than could be had from \$2 barley, and yet the quality of the ration was even better than that of barley alone.

The yellow corn and the kaffir grains were bought in bulk and sacks were furnished by the "co-op." The sacking was done by the members to keep the costs down.

Dried cull prunes were purchased for \$5 a ton and squash was purchased for \$2 a ton to feed the chapter livestock. It was found that these feeds could be added to the rations in small quantities and yet the value of the rations was not impaired. Dry sows especially like this cull fruit.

Membership in the co-operative costs \$10 and these memberships may be rotated and sold if no longer useful to the member. This membership gives the co-operative a revolving working fund. Altho the co-operative has only been in operation since the beginning of the school year, a high percentage of the members of the F.F.A. Chapter are signed members and 95 percent of the chapter feed is handled thru the "co-op." Even tho the non-members may purchase feeds thru the co-operative, they have no voting power. The privilege of voting is obtained by purchasing a membership. One of the main requisites of a successful co-operative is efficient management. The boys have no paid or experienced managers but they have organized to

Tours for Young Farmers

C. L. MILLER, Teacher, Epps High School, West Carroll Parish, Louisiana

TOURS are interesting to almost everyone. Most people possess a desire to see and know what is taking place on the neighboring farm, in the community, state, and even beyond these boundaries. Travel not only satisfies these desires but, at the same time, broadens one's knowledge.

Community Tours

One of the best ways to promote a new enterprise or to improve existing local practices is to have the practice carried out by one or more farmers or farm boys, and to give the information first hand to young farmers. Information gained in this manner is lasting as well as stimulating. The individual values it more than that learned in the classroom, from newspaper articles, radio programs, or lectures. Knowledge is worthless unless used. The student will use it when he is convinced that it is practical and applicable. There are many things of interest and value in every community which are never seen by the majority of young farmers. Contacts may be made easily and pleasantly by grouping young farmers and making a well-planned, organized tour. It is generally more satisfactory to use a school bus for a tour because it is cheaper to do so, and the group can be together.

Tours Outside the Community

Those who work with rural youth are, of course, interested in their growth and development. If the worker places any value on tours, he will become concerned about the underprivileged rural boy who has never been outside his own community and who, in most cases, will never have an opportunity to do so. If rural youth are to nurture a love for country life, to desire to be good citizens, and to be optimistic about their place in the world, we must provide an opportunity for them to enjoy some of the more valuable things in life. It is easy for rural youth to become dissatisfied with farm life when they see boys whose families follow other occupations enjoy trips and other pleasures which they cannot afford. Summer tours can play a large part in making boys satisfied with farm life.

Experience With Tours

The information given in this article is based, primarily, upon what little ex-

distribute the several managerial duties among the members. Under the close supervision of the chapter advisers the co-operative is running smoothly and accomplishing its purposes. The members have elected from among their number a general manager, purchasing agent, and a head salesman, besides a president and a treasurer.

The co-operative gives the boys actual experience in working together. It shows them the advantages and benefits that are gained when people work together in the purchasing, marketing, and distributing of agricultural products.

perience I have had with tours. In the last five years our chapter has made four summer tours outside the community, varying from 600 to 6,000 miles each and covering a period of from six to 24 days. The tours have carried us over a large part of our own state as well as into Mississippi, Arkansas, Oklahoma, Texas, New Mexico, Mexico, Arizona, California, Nevada, Utah, Wyoming, and Colorado. The longest and by far the most valuable tour was one to the west coast in 1939. The boys will always remember the experiences they had while riding a school bus and sleeping outdoors in the wide-open spaces for 24 days and nights.

It is much easier to do a thoro and more complete job of teaching when the learner has a motive in doing the task. We realize the importance of motivation in teaching, but often find ourselves lacking in motivating materials. Travel, of course, requires money which must come either directly from the boys or be raised thru co-operative activities which are usually carried on at school. If the poorest boy is to make a trip, it becomes necessary for the expenses to be earned by the chapter. Most schools are burdened with the task of raising money for general school purposes. This is usually done thru plays and other entertainments. F.F.A. and part-time boys cannot afford to use similar money-raising schemes.

Earning Expenses

There are numerous methods of raising money for tours which may be tied in with the teaching program. In this way new and improved practices are promoted. First, we raised 350 broilers. This was done at the school building by the boys, who took a great interest in carrying on the project. From this enterprise the boys cleared \$44.05 which went into the treasury. Other projects promoted included storing and bedding sweet potatoes. For two springs we bought seed potatoes for bedding. Plants were sold from these as a money-making project. This year we converted an old room into a potato-curing house and have filled it with potatoes. These were bought at digging time, and we expect to sell them at a profit. Such activities provide a splendid opportunity for teaching.

In brief, tours are educational, recreational, and a stimulating device in teaching. After the war we expect to make a tour each summer.

Editorial Comment

(Continued from page 3)

proved pastures for the community.

The war emergency has doubtless brought about a greater need for the community emphasis in education, and the teacher of vocational agriculture, because of his education and experience in locating and utilizing community problems in teaching, is in a position to stimulate and assist rural teachers of general education subjects in the development of community schools.

R.W.R.

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