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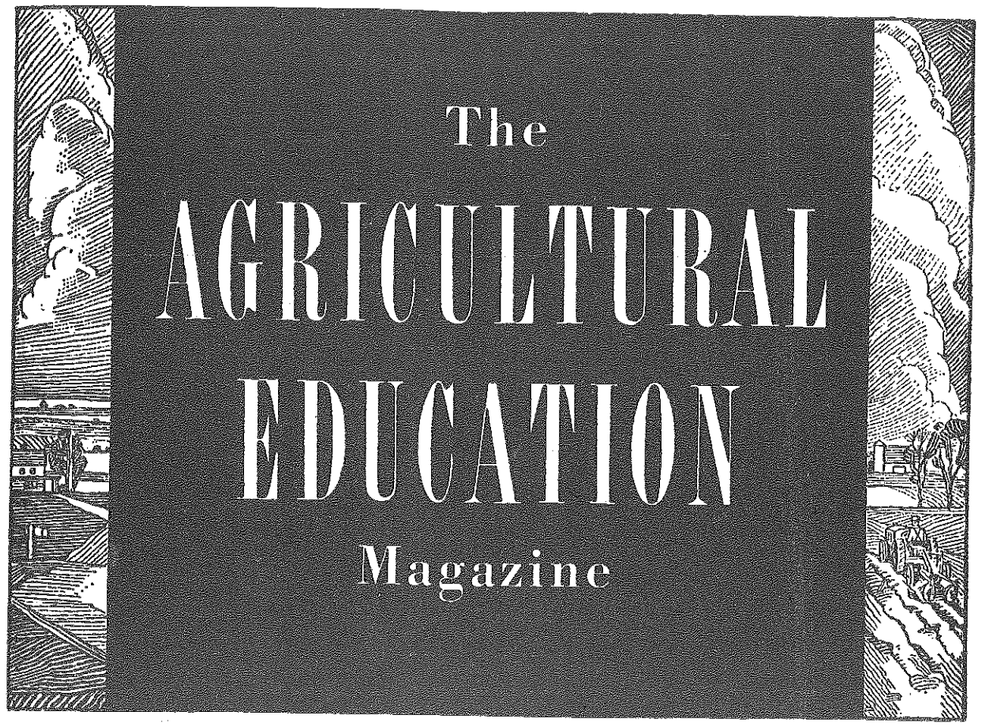

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Editorial Comment

Fighting With Learning

Barton Morgan

MOST of us have fought learning at some time or other, but only recently have we begun to fight with learning. Even now, the rank and file of military leaders and laymen do not realize the tremendous power of education to develop and motivate human beings. We should make more use of this power in our war effort; and the strategic value of teachers, especially vocational teachers, should be recognized. Thru education we can increase the efficiency of our limited manpower (1) in the production of food and fiber, (2) in the creation and production of the materials of war, (3) in the management of personnel, and (4) in the planning and executing of military tactics and strategy. By means of education we can also strengthen morale, which is very important if we are to believe Napoleon when he said, "Morale is to the physical as three is to one."

Education and Military Power

The best illustration of the military power of education in the history of the world is to be found in Germany. Let's review a little history. I am quoting from Cubberley's *Brief History of Education: page 1.*

"Having humiliated the Austrians and vanquished the Russians, Napoleon now goaded the Prussians into attacking him, and then utterly humiliated them in turn. At the battle of Jena (October 14, 1806) the Prussian army was utterly routed, and forced back almost to the Russian frontier. Officered by old generals and political favorites who were no longer efficient, and backed by a state service honeycombed with inefficiency and corruption, the Prussian army that had won such victories under Frederick the Great was all but annihilated by the new and efficient fighting machine created by the Corsican who now controlled the destinies of France. By the Treaty of Tilsit (July 7, 1807) Prussia lost all her lands west of the Elbe and nearly all her stealings from Poland—in all, about one-half her territory and population—and was almost stricken from the list of important powers in Europe. In all its history Prussia had experienced no such humiliation as this. In a few months the constructive work of a century had been undone."

There was a wise man in Prussia in 1807, a philosopher by the name of Fichte, who in a series of addresses to the German nation urged the leaders to turn to education as a means of rescuing the state from the miseries which had overwhelmed it. He pointed out, that with every phase of the government determined by a foreign conqueror, only education had been overlooked, and to this the leaders should turn for national redemption. The King of Prussia took action. Said the King:

"Tho we have lost many square miles of land, tho the country has been robbed of its external power and splendor, yet we shall and will gain in intrinsic power and splendor, and therefore it is my earnest wish that the greatest attention be paid to public instruction. . . . The State must regain in mental force what it has lost in physical force."

The school system of Prussia made rapid progress. After Horace Mann, the George Washington of our public school system, visited that country in 1843, he wrote in his seventh annual report:

"I do not hesitate to say that there are many things abroad which we, at home, should do well to imitate; things, some of which are here, as yet, mere matters of speculation and theory, but which, there, have long been in operation, and are now producing a harvest of rich and abundant blessings."

The military result of this education, according to Cubberley, showed itself in the War of Liberation in 1813-15 and in the later wars against Napoleon. "Still more clearly was the result shown in the humiliating defeat of France, in 1870, when it was commonly remarked that the schoolmaster of Prussia had at last triumphed."

The best modern illustration of the power of education is to be found in Germany under Hitler. As great as is his military might, it has been estimated by good authorities, who are not educators, that he has gained more thru education and psychology than thru his armed forces. Thru education he has united a divided people and has given them a patriotism akin to fanaticism.

In addition to uniting his own people thru education, Hitler has divided many of his enemies. France is a good illustration of this. You may call it propaganda, but according to my definition of education, propaganda is a form of education—a misdirected, illegitimate form.

The following quotation from Erika Mann, daughter of Thomas Mann, compares certain phases of our education with that of the Nazis: "It is certainly true that the 'educators' of Nazi youth are making the best of their jobs. The sinister doctrines of the Fuehrer are beaten and hammered into the minds of the children from their third year on.

"On the other hand, what we have to teach is human—every child can grasp it. Perhaps that is the very reason why we are inclined to neglect giving our students the definitions and redefinitions of simple notions like 'good' and 'evil', and 'true' and 'false', 'just' and 'unjust'.

"That is a fallacy, we can take nothing for granted. The time is out of joint—the crisis and disasters of the century have confused and distorted all concepts, and we could be well advised to clarify them and place them before our youth anew with all the emphasis at our command. 'Herein and herein alone lies our chance. Herein, and herein alone can we learn from the enemy. Let us teach the good as insistently as he teaches the evil.' "

Education Must Be Utilized

I shall not discuss this point further, but we in America must recognize the power of education and give it a larger place in our war and peace efforts if we are to compete with our enemies in the war, and shape society toward nobler ends during times of peace.

Paul V. McNutt, chairman of the War Manpower Commission, recently said:

"The United States government needs education today as it never did in the history of our nation. Our schools are part of our victory production assembly lines. Our schools are also part of the Army-Navy training program." He pointed out that whereas only four percent of the doughboys of 1917 had completed high school that 41 percent of the present Army are high school graduates.

As opposed to this encouraging picture General Somervell presents "the shocking fact that more than 200,000 men in this nation already have been deferred from induction into the armed forces because of educational deficiencies—because of illiteracy. These 200,000 men might constitute 15 combat divisions, yet they must be taught to read and write before they can be utilized by your Army." From a standpoint of vocational or technical training the situation is serious. Again, according to General Somervell, "our Army today is an Army of specialists. Out of every 100 men inducted into service, 63 are assigned to duties requiring specialized training. We aren't getting those 63 specialists thru the induction centers, but modern mechanized warfare dictates that we must have them. . . .

"Taking only those specialties in which the Army has found major shortages, we find a total of 62,853 lacking in every 300,000 men inducted. That adds up to 838,040 in an Army of 4,000,000 men.

"Yes, these shortages of trained manpower—of men trained in the fundamentals of jobs that must be done in a modern army—are serious, much too serious. The situation is not getting better. It is fast getting worse. The specialist field is being combed and re-combed. The supply of trained men is dwindling by the day."

It is apparent that there is great need for education in the war effort, but the most crucial test will come when the war is over. An Army of seven or more million men will be demobilized and war industries employing over 20 million persons

(Continued on page 38)

Professional

S. S. SUTHERLAND

R. W. GREGORY

Making Vocational Agriculture More Educational

CARSIE HAMMONDS, Teacher of Education, Lexington, Kentucky

Carsie Hammonds

THE expressions "vocational education in agriculture" and "agricultural education" are fairly common. However, vocational agriculture is not as educational as it might be. The amount and quality of learning secured can never be a matter of indifference in teacher education or in farmer education. The business of education is to direct learning (purposefully).

One cannot talk very long today without saying something about war. During a war, of course, we can work only in a war situation. Always we must meet the situation that is. But it is difficult to sustain the quality of vocational teaching during wartime, to say nothing of strengthening it. To begin with, a great segment of the leaders in this country believe that education is now important only as a background for the military program. Occasionally a speaker goes so far as to suggest that there is really no time for any education except pre-induction education. To one who holds such a belief, vocational agriculture must seem unimportant.

The duties of agriculture teachers are now multiplied, often almost beyond human endurance. This situation interferes with quality of teaching.

There is also the pressure for *immediate* results. This pressure is detrimental to teaching, in two ways: Immediate results may be secured without a change in the students, the attempt to secure immediate results may be antagonistic to a fundamental concept of education, which is that education always has in it an element of deferred value. Education is in some measure preparatory; it undertakes to make one ready to deal with the demands of life ahead. Present behavior is educationally useful or not as it produces or does not produce a desirable effect on future behavior.

The war is interfering with the making of vocational agriculture educational in still another way. Hundreds of good teachers have been and are being drawn into industry and into the armed forces. In desperation, many of the vacancies are filled by men poorly prepared and poorly suited to their tasks, and some of the vacancies cannot be filled at all. At the war's end, many of these emergency teachers who have not made good cannot be dislodged. It is well known that men are still employed who entered the service more than 20 years ago and who have never taught well. All in all, if poor teaching today is criminal, some of the crimes are being committed by men who are neither Japs nor Germans.

What Should Be Our Aim?

Having commented on the war, we can now proceed with other aspects of our subject. I propose to deal with three other aspects. The first of these may be called the *aim* aspect. Those engaged in education must have an aim or aims that are educational. After 25 years we are not clear, or in agreement, as to the primary aim of vocational education in agriculture. Because of this, vocational agriculture is less educational than it might be. For years we have said that the aim, or at least the primary aim, of vocational agriculture was the training of farmers and prospective farmers for proficiency in farming. Several workers in agricultural education have said, more recently, that the aim of vocational agriculture is establishment in farming. To some people, this latter statement of the aim may not call for much education; the object, they say, is simply to get across the river, not the crossing of the river. These people say, in effect, that such an end is outside the educative process, or that it is at least subordinate to education.

What about it? It is possible to become established in farming, in the narrow sense of the expression, without much preparation for farming. On the other hand, it is possible to be trained for proficiency in farming with nothing to farm with except one's proficiency. One cannot plow his proficiency nor dispose of it later as scrap metal. And one can't seed it or breed it or milk it or shear it.

Confusion Exists

Apparently we are confused as to whether the aim of vocational agriculture should be stated in terms of end or of fulfillment. These words do not mean the same thing. The aim of life is not fulfilled in death. Aim, of course, always relates to results, but not all results can be attributed to aims. The wind blows the desert sands of Africa. The position of the grains of sand is changed, but so far as I am aware, there is no aim. Nor does a mere serial aggregate of acts constitute an aim. A series of the bees' acts gets results. But the bees do not anticipate the consequences of their activity nor perceive their ends in foresight. An educational aim implies foresight of results and an order of carrying out a process; it implies a sequence in the use of means.

More than a quarter of a century ago John Dewey pointed out that the end in view was not the target but hitting the target, that the object to be hit was only a sign by which the mind specified the activity one was to carry out. When I was 15 or 16 years old I learned to aim in such a way as to hit a running rabbit. Before, the rabbits usually ran on. I learned to take aim by means of the rabbit, but I took sight *on my gun* and I pointed the gun to place the shot where I judged the rabbit would be to receive the shot.

Whether you and I have an aim and what that aim is, are important. Of course, agricultural education as such has no aim. We speak of "the aim of vocational agriculture." As all of us know, only persons have aims, and only persons taking steps to reach the ends have aims —an aim is not the idle view of a spectator.

Perhaps the primary aim of vocational agriculture could not be completely formulated prior to the attempt to realize it. Twenty-five years have gone by, and we have not yet succeeded in stating an aim for vocational agriculture to which all of us agree. Even if our aim were stated so as to include both "training for proficiency in farming" and "establishment in farming," we would still not be in agreement. In the opinion of some of us the first expression refers to economic efficiency only. Others of us vaguely read into "training for proficiency" something on the mode-of-living side of farming, but we are baffled in viewing our aim as "hitting the target." Our objectives in this direction and our design for attaining them are not very creditable. Enough on the aim now; more later under our concept of the vocational.

What Is a Valid Psychology of Learning?

We pass to the psychology-of-learning aspect of this presentation. Vocational agriculture is not likely to be made educational unless it is in keeping with a valid psychology of learning. Education has to do with directing learning; teaching is directing the learning process. We are handicapped in directing a process which we do not attempt to understand. We cannot excuse ourselves for what we do, or do not do, by saying that there are many things not known about learning. There are many things not known about agriculture. A specific foundation which at least throws a good deal of light on the learning process has been built. Vocational agriculture would profit tremendously by building more squarely on this foundation. I do not presume to be an authority on this foundation nor shall I attempt here to examine it in detail. But I shall point out briefly some of its features of significance to vocational agriculture, keeping in mind that no feature is an isolated phenomenon.

Transfer of Training

The possibility of transfer of training is now definitely recognized. Whether transfer does or does not take place is no longer an issue. Early in the century the majority of psychologists and educators denied the possibility of transfer. This accepted psychology gave rise to the philosophy that only highly specific vocational training could be of value. Let us not get all "hot and bothered" as to whether we like the expression "transfer of training." That is beside the point. Perhaps all of us agree that the purposes of agricultural education, however stated, involve the ability of the individual to use in new situations what he has previously learned. You and I do not expect any later situation to be exactly the same as a situation met before.

We must not get too involved in debating the attempts to formulate a theory as to how transfer takes place. Whether we refer to the relation between the new situation and the previously learned as identical or similar elements, or as identical components, or as general factors, may be inconsequential. After all, generalization requires an identity or similarity, by whatever name.

The desirability of transfer, in calling for a teaching procedure that will make a deliberate effort to use what has already been learned in meeting *present* new situations and in promoting learning that will enable one to meet future *new* situations intelligently, suggests the rich possibility of agriculture as an educational subject for farm people.

Apparently there is justification in the criticism that vocational agriculture is sometimes too specific, sometimes not general enough. Not all persons making the criticism refer to the same thing, of course, and some of them do not know what they are talking about, but the truth is there. "If one learns a specific response to a particular situation, and no question of the applicability of that behavior to other conditions is considered, transfer is unlikely except to situations that are so similar they are almost identical," says Judd in his 1939 *Educational Psychology*. This does not mean that agriculture is to be taught detached from specific context, that there are to be no specific responses, that there are to be no particular situations, that teaching and learning are to be disconnected from the situations at hand, nor that the end of learning is to have no connection with the means—far from it.

Vocational agriculture is sometimes too specific in that the applicability of the behavior to other conditions is not considered, there often being an attempt to train or educate for each specific situation unto itself. As a simple illustration, a teacher attempts to teach the use made of protein by growing pigs, but no application is made as to the use of protein by other growing animals—growing calves, lambs, chickens, colts, pups, and snakes. The enrichment of the learning should well take place in two directions; the varied previous learning or experience of the learners in the use of protein by growing animals should be brought into play, and the use-of-protein learning should ramify into many directions from the growing-pigs point of departure. Thus the learning would be more meaningful, it would appeal to a larger number of students, there would be a greater degree of understanding, there would be better organization, there would be more frequent opportunity for subsequent use; in short, much more learning would take place.

We must hasten to add that not all of the valid psychology of learning is included in transfer of training, the much of it is related to transfer and to the principle of generalization in one way or another.

Other Principles of Psychology

Most of the basic principles of a valid psychology of learning have been stated several times in agricultural education literature (during the past dozen years), particularly by Dr. Paul J. Kruse. May I enumerate four of the principles lest they seem to be omitted in discussing the valid psychology of learning.

1. Learning is an active process. It is the process by which one, thru his own activity, becomes changed in behavior. Learning changes are brought about thru the learner's own activity. Present behavior or present activity is educationally useful or not as it produces or does not produce a desirable effect on future behavior. Activity, tho essential to learning, is no guarantee of desirable learning, which leads to the statement of the next principle.

2. What we learn is what we practice. None of the principles here stated is limited to manipulative activity. They hold with other kinds of doing and with feeling and with knowing behavior. Many people have a narrow concept of "learning to do by doing;" they use the term in too restricted a sense. One cannot learn to think without thinking; one cannot learn to plan without planning. Doing or practice does not insure the learning we expect, for several reasons. First, we may fail to realize precisely what is being practiced or fail to recognize its importance. The boy disliking record keeping is practicing dislike of record keeping. Second, as we practice we are drawn toward the standard we accept, the standard in mind being part of the practice, and it is not always easy to know what standard the learner has accepted. The teacher *can* attempt to develop the standard. However great the amount of time devoted to practice, the learner is not likely to exceed his standard of performance. Third, practice takes place with varying degrees of *self* in it. Vividness or intensity is largely responsible for both the quality and scope of the experience. This leads to the third principle.

3. Satisfaction *or* annoyance promotes learning in so far as it makes for vividness of experience, and promotes or hinders learning in so far as it affects further practice of the reactions. This is a very different statement from the one under which you and I grew up. It does not say that satisfaction is essential to learning. Also, one may learn *not* to as well as learn *to*.

4. If retention or permanency of learning is to be expected, there must be a large degree of learning or a good deal of subsequent use or both. This principle alone, if used by all teacher-trainers and teachers, would make vocational agriculture much more educational.

How Can We Make Vocational Agriculture More Educational?

In the last phase of this presentation, I should like to "plug" for making the all-day vocational agriculture class more educational. We face a new era in adult education in agriculture, and we would not have it otherwise. On with adult-farmer work and with young-farmer

In my humble opinion our closest tie-up with public education is on the all-day level. Most of our teachers are teachers in the high school. Superintendents of schools and high-school principals have a right to expect educational results from vocational agriculture in the high school. We cannot deny them the right of evaluation in their own school systems.

Vocational agriculture on the high-school level has the backing of most of our educational leaders. In his recent *Educational Psychology*, Judd says that agriculture affords as stimulating a challenge to intelligence as any one of the callings demanding higher education. Works and Lesser, in *Rural America Today*, say that the "desirability of rural schools' providing instruction in agriculture is scarcely open to question." Feeling is widespread that the high school should educate people for work.

We must not bungle our opportunity. There is room for improvement in making vocational agriculture educational on the high-school level. I shall mention three places where, in my opinion, improvement may be made.

1. Understanding on the part of the learner is, too often, not secured. Not all understanding of agriculture comes from science, but much of it does. Selected portions of sciences brought to bear on the problems of farming make agriculture the science that it is. Prescription teaching does not secure understanding. Here are some questions I asked a few years ago, and answers by boys who had had two or more years of vocational agriculture:

a. What is protein?
"It contains potash and something."
b. What is the use of protein in the body?
"It is used to build bone."
c. When asked if a grown cow giving milk would need protein, since her bones were already built, they answered, "No."
d. Why does pulling the leaves from corn decrease the yield of corn grain?
"Cells in the leaves take nitrogen from the air."
e. Why inoculate legumes?
"So they will sprout."

These answers illustrate two things: (a) An absolute lack of understanding by the boys of some of the elemental things one should know in farming; (b) the willingness of the boys to give a definite answer without a knowledge of the facts or of the forces behind the facts.

2. The organization of subject matter is too often not good. Organization, of course, is closely related to understanding. A few years ago I had what was to me the exceptional privilege of visiting for an hour with Dr. Lancelot of Iowa. In talking about some of our problems and shortcomings, he said that we in vocational agriculture were strong in bringing knowledge to bear on the problems of life. He pointed out that traditional education had made its mistakes in not bringing knowledge to bear on life's problems. He contended that we were erring in not relating knowledge to knowledge, and thus organizing knowledge as well as bringing it to bear on the problems of life. He felt that our error might be as serious as the error of the general-education people. It *is* possible to have good organization of the subject matter in vocational agriculture. We do not have it when the problem or subject

Methods

G. P. Deyoe

Methods of Correlating Wartime Instruction With Farm Labor Needs

HAROLD C. POTTER, Teacher, Chester, Vermont

POSSIBLY, at no previous time in the history of agricultural education has the profession been presented with a more direct challenge to justify its place than in the present hour of world conflict. At a time when duty on the one hand and opportunity on the other, is beckoning thousands of our farm boys into the armed forces and into war industry; the country is faced with the necessity of producing an unprecedented amount of food and raw materials to maintain our own war effort, and to bolster the effort of our Allies and our occupied territories. The justification of Secretary of Agriculture Claude Wickard's slogan that "Food will win the war, and write the peace" becomes more and more apparent, as we appreciate the tremendous effect which American-produced foodstuffs have had upon the moral stability of our British, Russian, and Chinese Allies; and as we realize the tremendous psychological effect which President Roosevelt's order of sending bread with bullets into the North African arena must have had upon those subjugated and war-torn peoples. Nor has the flood of foodstuffs abroad reached its crest. As our gallant soldiers, sailors, and marines become more active on far flung battle sites, and as more and more countries become dependent upon American-produced food, our production must keep pace with the need. Truly, ours becomes a tactical problem of training, directing, and sending into battle, our vast army of soldiers in overalls.

Loss of Selectivity

An immediate limiting factor against our eventual success is the loss of our student selectivity. Particularly is this true in many areas where war industry has made labor shortage an acute condition. The lure of Midas' touch, or the absolute necessity of remaining on the home farm has kept, and will continue to keep, many of our most desirable vocational students beyond the reach of formal, in-school education. The passage of the induction bill, for eighteen-year-olds, in spite of its occupational rider, will call many of our red-blooded American farm boys into the active battle lines. All of these conditions will find our agricultural classes with fewer and fewer of the farm-minded youth who have been our pride and joy. In their places we will receive larger and larger enrollments of younger boys, urban youth, and patriotic-minded girls.

When this condition develops, we are apt to find our students deprived of really good supervised farming opportunities. The younger boys are not generally given as much freedom to try their hand, and the urban youth does not have the room or the facilities for large programs.

What to Do?

Does this mean that we are to throw up our hands in despair, and mark time until the "good old days" return? Not if we are to justify our position as an integral and necessary part of rural education. Obviously, our task is made more difficult, but at the same time, more necessary. We must prepare to supply manpower to the task of production, both in quantity and quality. We must, for the duration, be able to supply the farmers with large numbers of strong backs and hard hands—backs and hands that know what to do, and how to do it, even tho they may not be as fully informed as to why it is done as we might desire. A village boy, properly trained, can become an efficient hired man, capable of producing food which will save lives.

The experience of last summer with willing, tho untrained, workers as practiced in some states, emphasized the fact that efficient farming requires skilled manual labor. Supplying that skilled labor becomes our job, in part, for the duration.

Methods

Obviously, then, we must train our students to become proficient in manual manipulation. We must emphasize the use of the milk pail rather than the pedigree of the cow. The proper technique with scythe and pitchfork must take precedence over the nutritive content of the grass. The adjustment of the hame strap is of greater immediate value than the identification of a bog spavin. Proficiency at shearing has a greater wartime value than a knowledge of the crimp in the wool, and the ability to spot gray-pigmented eyes is a superior wartime poultry asset to a knowledge of Standard of Perfection rules.

In recent years, in too many cases, we have tended to veer away from some of the all too common types of jobs which we as teachers have considered too elementary to include in our plan of work. What teacher has not, at some time in his career, been embarrassed to find that he has taught something akin to the sanitary handling of milk, only to find that at least a part of the students were unable to milk the cow? As we gather to our flock the younger boys, the urban youth, and the girls, we must remember that in many cases, they are totally unacquainted with many types of farm work.

Naturally, practical application on the job is the answer to a greater extent than ever before. Just as naturally, we will have a greater opportunity than ever before to practice. With labor so at a premium, and the demand for production increasing, more and more harassed farmers will be willing this winter and spring to turn their farms into veritable school demonstration plots, just so long as a reasonable amount of work is accomplished, and accomplished satisfactorily. Perhaps some teachers will hesitate to make day laborers of their classes, yet what better contribution can we make, or what better teaching medium can we find? As long as we are allowed to hold classes, and the boys and girls are allowed to attend, shouldn't we go all out, and add our bit to actual production? Certainly such a program of instruction will furnish a more diversified background of actual practice, and allow us at the same time to adhere more closely to our slogan, "Learn by doing."

Possibilities of Placement

Supervised farming programs, particularly in some sections and in some individual schools, are bound to suffer heavily as has been cited previously. Should we not, in the interests of national farm production, forego the habitual type of management programs that have in too many cases served merely as a prerequisite to the course, and emphasize in their stead the placement program?

In this connection, the writer's experience, in a defense area, will justify mention.

In the spring of 1942, farm labor of any sort was impossible to find. Many farms had already gone out of production, and many more were on the verge of doing so. The potential graduates were certain to take war-production jobs upon graduation, and thus could not be induced to maintain really productive programs.

In an effort to alleviate both conditions, arrangements were made with local and state boards of education, and with the state Supervisor of Agricultural Education to allow junior and senior agricultural students to complete their academic work in March, with the understanding that the boys so released would work on placement, either on the home farm or on an approved farm until October 1.

The results were gratifying. Of the senior boys thus placed, the present writing finds one farm manager, two partnership agreements, one air-force cadet, one war-production cadet, and the remainder still employed on the original farms where they were placed. Of the junior boys, all but one will return next year.

Fully as gratifying as the production results were the educational results. In several cases of non-farm boys, the practical application of classroom teaching has broadened the concept and understanding of the boys as nothing else could do, and has made of them, reliable and efficient farm workers.

Spare Time Activities

Conservation Education—A Community Affair

LYNN HEATLEY, Teacher, Midland, Michigan

TEACHING of conservation in Midland Senior High School developed from the needs and problems of the community. In courses in vocational agriculture in Midland schools we have emphasized the importance and uses of our natural resources. Conservation facts and principles are a part of history, economics, and health as well as of the natural sciences. Understandings and appreciations of state and national problems are based upon local experiences. Now, seeing a need for teaching adults as well as boys and girls in school, we are developing a program that can cover the entire school and community.

Projects that can be developed over a period of years serve as a means both of teaching conservation to school children and of carrying on the lesson into adult life. Reforestation, soil conservation and home beautification projects have been used in our conservation education program.

A Class project in forestry

School Forest An Outdoor Laboratory

In 1931 we worked with the city in the establishment of a city forest. We have an area of this as a school forest. We are now developing an arboretum—a planting of different species of trees, shrubs and perennials that are useful in conservation work—on the school grounds. The forest and arboretum are outdoor laboratories for teaching conservation. They give the young people an opportunity to do some constructive work toward the rebuilding of the natural resources of the community. In the school forest they practice propagation, planting, and care of trees and shrubs and the management of wildlife. In the arboretum they learn to know the different species of plants useful for reforestation; food and cover for wildlife; soil erosion control; and home beautification. At the same time they learn to appreciate wholesome outdoor recreation.

Many of the experiences gained thru these school activities have been practiced at home. In 1927 and 1928 a student and his grandfather bought 1,000 Norway pine trees to start a planting on a sand ridge back of the farm buildings. These trees are now large enough to demonstrate their value as a windbreak and for holding the sand in place, providing for wildlife, and improving the appearance of the countryside. As a result of this planting a number of persons in the community are now making plantings on waste areas of their farms. Each year several thousand trees are planted. The school forest also is serving to stimulate home plantings on farms.

Five School Grounds Landscaped

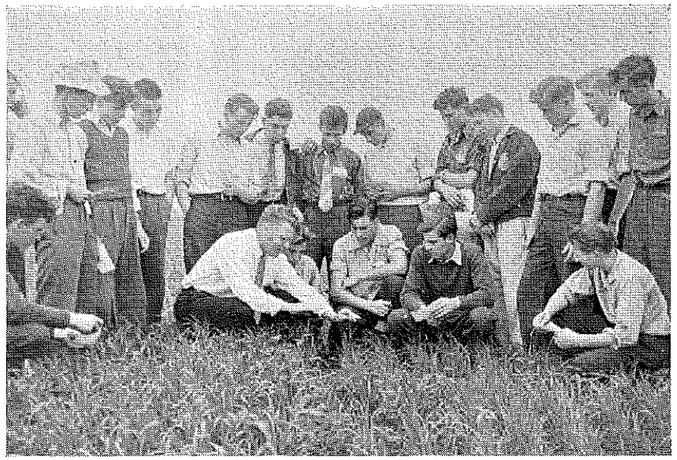
While reforestation projects care for land that otherwise would be waste, and make it of value, we also carry on projects for the maintenance of the fertility of farm lands. Planning of crop rotations—with regard for legumes, the care of manure, use of cover crops, and use of commercial fertlizers—is part of the farm practice work for vocational agriculture students.

School and home beautification is a useful method of teaching conservation. We have designed and planted five of the school grounds in the city and have assisted some of the rural schools in the planting of their grounds. This work gives

(Continued on page 38)

gram is undertaken, a lightened classroom load will result. Possibly such time should be devoted to supervision. However, if the placement positions have been selected judiciously, the farm owner will become a very capable supervisor for the greater part of the time. Then the classroom time can be devoted to increased service among the non-vocational students. Home gardens, tended by school children will become a "must" in a great many cases. Our spare time can well be occupied in passing along what information we can to girls and non-vocational boys. Anything that can be done to increase the production of home-grown food, and at the same time help to conserve vital supplies of seeds and fertilizers, must certainly be considered worthwhile.

Yes, the wartime agricultural teacher has a place in the whole pattern of war production. Routine in its ordinary sense must be abolished, and in its place must come new ideas, new concepts, and a new willingness to serve. Old methods, however sound in peace time, must be revised to meet the current need. As in all our teaching, sweeping statements as to methods and procedures cannot be made, but the individual teacher should analyze and revise his own plans and methods so as to place on the production front an ever increasing supply of capable, well-trained farm labor.



Class studies soil fertility

Supervised Practice

C. L. ANGERER

A Poultry Production Program

LESLIE G. MALOY, Teacher, Safford, Arizona

OUR poultry improvement project began last fall with a survey of poultry flocks in the community. Altho the Gila Valley is an agricultural section with splendid opportunities for poultry, the study showed that about 60 percent of poultry products consumed in the Valley are shipped in from outside sources. The survey further showed that lack of home flocks was due mainly to insufficient knowledge of poultry practices and inadequate equipment and facilities, especially for raising chicks.

The Program

Upon these conditions the adviser and members of the local Future Farmer chapter set up the following program for the community:

1. An OSYA course in poultry production for adults to teach approved practices in poultry production.
2. A chapter chick brooding project on the school grounds to:
   a. Give the agriculture students experience in brooding chicks by use of superior practices.
   b. Demonstrate good brooding practices to the community, especially to members of the adult classes.
   c. To supply high grade, started pullets to the community at a reasonable price.
3. Shop projects to plan and construct all necessary equipment and facilities for the chapter project and for use of F.F.A. members and adults.
4. A co-operative service group of students studying poultry to assist in buying chicks, feeds, supplies, and to promote the entire program of poultry production.

Finishing electric brooder in the school shop

How the Plan Works

Most of the chapter members brood their own chicks. Members of the adult class obtain chicks thru the chapter or buy started pullets from the chapter project.

The entire agriculture class in poultry production conducts the group project, including budgeting, financing, planning, and record keeping.

The actual work is performed by one member of the group who receives a fair rate per hour for his services. The chicks are sold on advanced orders at 45c each at eight weeks of age.

Some Results

To date 1,600 chicks have been brooded thru the group project, 4,000 by chapter members and 2,000 by adults. Six brooding-laying houses, 16 electric brooders, more than 50 feeders, and other miscellaneous equipment have been constructed by students in farm mechanics classes.

A Co-operative Poultry Program

CECIL JONES, Teacher, San Augustine, Texas

TEN San Augustine Future Farmers are paid up members of the East Texas Poultry Producers Co-operative Hatchery. These boys have faith in the future of this organization and what co-operation may bring to the farmers of East Texas.

This co-operative undertaking is in its first season of operation, but includes two new incubation units of more than 12,000 egg capacity each, and a hatchery unit; also, a battery brooder just in case there is an "overflow of chicks" at any time.

The agricultural workers of East Texas, particularly the vocational agriculture teachers, are credited with the origin of this new undertaking, which, in spite of all the handicaps and delays attendant to it, such as the scarcity of critical materials, labor, transportation, and other misfortunes (even a tornado), is enjoying a most successful season. Orders are pouring in every day for larger and larger quantities of chicks.

Quality Emphasized

One point for which it has received the praise of agricultural leaders and other interested people is the association's emphasis on quality. The Co-operative has affiliated with the National Poultry Improvement Plan and no eggs are placed in the machines except those from U. S. approved pullorum tested flocks.

Last summer as a representative of the organization I was sent by the Co-operative to the state convention at Dallas. During the week I was in Dallas I met the qualifications necessary to become an official Flock Selecting Agent for the Texas Baby Chick Association.

It is now my duty to locate, cull for the standard breed and production qualities, pullorum test, and officially band with numbered and sealed leg bands the flocks that supply eggs for the hatchery.

A few outstanding flocks were found in the East Texas area, but in several cases these flocks were producing infertile eggs. In order to use these highly bred flocks the Co-operative Hatchery purchased 27 record of production cocks and cockerels from W. A. Seidel of San Antonio, Texas. The dams of these cocks and cockerels were trapnested with records of 280 to better than 300 eggs per year. Fifteen of these cockerels were placed with outstanding flocks in Newton County. Ten others were placed with the Stephen F. Austin State Teachers College at Nacogdoches. Other sources of eggs include Texas A. and M. College, and the Golden Rule Poultry Farm at College Station.

He who sows the ground with care and diligence acquires a greater stock of religious merit than he could gain by the repetition of ten thousand prayers.—Zoroaster

Practices in Sheep Husbandry Which Will Increase Production

L. J. HORLACHER AND CARSIE HAMMONDS, University of Kentucky

VOCATIONAL agriculture is gearing its program to make the greatest possible contribution to the production of needed food and fiber. It is doing this on the high-school level, on the regular young-farmer and adult-farmer levels, and thru the Rural War Production Training courses. One of the chief ways of increasing production is thru the use of improved practices. This possibility is nearly always available to the farmer even when new farm machinery and an increased supply of farm labor are not available. The securing of improvement in practices fits in with our philosophy of vocational education—and progressive education in general—which says that learning must result in action; the individuals must acquire a new or a better way of doing something.

We present here a list of practices that will increase production in sheep—largely from the standpoint of mutton and lamb production.

1. Select for the breeding flock ewes that are:
   a. Adapted to the area.
   b. Strong and vigorous.
   c. Healthy and free from disease.
   d. One to four years old. If possible, select ewes that were born early in the lambing period.
   e. Well-grown, with plenty of capacity.
   f. Good milk producers.
   g. Sound in teeth and udders.
   h. Prolific. One of the most important factors in determining profit is the number of lambs saved per ewe.
   i. Capable of producing seven to eight pounds of dense wool.
2. Select a ram that is:
   a. Purebred and registered.
   b. Deep, thick, and of good mutton type.
   c. Medium in size.
   d. Good in quality.
   e. Strong in back, feet, and legs.
   f. Covered with a dense fleece.
   g. One to four years old.
3. Begin breeding five months before it is desired to have the first lambs dropped. August 1–10 is a good time to start breeding for early lambs.
   a. Study the weather records and plan to have lambs born when the weather is best on the average.
   b. If the temperature is high, ewes will not breed as readily as when nights are cool.
4. Plenty of good, green pasture is desirable. Keep the breeding ewes gaining in weight.
5. Fertilization is most likely to occur if the ewes are bred late in the period of heat, which varies in length from one to three days.
6. Trim the feet of the ewes and ram, and tag the ewes.
7. Drench for worms before the beginning of the breeding season. Use copper sulphate, cunic, or phenothiazine. Drench every 30 days during the warm months.
8. Sow rye, barley, or oats for fall, winter, and spring pasture.
9. Use one ram for each 25 to 35 ewes.
10. Protect the sheep from dogs.

October, November, and December

1. Take the ram away from the ewes when breeding has been completed.
2. Keep the ewes gaining. Each ewe should gain 20 to 25 pounds during pregnancy.
3. Provide plenty of good pasture.
4. When pastures get short, feed good legume hay, such as alfalfa, clover, lespedeza, or soybean.
5. Get the barn ready for lambing.
6. Start feeding grain about one month before lambing is due to begin. Start with ¼ pound per day and increase to ½ pound, or more. Use home-grown grains to keep down cost of production.
7. Provide feed racks and troughs for hay and grain.
8. See that the ewes get plenty of exercise, have fresh water available, and are salted regularly.

January, February, and March

1. Keep the ewes gaining right up to lambing time. This helps prevent pregnancy disease.
2. Trim the flanks, bellies, and udders of the ewes a few weeks before lambing time.
3. Save as many lambs as possible.
   a. Clean and disinfect the barn, make it free from cold drafts, and provide plenty of bedding.
   b. Have on hand disinfectants, soap, pine tar, vaseline, iodine, and other things needed at lambing time.
   c. Watch the ewes carefully.
   d. Provide as many lambing pens (4′ x 4′) as needed.
   e. Be on the job when the ewes are lambing.
   f. Reduce the feed a day or two before lambing.
   g. Prevent chilling. Warm the chilled lambs immediately.
   h. Help the lamb to nurse, if necessary.
   i. See that each ewe owns her lambs. An orphan lamb will do better if it can be placed with a foster mother.
4. Mark, with branding paint, ewes that lamb early so they can be kept to produce early lambs. This trait persists from year to year.
5. After three or four days stimulate milk production by increasing the feed. Feed more grain than before lambing. Use home-grown grains.
6. For best results, keep the lambs gaining. Feed them thru their mothers. Milk is the best feed for growing lambs.
7. When plenty of milk and pasture are not available, feed the lambs some cracked corn in a creep. They will start eating grain when they are two to three weeks old.
8. Castrate all ram lambs at about two weeks of age.
9. Watch the young lambs carefully for such troubles as constipation, scours, pinning, sore eyes, sore mouths, pneumonia, and navel infection.
10. Provide plenty of water. Keep the feed troughs clean.

April, May, and June

1. For greatest gains in weights, keep the lambs on fresh, growing pasture. Each lamb should gain more than ½ pound a day.
2. Reduce cost of production by using pastures as early in the spring as possible.
3. Mark, for culling, those ewes with poor lambs.
4. Shear as soon as the weather is suitable—in April or May.
5. Sell the wool.
6. Dip for ticks, lice, and scab soon after shearing.
7. Plan for plenty of good summer pasture.
8. Beginning about June 1, drench for stomach worms. Repeat every 30 days.
9. To control nodular worms, use phenothiazine.
10. To provide shearling pelts for war needs, shear lambs six weeks before they are to be marketed.
11. Sell lambs at 80 pounds by early June.
12. Wean lambs that are to be kept for replacements or that are not ready for market. Do this by June 30.
13. Sell cull ewes. Select ewe lambs that are to be kept in the flock if this plan of replacement is to be followed. Make plans for the purchase of ewes for replacements.
14. Trim the feet. Watch for foot trouble.

Book Reviews

Elements of Automotive Mechanics, Heitner, Shidle, and Bissell, pp. 395, illustrated, published by D. Van Nostrand Company, Inc., 250 Fourth Avenue, New York, list price, $1.92. This book is designed to meet the Army's need as expressed in the pre-induction training course outline. The principles explained are drawn exclusively from current American practice, and emphasis thruout, is laid on designs and constructions in current use. Sections at the ends of most of the chapters are devoted to a description of the possible mechanical troubles, an explanation of their causes, and a brief outline of how they are commonly remedied. A.P.D.

Elements of Machines, Verwiebe, Burns, and Hazel, pp. 221, illustrated, published by D. Van Nostrand Company, Inc., list price $1.24. The authors have attempted to meet the specific needs of the pre-induction training course in the fundamentals of machines as outlined by the War Department. Emphasis in the presentation of principles of physical science has been placed largely on selected topics in the areas of mechanics and heat. Each chapter is followed by a list of questions and sufficient problems to give the student practice in applying principles and in developing his understanding. A.P.D.

Farmer Classes

E. R. ALEXANDER — W. H. MARTIN

The Effect of Multiple Tract Farms on Farming Opportunities

O. R. LE BEAU, Associate Agricultural Economist, Bureau of Agricultural Economics

FAR-REACHING changes are taking place in the pattern of American agriculture. Multiple tract farming, or the practice of farmers' operating one or more tracts in addition to the home farm, is becoming increasingly prevalent. This is particularly true in agricultural areas that are well suited to mechanized farming.

O. R. LeBeau

Tractors have speeded up farming and increased the acreage which each operator can handle. In many cases the original "home farm" has been too small to make the maximum use of the up-to-date equipment which the modern farmer (and the farmer's son) desires. Moreover, the advent of rubber-tired tractors and equipment, together with the improved rural highways, is enabling farmers to operate tracts that are several miles distant almost as conveniently as contiguous tracts. This trend may be affected temporarily by the present rubber shortage; but taken as a whole, the war is almost certain to accelerate rather than to diminish the practice.

As community leaders to whom many farm boys look for guidance and assistance, agriculture teachers will do well to examine carefully the extent to which this new operating pattern is becoming prevalent in their locality and the effect it may have on the farming opportunities available in the area.

Rural Youth Studies Reflect Trend

Recent rural youth studies, sponsored co-operatively by the Bureau of Agricultural Economics and several state and local organizations, have revealed a surprising growth in the number of multiple tract operating units. Surveys in five counties in Indiana,[1] for instance, show that land for this type of expansion has usually been obtained by renting farms from elderly owners or part-time farmers who reserve a dwelling for their own use, or for renting to some non-farm family. A second major source of land has been that of farms previously operated by tenants. Occasionally the better-to-do tenants as well as owners have expanded their operations to include neighboring tracts. This has had the effect, at least prior to 1940, of reducing the number of farms available for rent to young farmers who desire to become independent operators. Furthermore, the the once common hired man has practically disappeared in many of the communities studied. Increased mechanization, coupled with the assistance of family members and some occasional day labor, has enabled the average farmer to get along without him.

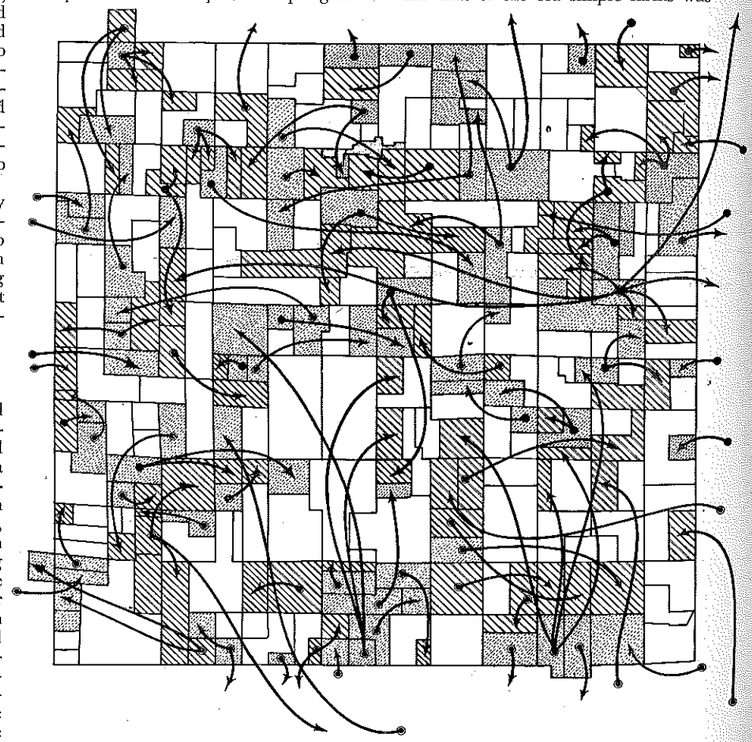
These changed circumstances naturally affect the number and kind of farming opportunities available for local rural youth. The alert agricultural teacher will wish to consider this problem when counseling his agricultural students.

Father and Son Partnerships Increasing

On the brighter side, this tendency toward large scale farming, coupled with the larger investment required to get started in farming, has given an added impetus to the creation of father and son partnerships. Agriculture teachers have contributed significantly to the development of these partnership agreements thru the supervised farm practice programs of their students. Many such partnerships were developed particularly during the pre-defense period when industrial opportunities for farm youth were less numerous.

Whereas many of the more prosperous farmers of the past planned to retire fairly early in life and to rent the farm to a son or someone else, an increasing number of farmers are now taking their sons into partnership with the expectation of remaining on the farm as long as they live. This usually means the size of the farm has to be increased to where it will adequately support two families. Such expansion generally involves the renting or purchase of additional land, often whole farms, with the result that multiple tract operating units already comprise a large portion of the land area in some communities. For instance in Washington township, Blackford County, Indiana, more than two-fifths of the farm operators in 1940 were farming two or more tracts of land. (Figure A).

These multiple tract units accounted for 51 percent of all the farm land in that community. The average size of the multiple tract farm was 181 acres, (including some land outside the township) while that of the old simple farms was only 93 acres or approximately one-half that of the larger units.



Owned by operator:—farm of two or more tracts or owners

Rented:—farm of two or more tracts or owners

Farms of one tract

Implications for Vocational Education

The accompanying map illustrating the prevalence of multiple operating units in Indiana (Figure A) has numerous implications for vocational education. Doubtless, many agriculture teachers, both in the Corn Belt States and elsewhere, will find that the same situation applies to a greater or lesser degree to their own localities.

Since these larger operating units often can be operated more efficiently than smaller units, the tendency toward consolidation may be expected to continue for some time. But if multiple operating units become increasingly common, the question may well be asked, "Where will the young men who want to farm find places to start?" This applies particularly to those whose parents are unable to help them. Obviously, this is a matter of vital concern to the local agriculture teacher who would like to see his graduates obtain satisfactory placement.

A consideration of this problem raises other significant questions, such as: How many young men can reasonably expect to find farming opportunities in their home communities? Which young men should be encouraged to prepare for farming? What are some of the related fields in which farm boys can best capitalize their agricultural experience? What other occupation and skills should be taught to the surplus who must look elsewhere for employment?

The alert agriculture teacher will aim to keep himself constantly informed as to the kind of farming opportunities available, their approximate number, and where they are most likely to occur. He will take these facts into consideration when counseling farm boys and in helping to develop adequate vocational training facilities for all the residents of his community.

Simple Community Surveys Helpful

To assist agriculture teachers and other community leaders interested in ascertaining the number of farming opportunities in their localities, the Bureau of Agricultural Economics has evolved a procedure which has been used with success in a dozen or more counties thruout the country. By means of a simple community survey designed to be conducted with a minimum of personnel and travel, it is possible to procure a significant quick picture of (a) the present number of farming opportunities in the locality, (b) the rate at which new opportunities have occured during the last five years, and (c) an estimate of the number of new opportunities likely to become available in the immediate future.[2]

Experience has shown that most of this information can be obtained in a surprisingly short time thru interviews with a few key individuals in each community, such as the members of local agricultural planning committees and AAA committeemen. Moreover, the data can be recorded and tabulated on a simple one-line-per-farm schedule which facilitates prompt summarization. This makes it possible to report the findings within a relatively short time while the interest is still high and the data are up-to-date.

Short, simple studies of this kind, carefully interpreted and properly publicized, can be immensely valuable in giving the teachers, school officials and parents, a more adequate background for estimating the number of boys that should be encouraged to train for farming. Used as a basis for community discussions, the findings should stimulate public approval and demand for a vocational education program that envisions the needs not only of those who wish to farm but also of the surplus who by preference or necessity will engage in agricultural service activities, in rural industries or in other non-farm occupations. In periods of rapid changes, such surveys could be repeated as frequently as is necessary to afford a correct picture of the current situation.

Dr. O. E. Baker reports that the rural youth studies conducted by the Bureau of Agricultural Economics during 1940–41, have indicated (a) *that when opportunities for urban and non-farm employment are favorable, most communities have an adequate number of farming opportunities to meet the needs of young men who are definitely interested in farming*, and (b) *that only a few young men have the capital that is required to start farming, except as junior partners with their parents*.

In such communities the agricultural teacher's problem becomes one of (a) ascertaining the optimum number of young men to be trained as farm operators, (b) encouraging only those boys to enroll for vocational agriculture whose attitude, aptitude, and home-farm situations are most favorable to success in farming, (c) helping to obtain alternative training opportunities for the surplus farm youth, and (d) facilitating the placement and continued occupational progress of the youths who are trained in agriculture.

Maximum utilization of our manpower in the present crisis, demands that individuals be trained for jobs that are definitely available. The favorable results that should accrue from a community vocational program that includes the above objectives affords a genuine challenge to every agriculture teacher.

1 Blackford, Hancock, LaPorte, Monroe and Orange

2 Specimen copies of the schedule "Farming Opportunities for Rural Young Men" and suggestions for its use can be obtained from the Bureau of Agricultural Economics, U. S. Department of Agriculture,

Training, Placing and Financing Young Men Returning From Military Service and War Production Industries After the War

G. A. SCHMIDT, Teacher of Education, Colorado State College

THOUSANDS of young men formerly engaged in farming who have entered military service and who have gone into defense jobs, will flock back to the farm when the war is over.

Among these thousands there will be many in every community where there is a department of vocational agriculture.

Those returning to the farm may roughly be classified into four groups:

1. Young men who merely helped their dads operate the home farm.
2. Young men who helped their dads operate the home farm, but who also had some equity (stake) in farming.
3. Young men who were hired hands on farms.
4. Young farm operators, renters and owners, who quit farming primarily because of low incomes.

Among these groups there will be many former F.F.A. members. Just recently I saw an account of last year's F.F.A. graduates from a local chapter. Out of the 12 graduates, six were in the armed forces and six were at home helping to run farms altho they were expecting to be called into military service at any time.

Many Boys in Service

If this is a typical case, one might conclude that over 50 percent of the graduates from high schools in recent years who were F.F.A. members are now in the armed forces. I believe that teachers of vocational agriculture will have an opportunity and a responsibility in helping former vocational agriculture students, and to some extent other young men returning to the farms in their communities, to make re-adjustments after the war is over. Naturally, this is a problem concerned with postwar planning and right now is the time to attack it.

Joseph W. Eaton formerly research director of the Resettlement Institute in the 1942 winter issue of *Land Policy Review* states:

"Not the least of our ranking problems when peace comes will be that of rural rehabilitation. Take millions of men flowing back from the armed forces to civilian life. Add other millions who will leave their jobs in war industries. Many of them will have farm backgrounds, and may wish to return to their former way of life. Most of them will have little or no capital of their own, in addition to which some may require training and supervision."

Can the program in vocational education in agriculture render effective assistance in this readjustment problem that will eventually arise? How?

Training

Let us consider the first aspect of this problem, that pertaining to *training*. Would the following be practicable?

1. Offer instruction pertaining to getting established in farming.
   Such a course might involve problems pertaining to:
   a. Getting started in farming.
   b. The training value of working as a hired hand.
   c. Renting versus buying a farm.
   d. Analyzing efficient farm units.
   e. What it takes to make a farm business.
   f. Determining the scope of a farm business.
   g. Determining the use and sources of credit.
   h. Selecting a farm.

(Continued on page 37)

Farm Mechanics

L. B. POLLOM

Importance of Organizing and Guiding Agricultural Advisory Committees for Rural War Production Training Program

PAUL M. HODGSON, Supervisor Rural War Production Training Program, Delaware

THE National Defense training program for out-of-school youths, and the Rural War Production Training Program which was an outgrowth and further development of these out-of-school youth training opportunities, have developed and further emphasized the importance of local adult advisory committees for our vocational agriculture departments. It has brought to the forefront the importance of bringing together a representative group of adult farmers and representatives of those agencies interested in working with the farmer; of sitting down together, looking at a definite situation, and deciding upon the best method of procedure to meet the agricultural needs of that particular community. Especially important to the new teacher is this advisory committee and its meeting, and in these days when there are so many changes and so many new teachers much time can be saved in getting acquainted with farmers, learning the conditions, and making adjustments to meet better the local needs. Recommendations for developing and utilizing a local advisory committee in any representative school area by the local vocational agriculture teacher might be as follows:

1. Confer with the superintendent or principal of the school to be sure that there is a definite understanding on the part of the school authorities as to the purpose of an advisory committee.

2. Make up a list of all of the representatives from agriculture and industry who should be invited to serve on the committee. The representatives from agriculture might well be two outstanding farmers, and the two representatives from industry might include one farm machinery and one feed dealer. The consultants on this advisory committee should include: the school superintendent, the county agent, a representative of the county war board, a representative of Farm Security Administration, a representative of the county U. S. Employment Service, a representative of the Farm Credit Association, a representative of the R.E.A., a representative of the local Grange, and other farmers' organizations, and all local individuals who might be available and definitely interested in the community agricultural program. The supervisor of agricultural education or Rural War Production Training, or some one thoroly familiar with the program should be present at the organization meeting.

3. A letter briefly stating the purpose of such a meeting should be written to each of these persons asking them if they would be willing to serve. A self-addressed post card on which to check the reply might be enclosed. Carbon copies of all letters should be retained in the local file. If possible these letters should be followed, previous to the meeting, by a personal visit to each of the individuals concerned.

4. At a meeting of this group the purpose should again be outlined and a statement given on the services available thru this school program. Following the general introduction and brief remarks from representatives of the different organizations, the meeting should be thrown open for discussion of the problems, and the training opportunities available: so that conclusions might be drawn as to the general procedure to be followed in the future in that immediate community. Before the meeting closes they should suggest the best meeting place, the best practical repairman for their instructor, and recommend other centers where courses might be started in neighboring communities.

5. After the advisory committee recommendations have been obtained, the vocational agriculture teacher then has a definite responsibility to put forth the necessary effort to get this program under way. If the facilities of the school are not suitable he must, with the assistance of his local advisory committee, locate a place, the equipment, an instructor, recruit the farmers who will attend, and plan the general procedure of handling the course.

6. After the first meeting if the enrollment is not sufficient it may be necessary for the agriculture teacher to visit each farm, following much the same procedure as a salesman, being sure that no farm is missed. The purpose of this visit would be to let everyone know about the courses offered for out-of-school persons in that particular community. If they do not know, they cannot be expected to attend. Newspaper publicity and circular letters cannot take the place of a personal visit at which time plans may be made to bring some definite pieces of equipment to the first meeting of the group.

7. The advisory committee may serve as a nucleus of the class enrollment, and they may help to spread the information to other farmers in the community.

8. Publicize the meeting of your advisory committee, list names, and outline its definite plans for that particular community. Use the state and local newspapers, Farm and Home Hour on the state radio hook-up, county agent news letters, neighborhood leader groups, A.A.A. committee, mimeographed notices carried home by each child, posters in prominent places where farmers assemble, (stores, milk station, sales stables, etc.), and personal visits.

Careful Planning Necessary

Altho the advisory committee is a very essential part of the planning and operation of our agriculture work, and particularly of the Rural War Production Training courses; their value to a school and community depend largely upon the detailed planning, accurate information, and the foresight of the teacher, or the one handling the meeting, especially the discussion period. Some meetings may be held which defeat the purpose for which they were called, and do not function in all cases for the best interest of that particular community. I think of one example where a teacher wrote to me and stated that his advisory committee had met and did not feel that this was the year for this type of work, especially as they considered gas and tire rationing to be critical. I wrote back that there was one of two things wrong: they either did not understand the program clearly, or he had the wrong advisory committee; and that I would visit him. Upon visiting him in his department I was told that the people in that area were different from other areas and that they did not go for this sort of thing. At his request together we visited some of the farmers in an area in which he considered there would be the least interest. As we started out we agreed that we would set the next Wednesday night as the starting time so that we could extend a real invitation for an actual class. Within an hour we had recruited enough members for a class, and the teacher had made new acquaintances with farmers. This class started the next week. The interest grew and on a recent visit to the class I found a very interested group of farmers (among them advisory committee members) working on their machinery, and happiest of all was the young agriculture teacher who realized *it could be done.*

Committees Help to Expand Programs

Some outstanding advisory committee meetings included plans not only for courses in their own immediate community, but gave suggestions to the vocational agriculture teacher as to other centers, which should be considered, with names of men to contact in these new areas. From one advisory committee meeting four different centers were started under the supervision of the one local vocational agriculture teacher. To date 30 Rural War Production Training courses have been started in Delaware, 26 in repair, operation and construction of farm machinery and equipment, and four in production, conservation and processing of food for farm families. The general procedure was usually as follows: The meeting was called to order by the agriculture teacher who outlined the Rural War Production Training Program, its purposes and plans. The representatives of the various agencies present were given an opportunity to express their views as to the value of the program. The discussion which followed brought out in most cases the fact that the most important thing needed for that particular community was a course in repair, operation and construction of farm machinery and equipment, and most of the planning was towards getting this program under way. After these plans had been worked out by the combined group the possibilities of other courses dealing with increasing the production of essential foods, and training farm labor were mentioned in order to get the reaction of the advisory committee as to the advisability of also planning a detailed program for these other courses. In nearly every case the statement was made "Let's do one thing at a time" and this procedure was followed. The advisory committee properly handled represents the public sentiment of the farmers, and will greatly assist in the correct development of the type of activities most beneficial to agriculture, and to the Food for Victory program.

The Rural War Production Training Program

STANLEY TRENHAILE, Instructor, Jerome, Idaho

THE present Rural War Production Training Program at Jerome, Idaho, developed from the OSYA Program, was started during the winter of 1940–41. At that time the local administration saw how such a program would help Jerome, so an auto, truck, and tractor mechanics class, and a carpentry class were organized.

Organizing First Class

These first two classes required a lot of work in organizing. A survey of all out-of-school young men from 17 to 24 was taken in this district and county. This was done with the assistance of the local Selective Service Board and the school census. Even then, some of the 17 to 20 year old boys were missed. The community was informed about the available training by mailing information to the eligible trainees. The local weekly newspaper published several articles, and the major organizations such as Granges, the Chamber of Commerce, the Rotary Club, the Junior Chamber of Commerce, etc. were organized to help sell the program. The F.F.A. did its part to recruit trainees.

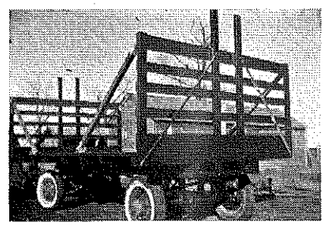
The result of this first year was the completion of the mechanics class with several of the trainees going into permanent mechanical employment. The carpentry class completed the high-school agriculture building which has a classroom 24′ x 30′ and shop 30′ x 80′.

Other Classes Organized

During the winter of 1941–42 a class in metal working was organized. This was easier to organize because of the work done the previous year. The ground work had been laid so a public announcement about the course and its contents was all that was needed to get the enrollees to start the class. At that time a large number of the young men were interested in welding in the shipyards, so that was another big help in organizing the class.

Lloyd Simerly, the instructor, who was one of the best farm machinery repairmen, welders and mechanics in Jerome, proved to be the backbone of the class. He was always on the alert for new methods and soon had several tradesmen coming to help with the class instruction. Blacksmiths, welders, plumbers, tinners, and mechanics would visit the class and the instructor put them to work at once.

This year the same instructor is teaching a class in farm machinery operation, repair, and construction. This class is made up of farmers both young and old, who are interested in learning to operate, care for and repair their farm machinery and construct labor-saving devices or other needed equipment. A number of these men tried to enroll in the OSYA classes last year but were unable to do so because of the age limit restriction. They have come in such large numbers that the class schedule had to be doubled. Finally an additional building had to be rented and a motor mechanics class started under Del Nielsen, a local garage mechanic.



Wagon and hay rack built in Jerome class

As was stated earlier in this article it was not an easy job to build up a good adult program. The classes had to be organized to cover material that the community wanted and to meet the needs of the prospective enrollees. It took a lot of work to awaken the people to their needs and sometimes their wants were greater than their needs.

Good Instructor Essential

The instructor for Rural War Production Training courses should be selected very much the same as the instructor for vocational agriculture is selected. He must be the people's choice. The best way to determine that, is to check or otherwise find out about his training and experience, the type of work he does, his personality, and his ability to mix with people. A good way to do this is to visit with him during working hours in his place of business, and to consult the farmers, business men and other mechanics, and to get expressions from them. Find out where the farmer takes his work when he wants the job done right.

Planning Should Be Carefully Done

The class must be conducted so that maximum work can be done with the equipment available each time the group meets. The instruction, whether with the group in the classroom or with the individual on the job, should be brief and to the point, but thoro. The work period must be so organized that a trainee knows in advance what equipment he will be working on during the next work period. The instructor must be able to arrange his jobs in order that he will have something definite to do each time the members assemble in the classroom for group instruction. The holding of the group meetings and the developing of new ideas of the enrollees should be encouraged. In order to supervise the adult class properly the supervisor had to:

1. Help secure instructor and organize the class.
2. Secure tools and supplies.
3. Check the reports.
4. Be on the look-out for new material.
5. Maintain contact with trainees after training is completed.
6. Help the instructor wherever and whenever needed.
7. Pitch in and get his hands dirty once in a while.
8. Meet the trainees on their own level.

Some of the benefits derived by the farmer may be listed briefly as follows:

1. They learned to operate, lubricate, and care for their machinery properly.
2. They learned to do mechanical jobs that they did not think possible for them to do.
3. They converted old machinery into useful machinery and saved it from the scrap pile.
4. They developed a reasonable degree of skill and confidence in their ability to keep their equipment in working order.
5. They built needed labor-saving devices, feeders, etc. that will save hours of labor.
6. They constructed useful equipment that could not have been purchased.
7. They repaired machinery that no one else would have repaired because of lack of available mechanics or lack of cash to have the work done.
8. They saved money that could be used to purchase feed or seed and thus indirectly increase the production of essential commodities.

Using Charts to Train Boys

F. O. ABEL, Instructor
Carey, Ohio

I HAVE made a few charts and keep them on the wall during selected periods of the school year. As a chart is displayed we discuss its meaning at least once. One example is "The Ladder to Success" with the ladder steps portraying these goals: politeness, promptness, sincerity, honesty, service, and so on. The chart, of course, pictures a ladder.

Another chart is entitled "Growing Into Farming" with these factors: (1) Efficient Livestock, (2) High Yielding Crops, (3) Equipment, followed by "What progress have YOU made during the past year?"

Other titles include "Steps in Becoming a State Farmer," "Long-Time Chapter Goals," "Goal for 1943," and "A Well-Rounded Education." Each chart is made on glazed cardboard.

Studies and Investigations

C. S. ANDERSON

Occupational Distribution, Entrance Into Farming and Opportunities for Farming, of Former Students of Vocational Agriculture

Part II

CARLTON E. WRIGHT

Implications for Guidance

Carlton E. Wright

THE program of vocational agriculture in the secondary school is based on the assumption that those who study that subject will enter farming occupations. Since it has been shown that only about one-half of the former students enter farming and only about two-thirds enter agricultural occupations of any sort, a loss in the training program is implied. So that such loss may be reduced to a minimum a program of vocational guidance is suggested.

1. Since it has been shown that great differences in occupational activities of former students exist in different parts of the country, in different states, and in different areas within the states, the implication is strong that vocational guidance be based on local programs in local schools. The fact that differences exist within any area on account of changes in the economic situation implies that local programs of guidance should vary within themselves according to apparent opportunities for future placement and employment.
2. Guidance in choice of curriculum is implied in that boys from non-farm homes are not likely to farm or to enter any farming occupation. The fact that rural boys tend to stay in rural areas implies that some form of agricultural instruction is valuable for them but it does not imply that vocational training for farming is best suited for their needs.
3. That boys who drop out of school before being graduated and boys who receive lower school grades are more likely to enter farming implies that, for boys in farming, further education is desirable; and that the training received in school is neither the type which they desire nor that which they ought to have.
4. Since boys who complete school and get better grades achieve a higher status in farming, if they enter that occupation, further training for those who drop out of school is desired. The guidance program should take cognizance of this situation and include a plan for the continuation and improvement of instruction for those boys not completing high school.
5. Since many boys do not have the opportunity for establishment on the home farm because the farm is undesirable, because it is not large enough, or because of competition from brothers, a program of guidance in establishment in farming on other farms is implied. Too often the boy who desires to farm is discouraged from farming because the opportunity at home is limited.
6. The fact that marriage is associated with permanent establishment in farming implies that social as well as vocational guidance is desirable for students of vocational agriculture. This is all the more important since girls tend to migrate from farms and rural areas in greater numbers and at earlier ages than boys, and since farm boys are likely to marry farm or rural girls.
7. Since a relatively small proportion of former students of vocational agriculture enters related occupations after finishing high school, it appears that vocational guidance is essential in assisting these boys to understand the opportunities or lack of opportunities which exist. With further education greater opportunities may exist and boys may be led to see opportunities with which they otherwise are not acquainted.
8. The great need for agricultural leadership implies that opportunities are available for boys with outstanding ability, initiative, and ambition to serve the occupation of farming thru active trained leadership as well as thru active participation in farming. It should be the function of the guidance program to acquaint outstanding boys with such opportunities. This implies knowledge of such opportunities on the part of the guidance officers. Since the teacher of agriculture is likely to be more fully acquainted with the field, his value in assisting in the program of guidance for rural boys should not be overlooked.
9. Since relatively few former students who enter college are graduated, a more thoro system of guidance is paramount. Assistance in choice of type of college is of great importance since fewer former students who enter non-agricultural colleges are graduated than of those who enter agricultural colleges.
10. Since State Farmers are more likely to enter related occupations than farming after attending college, and since such a large percentage attended college, it seems feasible to suggest definite programs of guidance in connection with the organization of the Future Farmers.
11. It has been shown that the longer groups of boys are out of school the smaller is the proportion in farming, indicating that many boys enter farming who might have been more successful in other occupations. A program of guidance is one means of assisting boys who should enter farming to do so and of assisting those who should not enter farming in choosing and entering other occupations.
12. It should be recognized in the guidance program in secondary schools that boys do not always follow the occupations of their choice, nor do they always enter the occupations for which they are trained. Furthermore, they do not always stay in the occupations they enter. Thru a program of guidance young men may be directed toward pursuits suited to their capacities and their interests.

Implications for Improvement of Research in Agricultural Education

In perusing more than 100 studies in agricultural education a great many items have been observed whereby improvements could have been made. Weaknesses in studies are due to many things; it is thru past errors that future development takes place. Specific criticisms have been offered in many cases, not in the temper of destructive criticism but with the intention of advancing the proper interpretation of data and with the idea of future improvement. Only insofar as the data have been sound, or their weaknesses recognized, can the present study be valid. Most studies have certain weaknesses, errors, or misleading data; some have many. That future investigators may profit, the following suggestions for improvement are offered. All suggestions are based on actual instances of weakness in the studies considered; all weaknesses have been detrimental to the effectiveness or accuracy of those studies.

Improvement in Method

That method in research may be im-

1. Questionnaires be so constructed as to eliminate ambiguous or misleading statements.
2. Cases be selected or eliminated on the basis of stated criteria.
3. Homogeneity, where advantageous, be sought in groups selected for study.
4. Groups be selected as readily identifiable.
5. Illogical groupings and ambiguous descriptions of individuals be eliminated.
6. False, unsound, or misleading premises be avoided.
7. Purposes be clearly stated and conclusions be based on purposes.
8. Opinion data be treated as such with their weaknesses recognized.
9. A clear understanding and definite statement be made as to what is being measured.
10. Reference to secondary sources be eliminated or identified in cases of necessity.
11. Statistical treatment of data be applied where useful and not where detrimental.
12. Sufficient time be utilized to avoid unnecessary errors and weaknesses.

Improvement in Quality of Advising and Directing

Those responsible for directing studies should:

1. Assume responsibility for limiting problems to a scope in keeping with the ability of the writer and the facilitation of the research.
2. Not permit persons lacking in research ability to attempt difficult problems.
3. Give thought to method and direction and assume responsibility for method, accuracy, completeness, and absence of bias.
4. Not allow studies to be rushed thru on a time limit for the sake of awarding degrees.
5. Assume and emanate an attitude of progress rather than finality in regard to specific studies.
6. Consider problems as problems and not to attempt to regard studies as theses unless the research merits such recognition.

Expansion of the Accurate Use of Statistical Method

That studies may be scientific the following points are suggested:

1. The study and use of statistics and statistical methods be encouraged.
2. The use of measures of central tendency other than the mean be encouraged where they can be more meaningful.
3. Statistical method be employed only on data capable of such treatment.
4. Attention be given to accurate presentation and interpretation of data from a statistical point of view.

Increase in Accuracy

To insure greater accuracy the following points are suggested:

1. Greater care be exercised to eliminate errors in calculations.
2. Erroneous assumptions be eliminated.
3. Figures be given with percentages to facilitate verification of results.
4. The use of secondary data containing errors be discontinued.
5. Descriptions of groups be more complete and more adequate.
6. Tables and other data be labeled concretely.
7. Statistical treatment be given data where feasible to give a complete analysis.
8. Dates of collection and summarizing data be stated, especially when the period studied does not coincide with the data of making the study.

Elimination of Bias

That bias may be reduced to a minimum the following points are suggested:

1. Assumptions and conclusions based on biased opinion be eliminated unless conclusively supported by evidence.
2. Giving false or misleading interpretations of data to suit specific needs be discontinued.
3. Comparisons between dissimilar studies be discouraged.
4. The assumption of cause and effect without proof be discontinued.
5. Irregular or unusual class intervals in tabular analysis be discontinued.
6. All the data be considered in determining trends or other results; the practice of using only the data which prove a definite point should be discontinued.

conclusive.

6. Opinion data not be treated by statistical methods where such treatment leads to erroneous conclusions.
7. Percentages be based on known cases and not total cases, especially when a large proportion of the group sought is not found.
8. The practice of drawing unsupported conclusions be eliminated.
9. Conclusions be based on facts rather than on opinionated statements.
10. Inadequate samples not be used, and if used, not be considered as representative of larger groups without proof.
11. Conclusions not be based on few cases.
12. Cause and effect not be assumed or implied without support.

Increase in Completeness

The following points are suggested that studies may be more complete:

1. Purposes be stated in a concise manner.
2. Inadequate samples be eliminated.
3. A large percentage of groups sought should be found and not have conclusions based on a small percentage of the total.
4. Conclusions be based on adequate cases to be of significance.

Making Vocational Agriculture More Educational

(Continued from page 25)

dealt with today is unrelated to what was dealt with yesterday or what will be dealt with tomorrow, and so on thru all the other days. Good organization of subject matter is necessary if agriculture is to be carried along intellectually. If it is not carried along intellectually, it is not so educational as it might be, nor so vocational.

3. Our concept of the vocational is often too narrow. Vocational agriculture will be made more educational if our concept of the vocational is enlarged. It might be enlarged in several directions. One direction is implied in the statements just made about securing understanding. Our concept of the vocational might well be enlarged to include a reinterpretation to the learner of his farm-life experiences. There is often a background of experience with no explanation of experiences. The essence of any education is to interpret or reinterpret to one his experiences—to lead him to see and appreciate where he didn't see and appreciate before. Our concept of the vocational must not be limited to production. Long after the Children of Israel had been led into the land of milk and honey, a new leader announced, "I am come that you may have life and that you may have it more abundantly."

What Should Be the Scope of Vocational Agriculture?

What are the total vocational needs, and therefore, how inclusive should be our concept of the vocational? John T. Wheeler asks, "Where do we go from here?" Dick Gregory reminds us that the farmer is concerned primarily with his farming, his farm, and his family—all of the family, the half which may farm and the half which may not. Dr. Hamlin reminds us that the farm boy and the farmer are members of a world society and believes that "a major part of the contribution of agricultural education to the development of the next generation will be in helping farm people of all ages adjust to their larger environment." These reminders and suggestions merit our careful consideration.

In closing, may I say that vocational agriculture cannot be as educational as it might be unless teacher-trainers and agriculture teachers feel that their work is significant. To feel that one's work is significant, one must feel that something of importance is being accomplished, he must feel that he is doing what he ought to do. One cannot feel that his work is significant unless he believes in what he is doing. A man cannot be the best teacher of vocational agriculture if he does not believe a good kind of life is possible on the farm, and that his work contributes to that kind of life.

I have attempted to discuss "Making Vocational Agriculture More Educational." The chance to make vocational agriculture more educational in the future depends very largely upon how we meet the problems today.

Book Review

Elements of Electricity, Erich Hausmann, pp. 260, illustrated, published by D. Van Nostrand Company, Inc., list price $1.24. This book was written to meet the requirements of the pre-induction training course designated as Fundamentals of Electricity—A Basic Course, as presented in PIT Outline No. 101, prepared by the United States Army and the United States Office of Education. Fourteen units cover the fundamentals of electricity as the first level, and no previous knowledge of electricity is presumed. A P.D.

Future Farmers of America

A. W. TENNEY

Developing Leadership Thru Co-operative Activities

R. C. MITCHELL, Teacher, Alpine, Texas

THE need for rural leadership has been acute in the past, and its importance is felt in this critical time thru which we are passing. Wherever one sees a job being well done, he usually sees some well-trained leadership being manifested. If the rural people of our country are to progress along with others, they must have trained leaders among the masses. By trained leaders we mean men and women who have been given the opportunity to participate in activities which have stimulated constructive thought and action.

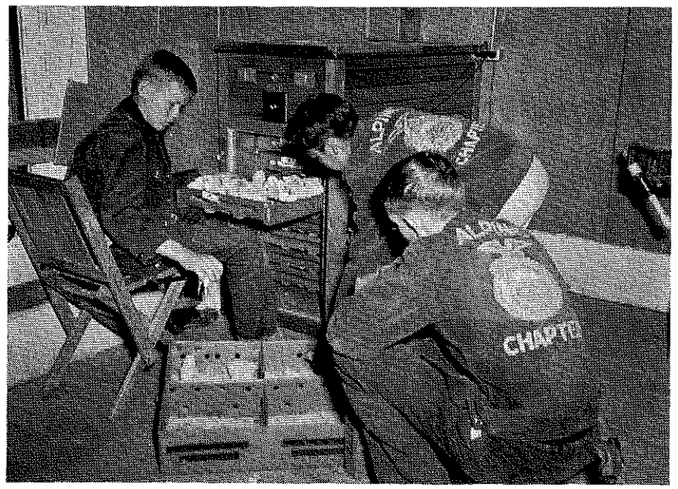
Leadership Needed

The Future Farmers of America have recognized the need for such training and many methods are employed to satisfy this need. One of the most forceful and outstanding methods of training young men for leadership is thru co-operative activities. Any co-operative movement which brings about a condensation of thought, and results in some good for all concerned is leadership training in action. Thru this organization we have many opportunities for boys to see practical demonstrations of what co-operative action can mean.

Co-operative activities have been featured in the Alpine, Texas, Chapter as one of the methods of training leadership. In planning our program of work for the year, we put down as many co-operative activities which we believe would bring beneficial results. We have realized the necessity of adequate financing for any undertaking, and our planned activities were no exception to this rule. Methods used to secure funds for financing were all of a co-operative nature.

The money was raised by conducting an annual F.F.A. Sweetheart Contest; a glamour boy show staged at the local theater by the chapter; a scrap iron drive that brought in over 20 tons of scrap; a ram raffle during the local livestock show; and by selling a fat calf and eight fat lambs given to the chapter. These activities netted the chapter well over $800.

This money was used in various ways, most of which was to sponsor other co-operative activities. Part of the sum was used to finance the local livestock show conducted by the chapter on a co-operative basis.



Boys operate hatchery

Left to right are Don Oliver, Billy Leyva and John Harris, all Future Farmers of the Alpine Chapter. Don operates the chapter incubator, but should he be absent the other two boys are instructed to take over. Custom hatching is done for two cents an egg, half of which goes to the operator and half to the chapter

Co-operative Hatchery

Another co-operative activity started recently was the purchase and operation of a 1,200 egg electric incubator to hatch eggs for the boys of the chapter and citizens of the community. Since the Alpine Community is 225 miles from the nearest hatchery, a method of incubating local eggs has proved to be a community service. Well over 2,000 eggs have already

Other co-operative projects include the purchase of a purebred gilt and the giving of it to one of the members on a co-operative basis. The boy is to return a good pig to the chapter after the gilt farrows, which in turn will be given to another worthy member. A chapter hotbed was built and over 3,000 plants were grown for the boys' victory gardens. The members also bought a $100 War Bond, which will be used as a start toward the building of a chapter loan fund. Another part of the money was used to conduct the Alpine Annual Father and Son Barbecue at which time a program, planned and put on by the boys, was given for the dads and other guests.

Alpine is located in a strictly ranching section where all feeds must be purchased. This gave the chapter a splendid opportunity to test the value of co-operative buying. Soon after the beginning of school the members purchased 15,000 pounds of grain for their animal projects at a saving of 70 cents per hundred.

The chapter also conducts a co-operative feeding pen which was provided by the local Rotary Club. The Rotary Club purchased the pens and buildings and turned them over to the boys to use in their work. Boys who do not have a satisfactory place to do their feeding at home may have space in the chapter pens for feeding their animals. One boy has just completed the feeding and butchering of 50 lambs for local consumption. The pelts will be sold to the government for use in making clothing for our fighting pilots.

Another co-operative project and perhaps the largest from the standpoint of financial value was the securing of over $2,000 worth of salvaged lumber from a near-by airfield. This lumber is being used by chapter members in constructing buildings and equipment for their food production projects.

The above activities have been cited to show what is being done in the Alpine Future Farmer Chapter as a result of getting the boys started in a small way in co-operative activities. Once started and aware that they were their own leaders they have kept going largely on their own momentum, and at the same time experience and confidence have constantly brought forth new leaders.

Much of the success of such training depends largely upon the proper allocation of responsibility, particularly in the beginning. Admittedly such activities add to the responsibility of the teacher, but even in a material way more can be accomplished in the long run. Also, such training develops and locates the more capable leaders because it gives a purpose to group activities.

Fiber flax is now a strategic fiber. Co-operative research in Oregon has yielded improved methods of culture, harvesting, and handling flax. Two new varieties—Martin and Highboll—were developed by plant breeders. At present prices these varieties return about $25 an acre more

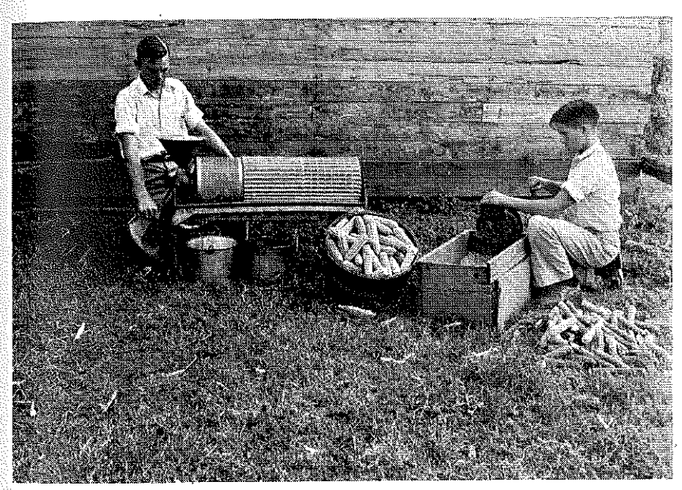
Boys Grow Seed Corn in Texas

CERTIFIED seed corn is being grown co-operatively by boys of cast Texas thru what is known as the Piney Woods Future Farmer Certified Seed Growers Association.

The Association was organized in January, 1938, and now has a membership of 14 boys in six different chapters. The purpose in organizing the association, according to Executive Secretary-Treasurer R. A. Shaw of Nacogdoches, was to provide farmers of the area with Texas Golden Prolific Seed Corn. This corn was developed by the Texas Experiment Station and is recognized as one of the most prolific varieties of corn for east Texas and other sections of the Southwest. Since the demand for this variety has been greater than the supply, members of the Piney Woods Association have had no difficulty in disposing of their certified seed at a price set by the directors of their organization.

In order to be approved as growers of certified seed, these boys paid an initial membership fee and purchased registered seed corn from the Experiment Station. Registered seed corn is secured each year and must be planted at least 1,500 feet from other fields of corn. During the growing season an inspector from the State Department of Agriculture passes on each member individually. If the member meets the standards required by the inspector, he is permitted to sell state certified seed upon harvesting his corn, provided a sample of the seed for sale is sent to the State Department of Agriculture and meets the 90 percent minimum germination test.

All the certified seed corn must be sacked in new even weight bags, sealed, and marked with a blue tag bearing the State seal and showing the percentage of germination and the official State Certification.



Grading seed corn

Training, Placing, and Financing

(Continued from page 31)

2. Offer pre-employment or refresher training on farm enterprises.
   a. Milk Production.
   b. Pork Production.
   c. Potato Production.
3. Offer instruction on subsistence farming coupled with more or less non-farm employment.
   a. Efficient units in subsistence farms.
   b. Determining kinds and number of livestock.
   c. Determining kinds and acreage of crops.
   d. Determining efficient layouts.
   e. Determining needed capital.
   f. Making budgets for subsistence farms.
4. Offer a course in farm guidance.
   a. What it takes to be a good farmer.
   b. Opportunities for profitable employment on the home farm.
   c. Opportunities for profitable employment on other farms in the community.
   d. Opportunities for part-time farming and non-farm employment in the community.
   e. Is there a need for more farmers in the community?
      (1) How many new farmers can make a profitable living in the community?
      (2) What are the opportunities?
   f. Making a budget for getting started in a farming business.
      (1) Capital needed for operating a farm as a renter, as an owner?
      (2) Capital on hand.
      (3) Amount to be borrowed.
      (4) Will investment return capital interest, running expenses, pay for labor and leave a profit?
   g. Renting a farm.
      (1) Cash rent.
      (2) Crop rent.
   h. Buying a farm.
5. Offer a course on farm appraisal.
   a. Considering farms for rent.
   b. Considering farms for sale.

Placing

Let us now consider the second aspect of this problem, that of *placing*. Would the following activities by the instructor in vocational agriculture be profitable and helpful in assisting in placement of those returning to farms after the war?

1. Getting names of young men, former agriculture students and others that have left the farms in the community.
2. Contacting parents of these young men regarding the future plans of their sons.
3. Determining the possibilities of these young men being profitably absorbed on their home farms as hired hands, as co-partners, as operator-managers.
4. Determining the needs for hired farm hands in the community.
5. Determining the farms in the community that are for rent.
6. Determining the farms in the community that are for sale.
7. Determining the small farms for rent or for sale on which farming could be combined with non-farm employment.

Financing

Now let us consider the third aspect of this problem, that of *financing*. Would the following activities by the instructor in vocational agriculture be practicable and helpful to those returning to farms after the war?

1. Determine contemplated action in Congress pertaining to grants or loans for those in military service that plan to enter farming after the war.
2. Determine contemplated action by the state pertaining to grants or loans for those in military service that plan to enter farming after the war.
3. Find out what Congress or the particular state has done along lines mentioned in 1 or 2.
4. Get acquainted with all governmental loaning agencies.
   a. Farm Security.
   b. Farm Credit Administration.
5. Other loaning agencies.
6. Provisions for those returning to farms in national and state postwar planning boards' contemplated projects.

If we in vocational education in agriculture are going to take a part in postwar planning we need to get busy on the job, if we have not already done so.

> "There are those who contend that we should not plan now, but should wait until the end of the war and then begin to plan. To wait until the war is over will be to wait until it is too late."

If teachers of vocational agriculture are to take an active and effective part in helping young men returning to the farms in their communities at the close of this war, they will need help and guidance from both Federal and state administrators in charge of vocational education in agriculture. They will, also, need sanction and wholehearted encouragement and support from their school authorities.

A Program to Increase Food Production

B. R. DENBIGH, Regional Supervisor of Agricultural Education, California

THIS is the story of what San Bernardino is doing to relieve the food situation.

San Bernardino is a city in Southern California of normally 20,000 people. Recently, an air depot, an army base, and other military units have been established in the area which has made a temporary increase in population of approximately 50 percent. This has created a serious shortage in food. About the first of the year a community food committee was organized to make recommendations to relieve the situation. Members of this committee represented such agencies as the War Board, Manpower Commission, Chamber of Commerce, schools, city, civic, and county organizations, and political subdivisions. This master committee outlined a conservation program, a major part of which was to be the home production of vegetables, fruits, poultry products, rabbits, and milk.

In co-operation, the schools, thru the Future Farmer organization and the agricultural teacher, Max Kipf, have organized an over-all plan. This plan provided Future Farmer goals to increase production thru projects; training for the elementary and junior high school, and an adult schedule under the Rural War Production Training Program. Two adult groups were set up, one of which is made up of the junior and senior high-school teachers in charge of a production division of the Victory Corps group. The teachers are meeting with the agricultural teacher who is providing them with the necessary information and assisting them in setting up local Victory Garden clubs in their respective classes. By this method, they expect to reach the 10-to 15-year-old children who will have home projects in vegetables, poultry, and rabbits.

Procedure Used

In addition to the above class, another class in home vegetable and fruit production is being offered for the general public. This one is meeting once a week and has been organized to satisfy the immediate and future crop needs of the members. In general, class meetings are divided into four periods, the first being devoted to a local speaker representing one of the agricultural or governmental organizations. This individual presents the economic needs as seen by his department. The second speaker is one who presents some specific plant subject or cultural practice, such as irrigation. The remaining part of the class time is handled by the instructor, R. B. Peters, a local agriculture leader of many years experience in the community. He divides his time by first reviewing and then applying both of the previous speakers' comments to actual local production. In concluding, Mr. Peters devotes a short time to questions and answers which are presented by panel discussion.

The above educational program is being encouraged and guided by the San Bernardino city superintendent of schools J. R. Croad, and his staff. The local offices of the United States Department of Agriculture, particularly the extension service, and the many farm organizations are wholeheartedly co-operating with the schools in making this food program a success. Present indications are that the San Bernardino city and surrounding area is going to do its part in assisting to relieve the food shortage by producing a maximum at home thru co-operative effort and education.

Editorial Comment

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will have to be reorganized on a peacetime basis. Many of these persons will have to be retrained for new jobs.

That education is a critical material in our war effort is apparent to anyone who takes the trouble to investigate. Skillful teachers in the vocational fields are especially necessary to produce the kind of education that is needed most of all. Teachers of vocational agriculture are coming to occupy a most strategic position because of (1) our policy to feed the people in the countries that we occupy, (2) the shortage of food in the lands of our Allies, and (3) the growing shortage of food at home. There is no doubt but that "food will help win the war and insure the peace."

Need for Teachers of Agriculture

The need for teachers of vocational agriculture will not be less when hostilities cease. The demand for food will be greater than ever before, for in addition to the present demands, there will be the necessity of helping feed the people in the conquered countries.

These people will have to be fed in order to prevent revolution and civil wars in their countries during the time it will take them to re-establish their social and political institutions and to develop a sound peace-time economy. This may take several years because of their lack of trained leaders and the confusion in their thinking. It would be wise for us to send educators into the conquered countries to help them get started on the road to a better way of living. The greatest danger in the world today is not that we shall lose the war but that we shall again turn to isolationism after the war is won.

I salute the teachers of vocational agriculture in the United States of America. Let it be said of you, as I know it should be said, that you did much to win the war and to insure the peace; that you taught the useful and the true as effectively as the Nazi leaders in Germany have taught the evil and the false.

Conservation Education

(Continued from page 27)

an opportunity to teach appreciation of beautiful surroundings and community pride, as well as skills in landscape work. We have a small nursery for growing the plants used in school and home beautification, and in reforestation. Many of the common plants are propagated and grown there, and in caring for them in this outdoor laboratory some of the skills in growing and caring for plants are learned. These beautification projects have stimulated home plantings in the community. A number of homes have made plantings; students have conducted projects in home beautification; and people of the community come to the school for first-hand information.

Class instruction is planned for boys and girls in school, but we have our program planned for carrying on conservation education in the entire community. This cultivates valuable community relationships. The Midland County Sportsman's Club is of inestimable assistance in our community projects. It has a strong program of forest and wildlife conservation and recreation, and we maintain a close association with its members. Men of the Conservation Department have been of valuable service with their displays, lectures and pictures.

Interest Is Important

Boys and girls take a greater interest in work in which they participate. This interest is the most important thing for which we are working, in our class work, individual and group projects, and the community activities that go to make up our program of conservation education. Students become active in community organizations, interested in conservation while in school, and then continue this active work when thru school. These young men and women are of great help to the younger boys and girls that are coming up thru the grades, as we maintain the community relationships. The conservation program that starts with youths in this way continues when these students have become established citizens of the community.

Montana Future Farmer "Victory War Program"

To Help Win the War and Lasting Peace

1. A "Victory Garden" on every farm—for every home.
2. Help with organization and training of additional farm labor.
3. Help keep farm machinery in repair, adjustment and in operation.
4. Revise and expand farm programs—set up production goals.
5. Help develop a "Live at Home" conservation and food program for farm families and community people.
6. Conduct and assist with salvage programs—collection of needed war materials.
7. Purchase and conduct sales of War Savings Bonds and Stamps.
8. Organize against fire and sabotage in rural areas.
9. Conserve soil thru improved practices.
10. Co-operate with local, State and National War Programs.
11. Aid in organizing "Victory Farm Volunteers."
12. Co-operate with "High-School Victory Corps."
13. Aid in prevention of waste of any kind.
14. Develop a "Complete Safety Program."
15. Assist in developing activities that "build morale."

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