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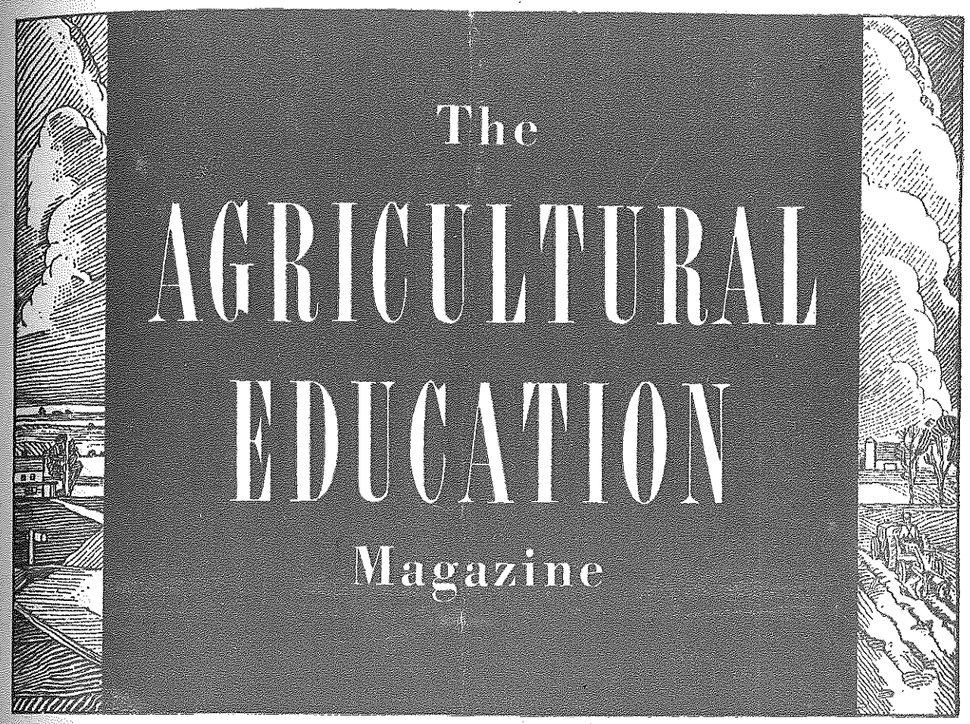

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Editorial Comment

Long Tenure for Achievements

C. E. Bundy

"THE grass always looks greener on the other side of the fence." This is an old statement handed down from one generation to another and its applications are many. It can even be applied to teachers of vocational agriculture.

Each spring many teachers of vocational agriculture acquire the desire to move to new schools. Some feel that they are not getting satisfactory salaries. Some think that they have stayed long enough in the present schools and feel that they will do better work in new communities. Many believe that their work is not appreciated in the present communities. It is not uncommon for teachers of vocational agriculture to feel that they are confronted with more problems in maintaining their departmental programs than instructors in other communities. Some men want to move away from the existing problems.

TEACHERS often want to move from small schools to large schools because of the assumed added prestige associated with the teaching in the larger school systems. Many teachers just want a change. They associate a change in position with an advancement. In many cases advancement has resulted, but very often the move resulted in further dissatisfaction.

After spending fifteen years as an instructor in vocational agriculture in one community and after watching other men in the field, the writer has become convinced that too many teachers are overlooking the opportunities for advancement which exist in their present communities. The "grass looks greener across the fence," and instructors move without appreciating the opportunities which they have in their present positions.

Most instructors who have taught for a long period of time in their communities have found that the communities are willing to pay top salaries for top men who develop outstanding educational programs. It requires time to develop good programs and time to prove to the communities the merits of the programs. This is especially true in regard to long-time farming programs, co-operative activities and leadership training.

Many instructors feel that they have been in a community long enough after three or four years, when actually they are just beginning to get programs underway which will bring about the desired results. Several instructors have remarked that they disliked leaving their present positions because they had programs underway which they would like to see completed. Yet they left, and in most cases the new instructors did not carry on the programs which they had begun. Six different men have been employed as teachers of vocational agriculture in a neighboring community during the past 15 year period. These men were all above average as instructors. None, however, remained long enough to give the community the kind of a program it needed, and long enough to receive the advancement which the community has to offer to the man willing to develop a program.

THE man who remains in a community for a long time and develops an outstanding program usually does not have to ask for a raise in salary. It comes to him. The larger town or city may have nothing more to offer than the smaller community. The small school is the ideal size of unit for developing community-wide educational programs. Often the higher salaries paid by the larger schools are offset by the increased living costs.

The social and physical make-up of communities vary, but every community presents problems peculiar to that community. The instructor who runs away from these community problems usually does a lot of running but doesn't get anywhere. He finds new problems to be solved in each new location.

It is generally agreed that the teaching profession is not a highly paid profession. Teachers of vocational agriculture are better paid than the other teachers in the secondary schools

Facing Stern Realities

LAST month's editorial, "Are We Too Soft?", presented conditions of weakness found in many departments during the war emergency and raised the question as to whether or not we can meet the issue and come out of the war period with an expanding program of strong departments equipped in all details to carry on a truly vigorous program of vocational education.

It was not difficult to present the situations and raise the questions. To meet the situation for which we are only partially responsible, however, will be a most difficult task. Since conditions are not uniform, we cannot assume that all the problems mentioned exist in all the states. However, we believe them to be worth mentioning again.

Using effectively our 25 years of experience: (1) Will we prescribe the conditions necessary for satisfactory work and use these as standards in locating new departments? (2) Will we prescribe room sizes, facilities, and equipment? (3) Will we insist that adequate instructional facilities shall be provided and maintained? (4) Will we disapprove in all but the exceptional case the assignment of nonvocational duties to vocational teachers? (5) Will we prescribe the time schedule necessary for adequate vocational teaching? (6) Will we separate the travel from the salaries of teachers to prevent unfair comparisons of salaries? (7) Will we provide objective measurements of satisfactory work and use them in approving or disapproving continued reimbursement,—that is, provide a means of weeding out inefficient teachers?

PERHAPS other conditions should be added, but these are enough difficulties to suggest that in these times we are *facing stern realities*. By the nature of things, the responsibilities are basically administrative, those of the state directors and the state supervisors of vocational agriculture. The task definitely indicates some of the characteristics of a leader in these situations. He must be a *member of the vertebrate family*. In the field of dietetics his ration must be *high in calcium*. In dealing with school administrators he must manifest good judgment and persuasion, preferably diplomacy. In dealing with his teachers he must possess leadership of the highest degree and beget confidence and respect. In enhancing a state program he must have vision, imagination, and originality.

To all state directors and all state supervisors, workers in agricultural education everywhere join in pledging their full co-operation and assistance. Perhaps it was for such times that Edgar Allen Guest wrote the following lines:

COURAGE

Courage isn't a brilliant dash,
A daring deed in a moment's flash;
It isn't an instantaneous thing
Born of despair with a sudden spring
It isn't a creature of flickering hope
Or the final tug at a slipping rope;
But it's something deep in the soul of man
That is working always to serve some plan.
Courage isn't the last resort
In the work of life or the game of sport;
It isn't a thing that a man can call
At some future time when he's apt to fall:
If he hasn't it now, he will have it not
When the strain is great and the pace is hot.
For who would strive for a distant goal
Must always have courage within his soul.
Courage was never designed for show;
It isn't a thing that can come and go;
It's written in victory and defeat
And every trial a man may meet.
It's part of his hours, his days and his years,
Back of his smiles and behind his tears.
Courage is more than a daring deed;

S. S. SUTHERLAND

Professional

HENRY S. BRUNNER

National Vocational Education Problems in the Postwar Period

Presented at the Western Regional Conference held at Phoenix, Arizona, April 24-28, 1944, Dr. J. C. Wright, Assistant U. S. Commissioner for Vocational Education*

IN THE past four years, as a result of World War II, the conversion of industry and the mobilization of armed forces have resulted in marked modifications of training requirements. This has greatly accentuated the problem of vocational education.

Dr. J. C. Wright

Vocational Education and the War

Since the summer of 1940, the public vocational schools of the country responded to the problem of mobilizing for war by training approximately 6,000,000 persons in trade and industrial education to increase war production, and approximately 2,500,000 persons in vocational agriculture to increase food production. The need for training of persons to meet the war emergency was such that Congress found it necessary to appropriate special funds.

The adaptation of industry, and likewise the adaptation of training to meet the needs of industry, was rapid. Vast numbers of persons were trained in occupations in which employment was not great during peacetime. Thus, schools had to adjust from training for normal peacetime occupations to training in aircraft sheet metal, aircraft riveting, aircraft welding, aircraft engine maintenance, shipfitting, ship sheet metal, ship welding, ship electricity, and various single-skilled occupations in machine tool industry.

The experience of public vocational schools in training for war has demonstrated the necessity of special attention to planning needed modifications in vocational training where rapid adjustments are necessary. Training for readjustment after the war will be to a very great extent war training in reverse.

It is evident that demobilization will not take place precipitously but rather continuously over a period of several years. In fact, some forms of demobilization and occupational readjustment are already taking place. We are, therefore, approaching the opportune time to critically appraise the readiness of vocational education in the United States to reconvert to the next phase, that of the retraining of military and civilian personnel to prepare them for peacetime pursuits.

*Prepared in co-operation with Dr. F. G. Cornell,

Extent of Postwar Occupational Readjustment Great

Altho the exact magnitude is not known at this time, the scope of reemployment and occupational readjustment following the war will be great and will require a modification of vocational training programs. Authoritative estimates of net contractions of certain segments of the labor force indicate that some 15 to 20 million persons will require some form of readjustment. It is to be expected that a substantial fraction of this number will involve vocational training and retraining. It is to be emphasized that such figures depend upon certain assumptions regarding the course of the war itself and upon many factors which are still uncertainties, such as: Government policy with reference to disposal of Government plants and surplus materials; demand for production as affected by international trade after the war; the development of new goods and services; industrial developments increasing the efficiency of production; changes in hours of work; and provisions for social security. Interpreted for vocational education, moreover, such facts must be further qualified. Statistics on net number of persons to be demobilized do not reflect interplant transfers within a given industry and transfers that cancel out between industries or such shifts as, for example, from armed forces to agricultural employment and shifts from employment in munition industries into agricultural employment or employment in peacetime distributive or service occupations. Such bare statistics do not reflect turnover within the employed labor force, industrial and occupational changes of high incidence in certain specific localities and industries, and the fact that peacetime employment requires a broader type of training than was acceptable during the exigencies of preparing for war.

War Creates Training Backlogs

Evidence of the complexity of needs for postwar vocational training may also be found in statistics showing the extent to which young people quit school to go into the armed forces or to take jobs. The Bureau of Labor Statistics has estimated that as of October 1943 there were approximately 5.8 million extra people in the armed forces or in the labor force, of which there were 2.8 million who normally would have been in school and are now at work or in the armed forces.

There are two reasons why it is important to give special study to providing return to school, for the most part, to receive vocational training. In the first place, these persons, having been denied training opportunities, have been handicapped and will be less effective wage-earning citizens if they do not receive the training which they have missed, either by returning to school or by extension education or some other type of program which will make up this training deficiency. In the second place, unless training is provided, this large proportion of young people, who would not normally be in the labor force, will become extra workers in the labor market during the reconversion period. Accommodating a backlog of training such as this, suggests an added burden on vocational schools during the reconversion period.

Some of the specific groups that vocational education will need to serve and some of the special problems which will confront vocational education are already apparent.

Postwar Training of Veterans

An imminent postwar vocational training responsibility for persons demobilized from the armed services is evident. According to a survey made by the Research Branch of the Morale Service Division of the Army Services Forces, seven percent of enlisted personnel in the Army plan to go back to full-time school or college after the war. An additional 17 percent expect to return to part-time school or college. On the condition that jobs are hard to get or that Government aid is available to assist them in schooling, a much larger percent expressed an intention of returning to school. While many of those expecting to return to school or college full time, contemplate college, professional, or graduate training, among those expecting to attend school part-time after the war, trade school or business school courses seem most in demand.

Legislation now pending before the Congress may soon clarify the future with reference to training of veterans. In the Report of the Armed Forces Committee on Postwar Educational Opportunities for Service Personnel, it was estimated that a minimum of 1,000,000 ex-service men and women would be interested in resuming their training for at least one year. The Committee contemplated that 200,000 would ask for a second year of training, 165,000 for a third year, and 150,000 for a fourth year.

Conversion Training for War Production Workers

Another group for whom special training needs will emerge with the conversion of industry and the cessation of hostilities, is the group of workers in war industry. Even the most optimistic authorities on the postwar situation expect that war workers will be released more rapidly than retooling of industry for peacetime needs can provide postwar employment

which many persons will need to be retrained for new occupations. It appears that in the shakedown from war to peace there will be a reduction in manufacturing industries such as aircraft, shipbuilding, machinery, and munitions, a reduction in Government employment, and possibly, with the resumption of normal peacetime requirements, an expansion in various types of small business, agriculture, trade, finance, and service occupations, in domestic service, and in the construction industry. According to the Bureau of Labor Statistics, "thousands of welders, riveters, turret lathe operators, machinists, tool and die makers, and other skilled and semi-skilled workers will have to transfer to other kinds of work. Unskilled laborers are likely to face a shortage of jobs in many parts of the country. Generally speaking, any worker who has learned only a single, narrow skill in a war plant, for instance, may have a hard period of readjustment ahead. The jobs opening up in construction will offer some employment opportunities requiring skills little different from those acquired in war industry. On the other hand, workers who go into the expanding service fields, in education, health, etc., will usually require a good deal of further training."[1]

No simplified mass training program will satisfy this need. The experience of the war training programs will have to be drawn upon in facing training adaptations to the emerging occupational needs of industry. In addition, there will need to be a thorogoing program of guidance and individualization of instruction to plan a proper readjustment training program to suit the particular problem of each individual.

Part-Time Farmers Employed by Industry

The redistribution of our working population in mobililizing for the war has dramatically demonstrated the gradual disappearance of barriers between the rural and urban components of our population brought about by modern communication and transportation. Unquestionably, we may expect an accentuation of the tendency for agricultural areas to take on aspects of American industrial life and urban areas to assimilate characteristics of rural life. We must direct attention to the emerging group of persons living in proximity to industry, in which they may secure seasonal or part-time employment, but who supplement their earnings on the farm. In this connection, it is to be noted that the urban farm population in the United States increased 15 percent during the period 1930–1940. This development should be carefully watched as progress is made in the efficiency of production and the probable reduction of hours of work in industry after the war, which, along with improved transportation facilities, will enable urban workers to live in the country. An effective training for occupational competence of these people will involve an agricultural-industrial type of training.

Women in the Labor Force

During the war effort, women have proved themselves to be more efficient in performance of some operations than were the men who formerly held these jobs. They have had the opportunity to gain experience in all types of work. We may expect two general categories of women who have had experience working in industry—those who will remain in the labor force and those who will leave the labor force after the war to return to their homes. In the former group will be the younger women 20 to 34 years of age who normally have constituted a significant component of the labor force, married women whose husbands do not return from the war and those whose husbands return physically disabled. For these women intending to remain in employment, the same impact of change in industrial and occupational patterns as noted above for war workers in general will require training and adjustment. Most of the extra workers during the war have been from among the youth aged 14 to 19 years and the older women above 35. Many of these, particularly married women who are not the main breadwinners of the family, and youth who will need to return to school, will be among those who will need the greatest assistance in adjusting to family living disrupted by the war. In fact, home economics education is challenged by the problems of both groups of women—those remaining in employment after the war who will need assistance in family problems because of time spent on the job, and those adjusting to normal family life after an interlude of employment in war activity.

Training and Technological Developments

Vocational education must be sensitive to industrial developments which will change the kinds of occupations and the numbers of persons to be trained in various occupations. One hears and reads Utopian dreams of technological developments after the war. We need not anticipate fantastic inventions to radically modify our industrial life. We need to be on the alert for industrial products and processes which have been stimulated by this war as technology was stimulated by the last war. It is sufficient here merely to mention some of the recent developments in this connection which will undoubtedly have an influence on training after the war. In home construction we may expect greater use of plywood, plastics, and light metals with modifications in prefabrication in construction. Home furnishings from stoves and heaters to kitchen utensils, furniture, and dishes will be improved thru the use of more plywood and plastics, new types of glass, the increased supply of metals such as aluminum, toughened and improved fabrics, and mechanical inventions. Freezing and dehydration of foods and the addition of vitamins have already resulted in modifications in foods. Mechanical inventions have improved agricultural products. Developments, even in the field of meteorology, are expected to have effects of value to farmers, packers, and shippers of food. To mention but a few more of the many types of developments coming out of the war are some products which were developed as substitutes when the war restricted the normal supply of raw materials. The use of plastics has already been mentioned. Rayon, nylon, and other synthetic fabrics which have been replacing silk, new dyes, synthetic fabrics, and synthetic

[1] John H. G. Pierson, Chief, Postwar Division, Bureau

Among improvements in industrial equipment and industrial processes may be mentioned the development of radar, and electrolytic process for tin plating, silver soldering by induction heating, centrifugal casting of nonferrous alloys, the electrification of hand tools, the development of electronic instruments for inspection, and electronic control devices and many improvements in the development of machine tools. An effective program of vocational education may expect some changes to meet the demands of these and many other symptoms of change on the industrial horizon.

Vocational education met the test of adapting to the needs of war, and by continuing its characteristic of flexibility in preparing the right person for the right job, it can adapt for the task of tomorrow. There will be many individuals and groups of individuals in all parts of the United States, youths and adults, whose needs must be served as illustrated by the various major problems outlined above. Only by careful study of the problems peculiar to each and every locality in the country may we expect a determination of the new direction which vocational education should take.

Remembering Our Boys in the Service

IT IS a pleasure to learn of the variety of methods being used in the several states to keep in touch with the teachers and former students in agricultural education who have volunteered or have been called into military service. The list includes individual letters—V-mail, air mail, and regular; mimeographed form letters; group letters such as letters from each member of the local F.F.A. chapter from which the selectees went; pictures, individual and group; lists of the latest addresses of all the boys in the service; and the regular newsletters of the F.F.A. chapter and of the State Department. That such efforts are appreciated, every returning letter testifies as they come from all the battle fronts and national camps. The local effort to produce these contributions is very small, but the benefit to our boys in building morale and curing homesickness is measured with difficulty. When boys from the states have to teeter-totter on the equator where their clothes are wet by day and do not dry by night, where movies and other entertainment are practically wanting aside from an occasional radio, their homes become uppermost in their minds and thousands of them no doubt are longing for the day when they can return. Let's double our efforts to make their absence a bit more pleasant to them. And, as a surprise, why not provide them with subscriptions to our magazine and file them for delivery when they return? Such a gift would really be appreciated.

I do the very best I know how—the very best I can; and I mean to keep doing so until the end. If the end brings me out all right, what is said against me won't amount to anything; if the end brings me out wrong, ten thousand angels

Methods of Teaching

G. P. DEYOE

Approved Practices and Their Place in Developing Farming Programs

GEORGE P. DEYOE, Teacher Education,
Michigan State College, East Lansing

G. P. Deyoe

"APPROVED practices" in farming are being emphasized in one form or another in the instruction provided in most departments of vocational agriculture. Since these practices represent procedures shown to be important in attaining success in some enterprise, they merit careful consideration. The term "approved" is applied to such practices because, thru experimental evidence or successful use on some farms, or both, each of them has been accepted as having superior merit. Appropriate practices should be incorporated by a person in his plans for carrying out each ownership and improvement project and each supplementary farm job in his farming program. It is important that sound instructional techniques be used in acquainting the boy with these practices, in helping him to select those which are appropriate for his situation, in teaching him the necessary skill or ability for applying each of these practices to his program, and in guiding him to make definite plans for carrying out each practice selected by him.

Developing Basic Lists of Approved Practices

Basic lists of approved practices should be developed for use within each state. In developing a list for a given enterprise or other phase of farming, the co-operation of the appropriate technical department in the college of agriculture should be secured. In some states, such lists for use in vocational agriculture have been developed jointly by members of teacher-training staffs and the technical departments. In any event, each basic list should have the stamp of approval of a technical expert in that field before being sent to teachers of vocational agriculture. Revisions are needed from time to time to keep pace with new developments in the field.

Instructional Procedures Related to Using Approved Practices

An important problem in relation to approved practices which should be of concern to every teacher is "*What instructional procedures shall I use which will lead to the understanding, formulation, selection, and application of approved practices by my students in vocational agriculture?*" Use of approved practices to students is very undesirable educationally because the students will not develop the necessary understanding of the importance and use of each practice nor will they develop the abilities necessary for carrying out the practices. Such a procedure "by-passes" an opportunity for some sound and effective instruction. Consequently, basic lists of approved practices made available to each teacher in the manner indicated above should be retained by him for use in checking his instructional plans and the desired outcomes in the form of generalizations or understandings which he wishes to develop with his students. Furthermore, these lists are useful to each teacher in constructing devices for evaluation, such as objective tests. They also serve as guides to the teacher, as instruction takes place, in developing *with the class* cumulative lists of practices. These can be put on charts and in various ways used to check progress while given projects are under way.[1]

Instructional Activities in Developing and Using Approved Practices

Activities Involved in Opening Up Each Enterprise:

1. Developing with the students an understanding of measures of efficiency appropriate for each enterprise represented in the supervised farming programs.[2]
   Examples—"How can we measure our efficiency as swine raisers?" (or "dairymen?", "bean growers?")
   Some Measures of Efficiency in Swine:
   Weight of litter at 56 days
   Number of pigs per litter raised to to 56 days
   Some Measures of Efficiency in Dairy Cattle:
   Annual butterfat production per cow
   Calving percentage (regularity of reproduction)
   Some Measures of Efficiency in Beans:
   Yield in terms of bushels per acre
   Percent of "pick" of beans marketed
2. Securing estimates or actual figures on present level of efficiency on projects completed by members of the group or on enterprises on home farm.
   Example—"What is our present level of efficiency in swine production?" (Note: Altho *estimates* may be necessary when this problem is discussed for the first time in a group, appropriate records should be started which will provide *actual* figures at a future date.)
3. Deciding how "good" the present level of production is in terms of acceptable standards of efficiency.
   Example—"How does my production compare with the average for farmers in the region?" "With the average of similar projects completed by other students?" "With the upper third of these projects.?"
   "What are the possibilities for improved efficiency in my sow-and-litter project?", etc.
4. Formulating goals by each person in terms of measures of efficiency for each enterprise.
   Example—"What should I attempt to accomplish in terms of 56-day litter weights?", etc.
5. Determining some of the abilities needed if goals are to be reached.
   Example—"What do we need to be able to do, that we cannot do now, if we are to secure the 56-day litter weights that we have set as our goals?"
   "What do we need to learn during the coming year?"

Study of Problems Seasonally:

1. Studying specific problems involved in improving the level of efficiency in a given enterprise (as the result of Item 5, above).
   Example—"How can we care for the sow and litter at farrowing time so as to save the maximum number of pigs?"
   As an outgrowth of studying and discussing this problem, the class should be guided in stating some of the approved practices which affect the number of pigs saved. The necessary background for this will be developed from a study of appropriate printed materials, visits to farms of good hog raisers, and pooling of experiences. *Each statement of an approved practice thus becomes a generalization substantiated by experimental evidence or use by successful farmers, or both.* For instance, one approved practice growing out of the above problem might be to "Use an electric pig brooder or heat lamp."
2. Developing ability or skill involved in carrying each practice to the "doing stage" and *actually applying the practices in his program.*
   Example—"How should pig brooders be constructed?" (Boys should study plans for approved types of pig brooders, and, if possible, see actual brooders.)
   "How can we provide pig brooders for our projects?"
   Definite plans should be developed and carried out by each boy for

[1]Byram, H. M., "Visual Presentation of Current Local Information in Teaching Vocational Agriculture," *Agricultural Education Magazine*, November 1943, Vol. 16, No. 5, pp. 86–87. (Also see Michigan Service Letter for February 20, 1943, Series V, No. III.)

[2]Deyoe, G. P., "The Place of Goals and Standards of Production in Developing Programs of Supervised

Teaching Without a Text

S. L. CHESTNUTT, Teacher Education, Alabama Polytechnic Institute, Auburn

S. L. Chestnutt

ONE of the difficulties encountered by teachers in Alabama, and possibly other states, who are trying to use the more progressive methods of instruction, is the attempt made to organize instruction on some other basis than a particular textbook in the hands of the students. Too, there is apparently a growing tendency in many high schools to insist on a reduced number of required textbooks. The main purpose in this, of course, is to encourage a wider use of the library facilities and a closer study of the student's own environment and needs. The philosophy of this procedure is basically sound and the results, if accomplished, are indicative of a very effective method of teaching.

The main difficulty the average teacher has in not using a text seems to be the problem of deciding, first, *what* to teach and, second, *when* to teach it. This means that, since a text is not used, the teacher at the very beginning of school must set up a general outline of topics from which the student, under the guidance of the teacher, may choose what he is to include in his studies of the subject. This procedure should be rather largely individualized, i.e., each student should share in setting up his own topics for study.

Students Are Guided

It seems that considerable lag and indecision results where too much is left to the judgment of the student. In other words, the teacher should take a leading part in helping the students decide on the various topics which go into the course.

However, this fact must not be lost sight of—there is as much teaching value, and often as much or more purposeful learning, in determining the general set-up of the course as there is in the pursuit of the course, once it is determined. Since this is true, the student should be left largely to his own initiative (under the guidance of the teacher) in working out the general nature of the course. However, the student should be encouraged to depend as much as possible on his own initiative. *It is in this respect that the value and promise of progressive education lies.*

Based on Farm Programs

There is one group of teachers who direct their students to set up "Course Calendars" or courses of study. The group referred to are teachers of vocational agriculture who place boys' farm programs ahead of a definitely adopted textbook. Most of these teachers have each student make out for himself a "Course Calendar" and when this is done the teacher derives his own teaching calendar from those made by his students. It has the appearance of being a very difficult procedure. In reality it is a very simple process of organizing the work and operating. The general steps involved are these:

The Boys' Calendars

I. Setting up the "Boys' Course Calendars"

1. Determining the main farm enterprises, both crops and animals, produced in the school community.
2. Determining the possible enterprises which might be grown profitably in the community.
3. Each boy decides what would be a practical and profitable farm program for him to carry out for the years he is to be in agriculture, choosing from the above enterprises the most logical program (always subject to later revisions).
4. When some progress has been achieved by the class in setting up their farm programs, one of the more common enterprises of the various programs is analyzed into so-called "jobs." These jobs are the different operations, decisions and procedures which enter into the complete production and use of the crop or product.
5. In the meantime, when the students realize they need a notebook in which to keep the material as it accumulates, the teacher has them prepare a loose-leaf notebook with appropriate tabs. (The form for our notebook has been standardized but the student may use variations or additions if he so chooses.)
6. After the process of analyzing the jobs is learned by the class, then the boys proceed with the analysis of the remaining enterprises in their own programs.
7. When the farm programs are completed and all the enterprises are broken down into jobs, the next step is to determine the season or month in which the job is performed on the farm. So from this a "Calendar" is made out for the school months indicating when each job should be studied. This constitutes the boy's course calendar since each boy has placed by months the operations or jobs which are a part of his own farm program. The teacher recommends that not more than 12 or 15 topics be scheduled each school month at this time, as there is something else to be added.
8. The additional items come under shop work. A program of shop jobs is made out now or it may be made as the farm program is being made. Some teachers—in fact many of them, and they are good psychologists at that—prefer to have the shop program made as the farm program is made. This is reasonable since the shop work should fit into the
9. The various jobs of the shop program are now, if not before, placed on the appropriate monthly sheets of the boys' course calendars.
10. Since the farm programs of agricultural students have materially increased in size and scope during the past eight or 10 years, the aggregate number of lessons, covering the full scope of the various students' programs, is usually so large that there are not enough teaching days in the school year to take care of them thru class or recitation procedure. Therefore, individualized instruction is necessary in many cases in order to cover the needs of the class.

Class and Individual Study

By this time the students are more or less familiar with individualized study, because each one has used it to quite an extent in setting up his farm program, breaking down farm enterprises, making a shop program, making a course calendar and doing other exercises in connection with the organizing the year's work.

The remaining step to be taken in getting the boy's course calendar completed is to determine what lessons are to be taught thru class procedure and which will have to be studied thru so-called "individualized instruction."

This can be done usually in one double period, the teacher reading out the jobs in the various enterprises, stating how many lessons will be devoted to each and whether it will be taught to the whole class or whether it can be handled thru individualized instruction. The students mark in their course calendars the class jobs to be taught with a "C." This completes the boys' courses of study.

When handled with dispatch it will take from three to six weeks to work out the boys' course calendars in detail. Some teachers are delayed unduly in finishing this organization due to the fact that they are called upon for the performance of many other duties in line with or in addition to their work. Most of them recognize, however, that getting the boys' farm programs and course calendars set up is the first and most expedient thing to do.

The Teacher's Calendar

II. Setting up the "Teacher's Course Calendar"

The teacher's course of study for the year is practically made when those of the boys are finished. He has to indicate on his monthly sheets the lessons marked for class instruction. In addition he sets down other lessons, not included in the boys' course calendars, which he thinks should be included in that year's course. These, not numerous, may embrace such subjects as farm credit, soil conservation, new enterprises, forestry, etc. Only enough lessons to fill the days not taken up by class instruction and individualized instruction are included.

The theory of progressive education presupposes quite a bit of individualized work. The real practice of it seems to develop considerable class instruction. We might wonder if

Farming Programs

C. L. ANGERER

Farming Programs in Mississippi for Students of Vocational Agriculture

D. W. SKELTON, Teacher Education, State College, Miss.

CONFORMING to my philosophy of vocational education in agriculture, one of its principal objectives is the establishment of boys in farming. To realize this, it seems only logical that the boy should set up, in the beginning of his training period in vocational agriculture, a tentative long-time program in farming.

The point at which a young farmer is established in farming has been widely discussed, but certainly it is not until he has a complete farming program on a sustaining basis which also provides a fair standard of living, comparable to at least the average farms in the community. Thus, in order for one to become established in farming, it seems that he should have training in all the enterprises and practices that make up the type of farming in his community or, at least, on his home farm. Usually this can only be accomplished by having the boy set up such a program, beginning with a comparatively small farming program, with gradual growth in the number of enterprises and their scope from year to year, building the program around his major cash enterprises at all times.

The idea of setting up a long-time farming program has been in our minds for many years, but in recent years, in Mississippi, the teachers of vocational agriculture have had all-day, as well as part-time students, set up in their written plans a long-time program the first year they enroll in vocational agriculture. This is done only after intensive studies of the financial and training needs and plans have been made by the students under the teachers' supervision with both student and teacher collaborating with the student's parents, in order that each boy might become well established in farming. Many factors are considered in this planning process, such as (1) community and home type of farming, (2) current financial needs, (3) needs as to skill development, (4) the ultimate goal of establishment in farming, and (5) possibilities and facilities for carrying out this program.

Of course it is desirable that the long-time program be revised from year to year in the light of economic trends and many other changing factors, but, in the main, it is hoped that the type of farming will be maintained and the plan in general will be followed, certainly in principle. Some may question the value of the long-time program in regard to whether or not it is followed in the main and, of course, as to the final results. With this in mind, a few case studies have been made, samples of which are shown below, which check the program carried out against the long-time program planned and give some indication as to the possibilities of the student's becoming suc-

Long-Time Farming Program As Planned by Thomas Groves, Caledonia, Mississippi

	Year						
Enterprise	1940–41	1941–42	1942–43	1943–44	1944–45	1945–46	1946–47
Corn	1 acre	1 acre	1 acre	1 acre	2 acres	2 acres	2 acres
Poultry	50 hens	75 hens	85 hens	95 hens	100 hens	100 hens	100 hens
Dairy Cattle	3 head	4 head	5 head	6 head	7 head	7 head	8 head
Swine	1 head	1 head	1 head	2 head	1 head	1 head	2 head
Hay	1 acre	1 acre	2 acres	2 acres	2 acres	2 acres	3 acres
Cotton		1 acre	2 acres	3 acres			
Beef Cattle				2 head	3 head	5 head	6 head

Actual Farming Program of Thomas Groves

Corn	1 acre	1 acre	1 acre	1 acre
Poultry		25 hens	50 hens	50 hens
Dairy Cattle	6 head	6 head	6 head	6 head
Swine		2 sows	2 sows	2 sows
Hay (Kudzu)			2 acres	2 acres
Cotton			2 acres	2 acres
Beef Cattle				
Net Profits	$150.00	$179.00	$401.00	

Long-Time Farming Program As Planned by Charles Betts, Caledonia, Mississippi

	Year		
Enterprise	1941–42	1942–43	1943–44
Dairy Cattle	5 head	8 head	12 head
Cotton	1 acre	1 acre	2 acres
Corn	1 acre	3 acres	5 acres
Hogs	1 head	1 head	2 sows
Poultry	50 hens	50 hens	50 hens

Actual Farming Program of Charles Betts

Dairy Cattle	3 head	4 head	5 head
Corn	1 acre	1 acre	3 acres
Cotton	1 acre	3 acres	3 acres
Hogs	1 head	1 head	2 sows
Poultry	50 pullets	75 hens	75 hens
Soybeans (Oil)		1 acre	
Truck Crops			1 acre
Net Profit	$259.00	$588.00	

As is readily seen in the first illustrations, Charles Betts, who has just completed his second year in vocational agriculture as an all-day student, has followed his long-time program exactly as to the enterprises carried, and in my judgment, he has made satisfactory progress with regard to increasing his scope in the various enterprises, especially his major cash enterprises, cotton and dairying. Charles, interviewed by the writer, said that he planned eventually to own a 500-acre farm with cotton as the major cash enterprise and dairying second, with a few good dairy cows rather than a large herd of grade cows. It appears

ress in his farming program, that, whether or not he realizes his high ambition, he will become at least a successfully established farmer within a few years. In fact, his net farming income this year compared very favorably with the average farm income in Mississippi and in his community.

In the second case, Thomas Groves, another all-day student, has completed three years in vocational agriculture in the same community as Charles with a smaller farming program in the beginning, but he has made satisfactory progress in his program and, at the same time, has followed his original plans. Again, the student's program today indicates that he is well on the road to successful establishment in farming. Both Charles and Thomas live in an average hill-section community in Mississippi and on farms of average size. They are probably

Community Responsibilities, Meeting Them

John Lowe

I NEVER saw an easier yet more dangerous time to get off the track. Any agriculture instructor can get so busy with the assumed responsibilities of the war and world that he can easily forget his first responsibility, that of making his community a production winner.

If you are resigned to a long war with fewer and poorer quality goods for civilians that should determine largely your community responsibilities. Our responsibilities are immediate things of action but vary with each community. It is no time for experimenting or taking a white collar attitude toward our job or community. We have every reason to keep our chins up and do all we can to keep up the morale of our farmers. If it is going to be a long war, we have six definite responsibilities as follows:

1. Be a "Pressure Boy" for high farmer morale. No farmer should convince you that he is justified in liquidating his livestock production program because they took his son to war. In the last war, farm boys went to war like anyone else. We and the country are fortunate that we have been able to keep many of them on the farm as long as we have. Farm boys in our classes should build up instead of liquidate their farming programs. No civilian in Kansas has any grounds for complaint so serious that it should slow him down on his job.

2. Now is the time to call on our reserve energy instead of feeling sorry for ourselves. You no doubt have been surprised how well you have stood up under such extra jobs as teaching farm-machinery-repair classes three nights a week until midnight, going out and driving a tractor at night, etc. This summer you can train businessmen to do the same thing or you can easily find eighty to one hundred sixty acres of land that is not being farmed, get yourself a partner or two, rent, borrow and fix up old machinery enough to farm that land yourself on Sundays, nights, or by the help of boys. When this war is over, if we are worn out and need a rest, just remember there will be plenty of better, younger men that deserve to replace us.

3. When an oil boom strikes a farm community, new and easy money often upsets the willingness of our boys to work for what they get. Present war influences are doing the same thing. We should do all we can to be a social, as well as an economic, stabilizer in the community. So we are not too big to be a scoutmaster, take on a Sunday-school class, or a postwar planning committee.

4. Many farm boys should be spending some of their time in school and after school doing more community work and organized services under our direction and supervision. These need not always be set up on a long-time basis or even be educational. We can have a dehorning squad, an emasculator squad, a livestock parasite squad, a meat cutting and processing squad, a welding crew, etc. to help out any farmer that really needs our help.

5. Community split-shift crews are now doing very effective relief work in Ohio and other eastern states. We could organize one or more of these among our townsmen to do relief farm work at night this summer.

6. About the only constructive, nonpolitical, long-time, farm, postwar rehabilitation plan I have been able to find that has been offered for our consideration in this country is that by Hugh Bennett in the Saturday Evening Post of last November. Most of the work we might do in our communities on farm postwar planning for returning veterans could be eliminated by expected legislative actions. However, we should be doing something. We can work out plans with our local farm and civic organizations, and then help to carry these plans into execution on the following problems:

a. To study and develop a program with the possibility of improving our services to agriculture and subsequently to improve and develop agriculture in the community.

b. To develop plans for aiding returning service men to become established in farming.

c. To study the resulting factors from the war that may damage local farming and to acquaint farmers with these factors.

d. To study Federal and state rehabilitation provisions, laws, etc. for postwar veterans, and aid in their application and use.

e. To study the needs of local farmers during the war and aid in meeting these needs.

tion orders and aid in influencing farmers to accept these and continue maximum production.

g. To promote definite land-use planning and the adoption of accepted farm practices that will insure more stable farm conditions after the war. (Close hen culling, war bond purchases to insure later replacement of needed machinery, soil and pasture improvement, home improvement, etc.) Seek the co-operation of local farm organizations in promoting this.

h. To study needed legislation that would allow farmers to acquire directly from the government, war surpluses that are best adapted to farm uses after the war, (barracks buildings, fencing, tractors, trucks, tools, welding equipment, etc.)

i. To sponsor legislation that would allow veterans with farm experience to buy and develop into farms, all available farm lands used by the Government for training bases, etc.

j. To point out and discourage farm waste of all kinds (conserve natural resources, control farm fires, prevent livestock losses, eradicate pests, etc.) We should seek the co-operation of the 4-H Clubs and F.F.A. Chapters on this problem.

k. To support actively a drive for self-sufficient farms and farm homes for the duration.

l. To study and show farmers how they can waste fewer man hours and more efficiently use the farm labor, power and machinery they now have.

Long Tenure for Achievements

(Continued from page 23)

and they remain longer in one community. However, many of them do not remain long enough to enjoy the satisfaction of seeing the results of their efforts. A well organized program of agricultural education properly administered can and does change a community. The changes involve the thinking of the people, the activities of the community organizations, and the agricultural production and marketing procedures in use by the local producers. The instructor who remains in a community long enough to see these changes take place may in some cases temporarily receive a smaller salary, but he receives, in personal satisfaction on seeing the job thru, something which cannot be evaluated in dollars and cents. There is nothing more stimulating and satisfying to a teacher than to see the desired changes come about in the students, in their homes, in the community, and in the agricultural conditions of the area.

Vocational agriculture as an educational program will result in greater achievements if the instructors will remain in their respective communities for longer periods of time, and the instructors will not only be more efficient teachers, but they will receive in personal satisfaction encouragement which they do not receive when jumping from one "pasture" to another.

Our Editorial Writers

INTRODUCING a policy of presenting occasionally an editorial written by a successful teacher of vocational agriculture, I am pleased to give our readers two editorials from that source in this issue.

John Lowe is a highly successful teacher of vocational agriculture located at Winfield, Kansas. His editorial also appeared in the Kansas Newsletter. It is written out of the sincere convictions from years of service in vocational agriculture.

Clarence E. Bundy is another highly successful teacher, a member of the Iowa Teacher-Training staff located in the training school at Iowa Falls. Mr. Bundy will be remembered by many as the adviser of the Iowa Falls Chapter when it won the National Chapter Award. He writes in favor of long-time tenure, a position which his highly successful career supports with an abundance of evidence.

The policy just mentioned supports the judgment of many readers that our magazine can be improved by a larger participation in its contents by our teachers of agriculture. To carry out this desire it is necessary for the teachers to respond, not merely to contribute, but to contribute quality articles for any department of the magazine. This includes editorials and articles for the Professional Section as well as the areas contributed to more frequently. To all this there is just one reservation—I must use my judgment in selecting the *best* articles for every issue. While I am inviting teachers to increase their contributions I extend the same invitation to new writers from among our many supervisors and teacher-trainers. It is surprising how many of our leaders have never written for publication. We need you. May I hear from new writers in all areas—

WATSON ARMSTRONG

Farmer Classes

W. H. MARTIN

Dairy Farmers Take the Offensive

IRA MONTGOMERY, Teacher, Faribault, Minnesota

ONE hundred sixty-five dairy farmers of Rice County, Minnesota, were organized this year into eight Food Production War Training Classes in dairying in order to learn methods of producing more milk. The work is a continuation and an enlargement of a similar program started last year. A study in one class last year indicated a net average increase in milk production of 1½ pounds per day per cow represented in the class. This was in spite of the fact that normally a cow decreases five pounds in milk flow during the three-months period over which the class was held. A preliminary survey indicates that this year's record was substantially better than the record of last year.

The department of vocational agriculture in Faribault High School is the center around which this program has been built. Faribault is chiefly a farming community of 15,000 persons. There are 2,400 farms in the county. Faribault is the county seat. The farmers are above average in farming ability. Dairying is the major enterprise on most of the farms. Each farm has from ten to thirty cows. Most of the cows are purebreds or high grades. Hogs and poultry are other major enterprises. Corn, alfalfa hay, and pasture are the feed crops around which dairy rations are built. Practically all the corn is hybrid.

Students of a night school program which has been in operation 20 years served as a nucleus around which the community classes were built. Let us outline briefly how this worked. One or more of the farmers who were members of the regular night school from a given community called together a group of their neighbors. The local supervisor, the teacher of agriculture, would meet with the group to explain the expanded program. If the group wished, they organized for further enrollment and a series of lessons. A special teacher was selected and a class started.

This method of starting community classes was supplemented by other methods. County committeemen of the AAA suggested centers and acted as local teachers. The local F.F.A. assisted in selecting centers. The work was explained to community leaders. Newspaper publicity was used to advantage. The program was discussed in everyday conversation by the supervisor, special teachers, advisory committeemen, and others. Many visits were made to explain the work to individuals and to community groups. It is the opinion of the writer that the number of classes which can be organized is limited only by the time and the enthusiasm which promoters have and by the number of qualified special teachers available. He is convinced that classes organized on a neighborhood basis are the most successful. Neighborhoods live program seems to work into this type of organization easily and effectively. All neighbors should be included. Neighborhood leadership and spirit should be used as much as possible. Creamery managers and store and station operators can be of great help. Farmers visit often during the winter, and a little promotion on their part aids these classes greatly.

Testing Motivates the Class

After a class is organized and started, its successful continuation seems to call for something definitely beneficial very early in the course. Our farmers were quite generally interested in knowing the milk and butterfat production of each cow in their herds. So the high school very wisely made available for loan twenty milk scales and several hundred sample bottles. Arrangements were made with a local creamery to do the testing. Regular D.H.I.A. record forms were mimeographed. At the second meeting of each class, the members were offered an individual-cow test with a record on each cow. This offer was accepted almost universally. The tests served as a basis for several discussions on care and feeding based on these individual records. A second test near the end of the course showed the improvement made. This work was financed by a budget of the class.

Another device used very effectively was frequent visits to dairy barns where actual conditions were observed and discussed. Other devices were used to supplement the regular class work. It is encouraging to note that special teachers will suggest the development and use of an almost unlimited amount of material based on local and seasonal needs.

The Special Teacher

We used six special teachers during the season, all farmers but one, and he was the manager of a feed store with a background of farming and dairy herd improvement work. The five farmers were successful dairymen and outstanding in their neighborhoods. One man had had experience as a 4-H Club leader, salesman, cow-tester, herdsman in a large dairy, as well as training in a school of agriculture. A second was a recent graduate of the Minnesota College of Agriculture where he specialized in dairying. The others were good dairymen, leaders in their communities, with special interest in improvement by testing and breeding. None had had any previous training or experience in teaching. The program benefited greatly from meetings of these teachers, held to discuss teaching methods. Obtaining good special teachers is usually one of the difficult

Places of Meeting

Our meeting places were private homes, district schools, the central high school, and town halls. In the judgment of the writer they were satisfactory in the order given. The homes had the advantage of neighborliness and availability of barns and herds for study. Schoolhouses had the advantage of space, comfort, light, and a blackboard. The central high school is always available for joint meetings and exceptional programs. Instructional equipment such as posters, blackboards, film strips, movie machines, reflectoscopes, books and bulletins were available for all groups from the high school department of agriculture.

In general, results have been quite satisfactory. Enrollment tended to increase as the courses progressed. The attendance was good, barring special events and bad weather. Some herds have increased in production as much as 15 pounds of milk per cow per day. Only one class proved unsuccessful.

Follow-Up

In the past, follow-up work has been rather poorly organized. Our plan this year is to continue one course thruout the summer. This course is open to any person who has enrolled in any of the classes during the winter. It meets once a month and stresses continuation of testing and discussion of problems of seasonal interest. It also serves to hold the groups together for the coming season and tends to make the whole program continuous. Each person contributes enough money to defray his part of the additional expense of testing and recording.

FPWT Part of Our Permanent Program

The FPWT program is a part of our regular agricultural work in Faribault High School. Six FPWT classes in farm machinery and metal work, one in poultry production, and one in vegetable production were also conducted during the year. Work is under way for the second year in food-production courses. Eight classes were taught and 90,000 pints of food were processed in the canning center last year. The FPWT Program carried on by Faribault High School is in addition to a regular adult-farmer school, a young-farmer class, and the four classes in all-day vocational agriculture.

The department of agriculture has been operating in Faribault High School 31 years. The writer has been the teacher of agriculture since 1924. The FPWT Program has been conducted since 1940. About 1,400 persons were enrolled in all programs during 1943, 875 of whom were in the Food Production Canning Program.

Credit here should be and is given for the effective and generous co-operation of the AAA, F.F.A., Chamber of Commerce, P.T.A., newspapers, school administration, Advisory Committee, and

Another Angle

C. B. EDWARDS, District Supervisor, Stephenville, Texas

IN DETERMINING the type of work that a teacher does and around which he builds his program of vocational agriculture, he is supposed to select those skills needed in his particular community. However, there is a difference of opinion among teachers of vocational agriculture, supervisors, and teacher-trainers as to what should be taught the vocational student in the farm shop. Many of our teachers of vocational agriculture believe that mechanics and electric and acetylene welding are too highly specialized skills to teach to their students.

One thing the instructor in vocational agriculture loses sight of in many communities is the purpose stated in the Smith-Hughes Act. The law reads: ". . . that such education shall be . . . designed to meet the needs of persons over fourteen years of age who have entered upon or who are preparing to enter upon the work of the farm or of the farm home." As much as we hate to admit it, what we actually do that helps the man who is farming is something that actually deals in dollars. If we can show the man or boy where he can save or make a dollar, we are on the right road so far as teaching is concerned.

The Dollar Angle

With the dollar in mind—whether or not we want to keep it in mind, the farmer will—let's figure from that angle. The average tractor and equipment costs the farmer in the neighborhood of $2,000. According to some experts, the average farmer pays, over a period of time, about $1 per acre for repair on his equipment. Most farmers who have been operating for some time have additional equipment which makes the farm machinery cost considerably more than $2,000.

Since the REA has come into farm life, this source of power is available to almost all farms, at least to tractor-using communities. A man who farms 200 acres with a two-row tractor would spend enough money in one year to more than pay for a good electric welder. The operation of the electric welder on the REA setup would be a small amount, because it would be added to his previous meter reading and would cause his cost to be in the low bracket. Consider this operation and then the time it takes him to drive twenty miles to town, wait half a day, pay out $2.00 for a job that does not cost more than 15 cents in materials used.

Another argument against welding comes under the usual head of school teachers. We know how to do certain things and are afraid to try to learn another. To me, teaching a boy to do satisfactory electric welding is easier than teaching him how to sharpen a hand saw. All of you, as teachers of vocational agriculture, have taught the sharpening of hand saws. (So you show on your annual teaching plan, if you make one.) I wonder how many of you have actually taught boys how to sharpen a hand saw. Just be honest—how many boys did you teach? Good teaching, in the minds of some, is that degree of skill where you would be willing to turn your personal saw over to the boy for sharpening.

to sharpen a hand saw—say in five periods. How many times during the year does the average farmer need his hand saw sharpened? Balance this cost of instruction with the 50 cents you teach the boy to save once or twice a year against the time it takes to teach a boy to weld and the amount of money he earns during the year in farm machinery repair as well as other constructive jobs he may do.

I know a man who during his spare time constructed a windmill tower 30 feet high which would cost in the neighborhood of $60 new. The material in this tower cost the man $7. I know of another man who constructed a tractor cultivator for $7.50 (from his old, two-row, horse-drawn machine) which would have cost him $180 new; breaking plows for $3 which would have cost him $150 new; trailers for $45, cost $200 new; tractor power lift $10, $35 new; scraper 50 cents, $25 new. In the case of the cultivator, I know that two crops have been made and only a small amount of repair has been done on it.

I wonder if we are *trying* to teach the farmer to make and save money. Understand that I am not opposed to teaching the sharpening of saws to farm boys. However, I believe that I can teach the same boy to do electric welding as quickly as you can teach him to sharpen a saw.

Teachers of vocational agriculture are still including in their teaching plans, and some in their classroom work, the teaching of such jobs as "how to run terrace lines." To me, many such jobs cause the vocational teacher to stay in that rut that we complain about other school teachers being in. How many government agencies operate in your community which run terrace lines for the farmer? How much money are we helping that boy and farmer to make or save when we run the terrace lines for him? Should we teach him how to do a job that another government agency performs?

Most of the shops for vocational agriculture have farm machinery repair equipment on hand. In communities where much of this work has been done the farmers will probably expect this type of work to continue.

Motor Repair

The average high-school boy has no idea what the inside of a motor looks like or what makes it run. Most teachers of agriculture can locate enough motors, which will be given to the shop, in their district for each two or three boys to have a motor to take down and assemble. A boy learns many things from this project. Some teachers, teacher-trainers, and supervisors say that this is another job that is too highly skilled for the average farm boy, (too high for the boy or the teacher?) and that we are not trying to make a "shade-tree mechanic" out of every boy. True, we have lots of them, so we might as well teach them something about the job. We have included in our teaching plans and taught many hours on "housing poultry," yet we still have many mesquite tree hen houses. Well, did you ever build one as a part of your program? No, I'll change that—did you ever cause one to be constructed? It is an idea anyway. Maybe one reason why we run out of work so often is because we don't know how to do some of these jobs. So far as mechanics go, we have the we have boys who are anxious to learn.

In mechanics, the boy learns to assemble a motor, time it, and make it run. In the process he learns (1) the kinds of wrenches, (2) the uses of wrenches, (3) wrench sizes, (4) the kinds of bolts, (5) bolt and nut sizes, (6) how to tighten bolts properly, (7) how to use easy outs, (8) the identification of motor parts, (9) taps and dies, (10) to clean and put up tools, (11) to keep shop clean, etc. Also, the vocational instructor has a chance to learn some things about a motor.

You would be surprised at the boy if, at the end of the mechanics part of your shop work, you do different things to a motor and have each boy come in and trace the trouble to see if he can make the motor run. Instead, some of us are still studying horses and mules in communities where farmers are using tractors.

In closing, let me suggest that you check your inventory of OSYA equipment. You have an average of about $400 in mechanical equipment and about $400 in acetylene and electric welding equipment. What do you think your "Uncle" will do when the war is over and you have all this equipment on hand and don't know how to use it? What would you think of your "nephew" if you bought him some tools for Christmas and he junked them by January 1? You asked for them, didn't you? Your "Uncle" might consider junking our vocational program along with the equipment he bought for you. Or would he?

Farming Programs

(Continued from page 26)

constructing brooders adapted to his situation, securing materials, and using the brooders in the sow-and-litter projects.

Study of Results During and After a Production Cycle:

1. Accumulating and summarizing the records which reveal measures of efficiency.[3]
   Example—At appropriate times during the cycle of swine raising, and following the completion of the cycle, stimulate each boy to raise the following question: "What level of efficiency did I actually achieve in swine production?"
2. Analyzing the measures of efficiency to note relation to use or lack of use of appropriate approved practices.
   "What approved practices were applied effectively in my sow-and-litter project?"
   "What ones were ineffectively applied or neglected entirely?"

Study for Successive Cycles of the Projects:

1. Deciding on shortcomings as producers of swine, etc.
   "What additional approved practices should I utilize in caring for the sow and litter at farrowing during the coming cycle of production?"
   "Which ones do I need to learn *more about* in order to apply them more effectively than before?"
   At various appropriate times during the year, further instruction will be provided in developing the abilities involved in applying approved practices.

Farm Mechanics

R. W. CLINE

Farm Mechanics Objectives Are Being Met

CARL G. HOWARD, Teacher Education, State College, New Mexico

Carl G. Howard

IT IS possible that everything pertaining to the major long-time objectives of farm mechanics in vocational agriculture has been written. But most of it has not been definitely separated from the general educational objectives of vocational education in agriculture.

Cook and Walker in "Practical Methods in Teaching Vocational Agriculture" state that farm mechanics has come to be thought of as "all of the unspecialized mechanical activities that should be done on the farm." It is generally felt that, for best results, there should not be a separate course in farm mechanics, but that this field should be an integral part of the instruction in a well-rounded course in vocational agriculture. As such it must be closely integrated with the instruction in technical agriculture which makes up the course content. This really takes the form of a development of the mechanical side of agriculture.

In order that farm mechanics may be most effective as a field of vocational agriculture the general training objectives in vocational education in agriculture must be studied. Monograph Number 21 of the United States Office of Education lists four general objectives which are an integral part of the philosophy of the whole of public school education. These have to do with the personal development of the individual, his home and family relationships, his civic responsibilities, and his vocational effectiveness. The first three of these are a joint responsibility of all educational agencies. The fourth is solely that of forces in vocational education and implies indirectly some objectives in farm mechanics.

Vocational Objectives

The aim of vocational education in agriculture is to train present and prospective farmers for proficiency in farming.

The major objectives of vocational education in agriculture are to develop effective ability to:

1. Make a beginning and advance in farming.
2. Produce farm commodities efficiently.
3. Market farm products advantageously.
4. Conserve soil and other natural resources.
5. Manage a farm business.
6. Maintain a favorable environment.

The commonly accepted general objective is "to train individuals to do the ordinary construction and repair work that needs to be done on the farm with the tools a progressive farmer may reasonably be expected to have." A much simpler statement may be wrapped up in the four words, "to develop mechanical resourcefulness." This over-all objective need not be limited to the all-day group. It applies equally well or better to the young farmer attaining a farm and the adult farmer who is satisfactorily established in farming on a sound economic basis. It does not distinguish between the so-called dirt farmer, the rancher, the truck farmer, and the horticulturist. This may be proved by a further study of the contributory objectives necessary to the attainment of the major objectives listed above.

To make a beginning and advance in farming assumes the effective ability to:

1. Evaluate the mechanical resources for farming
2. Obtain supplies for farm operations
3. Procure necessary farm equipment.

Other abilities which may be included do not specifically apply to farm mechanics.

To produce farm commodities efficiently assumes the effective ability to:

1. Select, procure, and maintain farm equipment
2. Make needed farm appliances
3. Manage the different production jobs without loss of time due to mechanical difficulties.

The other abilities included here for the whole program do not specifically belong to the mechanical side of farming.

To market farm products advantageously assumes the effective ability to:

1. Assemble farm products for marketing
2. Process and package products
3. Transport products to market
4. Follow sound storage practices (including refrigeration).

The remaining abilities listed under this objective do not directly apply to farm mechanics.

To conserve soil and other natural resources includes the effective ability to:

1. Terrace farm land
2. Construct and maintain dams and water spreading systems.

Any further listing does not apply to farm mechanics.

To manage a farm business includes effective ability to:

1. Equip a farm adequately and economically
2. Rent certain farm equipment
3. Secure maximum efficiency from machinery and equipment
4. Purchase supplies and equipment advantageously
5. Provide facilities for storing and/or processing food for the family.

To maintain a favorable environment

1. Provide and maintain suitable farm homes
2. Provide home and farm conveniences
3. Secure good roads and other transportation facilities.

A study of these contributory objectives which apply to the mechanical side of farming in the light of the all-day group, the evening class group, and the young farmer group and what each has been doing to attain them supplies the test as to whether or not the mechanical side of the program in vocational education in agriculture is "on the beam."

It must be remembered that the contributory objectives listed in Monograph 21 are not all of the objectives which contribute to the accomplishment of the major objectives listed. There are many others which could have been listed. As an example of this, it will be noted above that under the conservation objective only terracing and dam construction are listed. Contour farming, levelling land, clearing land, and many other things might have been included. However, the number of these contributory objectives is adequate to point the way toward an estimation of what farm mechanics at its different levels is accomplishing, and wherein a recasting of plans might bring about a greater likelihood of effective accomplishment.

Mechanical Equipment

To make a beginning and advance in farming, the student needs to evaluate mechanical resources and to obtain supplies and equipment needed for expansion or improvement. Putting this on the level of the all-day boy indicates that course content in farm mechanics for him should include training in determining values of tools and equipment, determining mechanical needs for the production of various crops and livestock, and locating and procuring supplies and equipment deemed necessary. Most instructors in farm mechanics at this level have paid little attention to this type of course content. Many of them have made rather exhaustive studies of this sort of material in the class with young farmers who are expanding and acquiring property, supplies, and equipment. It is likely that the adult farmer in the evening class group has had a lesser need for this type of course content than either of the other groups. The indication of possible avenues of improvement would seem to point toward a more general study of tools and equipment by the all-day group.

To produce farm commodities efficiently the student needs to select, secure, and maintain farm equipment, make needed appliances, and avoid mechanical breakdowns and difficulties. The all-day group has had little in its course content about selecting and securing equipment, but it has had much to do with maintaining it, making appliances, and repairing broken-down

velopment of scarcity and priorities caused by total war, it is likely that the all-day group was almost entirely limited to the making of appliances, with a small portion of advanced time allotted to the repair and maintenance of farm machinery. (The young farmer group has reached the place wherein this set of contributory objectives has functioned to the greatest extent.) A great deal of time has been spent in young farmer classes in helping the young men to select and acquire needed equipment and appliances. It has gone beyond this into training in putting these acquisitions into usable condition. And it has further provided adequate repetitive training to make mechanical resourcefulness a fact in the lives of these young men. Fortunately or unfortunately, there has been little in the evening class beyond the showing of new types of equipment until the national defense and rural war training classes in farm machinery repair were provided as very necessary to keep in operation the machinery and equipment now on farms and ranches which cannot be replaced for the duration. Fortunately is likely the better way of looking at it because the necessity did not exist previous to rationing. In any event the objectives of local farm mechanics courses need overhauling if all-day boys are to do enough selecting, acquiring, and repairing of machinery and equipment. Briefly, the all-day class should do more repair work and more construction with used materials than has been the case in most schools. Further Food Production Classes should be found in every farm shop in vocational agriculture doing the repair and maintenance and construction needed by young farmers who are not in the armed forces and the old-timers who have to make what they have on hand do the job.

Marketing Mechanics

To market farm products advantageously the student needs to handle assembling, processing, packaging, storing and transporting of commodities produced on the farms and ranches of the community. Course content for the all-day class in farm mechanics should take the form of making and repairing containers, graders and sorters, and storage places. For the young farmer the matter of transportation becomes the greatest point of interest. He must somehow get his products assembled and packaged and brought into the market or storage place. The processing of food begins to be a problem with this group also. However the real food processing and storing is more especially the concern of the adult farmer or rancher than of his younger associates. Refrigeration, quick-freezing units, dehydrators, and storerooms are of more interest to the adult than assembling or transporting commodities. Here again Food Production classes can handle the adult needs for the duration. This leaves the young farmer group to fit into the adult classes for what they can get out of them, mainly because in most communities there are so few young farmers on farms that separate part-time classes for them would be, in most instances, wasteful of the time and the energy of the teacher of farm mechanics. All-day groups seem to be fairly well handled under this objective under present practices. There might be more time

hydration, and processing of foods as a part of the regular work in farm mechanics on a boy level.

To conserve soil and other natural resources the student needs to run a farm level, operate earth-moving machinery, and handle irrigation problems. In the Southwest at least, the all-day groups have been doing all they could be expected to do in most cases with these objectives. Part-time classes have gone further into terracing, contouring and irrigating. Even the adult farmer and rancher have been doing a great deal of this, partly due to classes in vocational agriculture and to pressure and partly, or even mainly, due to the activities of the soil conservation service and allied agencies. Here only a continuation of past practices need be followed.

How Equip a Farm?

To manage a farm business the student needs to equip a farm or ranch adequately and maintain the efficient mechanical operation of it. The all-day group has done nothing in the line of equipping the farm or ranch as a part of farm mechanics in most cases except casually in helping local dealers assemble new equipment. Since Pearl Harbor, the main effort has been the repair of existing machinery. Even the systematic maintenance has not been the field of the all-day class. Some effort with the young farmer group has been spent in equipping the farm or ranch, altho here again the greater emphasis has been on the maintenance and repair of the equipment on hand. In the case of the adult farmer, the demonstration of new types of equipment before the war was the only contribution to equipping the farm which most farm mechanics classes for adults attempted. Maintenance and repair has been and is being adequately handled thru the Food Production program. The implication under this contributory objective is that, all along the line, the problem of equipping the farm or ranch is the thing which needs to be given more time and attention in all classes in farm mechanics.

To maintain a favorable environment the student needs to provide and maintain farm conveniences in a suitable farm home and to maintain access to community recreation and pleasure. It is likely that the farm mechanics class has done more in the all-day group under this objective than any other group. There still remains a need for much closer tie-up between the improvement project as planned in the class in vocational agriculture and its execution as a part of instruction in farm mechanics. The Future Farmer organization provides co-operative experience and other training which makes this objective easily attainable. The young farmers have taken to this objective whole-heartedly because of their need for the things implied in maintaining a favorable environment. They are ambitious and anything is better than nothing. To a lesser degree the adult group has been doing quite a little with this objective. Greater leisure and more money, before the war at least, activated many farm and home improvements and real conveniences. Much of this has been promoted, and more accomplished, thru instruction in farm mechanics at the three levels. For the duration little can be done to add conveniences. But the maintenance of existing conditions and the adwaste materials should not be forgotten. Probably the score for vocational agriculture in this field in the past has been greater than in any of the other objectives. There remains only the keeping of it there while the others are brought more nearly up to it.

Finally, assuming that the progenitors of Monograph Number 21 have stated their case accurately and well, it seems that, in many of the implied duties of the farm mechanics teacher, there has been adequate accomplishment. A few duties remain which have not been so adequately handled in all three of the groups reached before the war. These may all be lumped into one class of activities however. That class is the evaluation, selection, and securing of the farm equipment and materials needed for efficient production and operation. And even here things have not been so bad, for the all-day boy has learned fundamental skills which have been used by the young farmer classes and augmented by a study of machinery and equipment and financing, leading to acquisition of farm and home needs. While the adult farmer is being aided now by the Food Production program until his food production is kept at its highest possible level, one is justified in the prediction that a study of available equipment and materials after the war may well replace the present repair and maintenance study. All in all, the program of vocational education in agriculture has done a fair job in attaining its farm mechanics objectives. It remains only for the present group of teachers to keep up the standards set by those who have in many cases gone into the armed services of the country and for the postwar teachers to maintain the high level of accomplishment which now prevails.

Farming Programs

(Continued from page 28)

average students in this state. However, they probably have made more progress and followed their programs more closely than the average student in Mississippi.

On the basis of these and similar case studies, it seems that a long-time farming program can be followed successfully and still be in keeping with our philosophy of vocational education in agriculture. Furthermore, it is very likely that a student who has carefully planned his long-time farming program, having a guide at all times, especially with respect to his ultimate objectives, is more likely to attain these objectives than the student who haphazardly sets up a farming program from year to year and has not looked into the future and kept his objectives well in mind from the beginning of his course in agriculture.

Our Cover Quotation

The verbal equation on our cover is familiar to most of our readers—a thought well worth pondering by every teacher. For any to whom it may be new, it expands into these words: Selling is to buying as teaching is to learning. Just as no one has sold until someone has bought, so no one has taught until someone has

Research

E. B. KNIGHT

Procedures in the Formulation of Farming Programs for All-Day Students

E. B. KNIGHT, Teacher Education, University of Tennessee, Knoxville

E. B. Knight

OVER a period of time a group of intelligent professional people will arrive at some fairly definite conclusions regarding certain procedures and practices associated with a major activity of their profession. With this idea in mind, Tennessee teachers of vocational agriculture were asked to react to a number of items concerning their methods in caring for significant phases of the farming programs of their all-day students. In all, 171 teachers completed questionnaires during a recent series of summer conferences under the guidance of a member of the Agricultural Education staff at the University of Tennessee. As might be expected, the study covered many aspects of student farming programs, only one of which—procedures used by teachers in program formulation—is discussed in this article.

Time of Year for Program Preparation

The time of the school year when students of vocational agriculture should set up their farming programs has often been debated by teachers and others in this field. Table I reports what Tennessee instructors practiced in this respect.

Table I—Time of Year Students Tentatively Set Up Farming Programs

Time program is set up	No. of depts.	Percent depts.
During fall months	62	36.3
By end first semester	53	31.0
First two weeks of school year	24	14.0
Early in second semester	18	10.5
Late in school year	5	2.9
At various times	1	0.6
No reply	8	4.7
Totals	171	100.0

Apparently the large majority of teachers allow their all-day pupils several weeks for orientation purposes before initiating the process of program formulation. Better than four-fifths (81.3%) of the departments represented normally have this important matter of program preparation well under way by the end of the first semester.

Factors in Project Selection

Students are individuals. As such, their facilities, their opportunities and their limitations, and scope. These differences are due to many factors, the more numerous of which are indicated in Table II. The items are listed in order of frequency.

Table II—Factors Considered in Setting Up Farming Programs

Factor Considered	No. Teachers Naming	Percent Naming
Home farm situation of student	150	87.7
Student's likes, dislikes	87	50.9
Economic outlook for enterprise	59	34.5
Type of farming	31	18.1
Ability of student	31	18.1
Community practices	15	8.8
Parental attitude	13	7.6
Departmental objectives	4	2.3

*Each percentage calculated on basis of 171 teachers.

The home farm situation, including its facilities, its opportunities and its limitations, was considered the outstanding factor in determining the nature of the program. One-half of the teachers felt the preferences peculiar to the individual student were highly significant, and one-third named the economic outlook for the enterprise as a vital criterion. The student's ability and the local type of farming were mentioned by one-fifth of the co-operators. It is evident that a wide variety of items are pertinent when the boy is choosing his program activities.

Utilization of Outlook Materials

An abundance of materials dealing with the economic outlook for the principal farm enterprises has been available for the past decade. Evidently Tennessee teachers of vocational agriculture have encouraged their students to use this sort of information for approximately two-fifths stated it was employed either "as reference material" or as "a basis in selecting enterprises." Seven percent of the instructors indicated little or no use of outlook reports.

Nature of Program Agreement

Two-thirds of the teacher group reported that written agreements alone were in effect between parents, student and teacher while one-eighth of these instructors said only oral agreements were used in local departments of vocational agriculture. A few men used both written and oral contracts. Several had not settled the matter of program agreement sufficiently to make a definite statement. Most of the agreements employed followed quite closely the form printed in the record book considered as official in

The principal means of program financing was thru relatives, mainly parents, altho students themselves and local banks were mentioned by half or more of the co-operating teachers. Credit associations and F.F.A. chapters were also utilized. The proportion of boy ownership of projects varied greatly in different communities. The modal degree of ownership was in the 75–90 percent division. It was evident in a majority of the departments that at least 50 percent boy ownership prevailed. Frequently teacher replies revealed their conviction that complete student ownership was desirable but the difficulties of attaining this goal were great due to the small-sized farms characteristic of Tennessee. A minimum of one-half of the net profits from farming programs went to the student in 53.5 percent of the schools represented in the study. Seventy-eight of the teachers felt they could not give an accurate picture of their department because individual cases varied so greatly. Rather generally, the net income from livestock projects belonged to the boy while profits from crop enterprises were shared on the prevailing community basis. Large families, small farms and pressing family need for food help explain the situation.

Budget for Receipts and Expenses

An important part in the planning of any program involving business transactions is the preparation of a tentative budget of potential receipts and expenses. Eighty-four percent of the instructors stated local students of vocational agriculture prepared a budget whenever they formulated their farming programs. Ten percent of the teachers did not require a budget be drawn up, and six percent had no set policy in this respect.

Outcomes of Study

Among the more significant outcomes of this phase of the study are the following summary points:

1. The farming programs of all-day students in Tennessee usually are formulated by the end of the first semester of the school year.
2. The principal factors involved in enterprise selection are: (a) the youth's home farm situation, (b) his personal preferences, (c) the economic outlook for the enterprise, (d) his ability, and (e) the local type of farming.
3. Written program agreements, signed by the student, his parents and the teacher are favored by a majority of Tennessee teachers.
4. Financing of student programs is largely cared for by parents and relatives altho the student himself and the local bank function in many communities served by departments of vocational agriculture.
5. At least 50 percent student project ownership prevailed in most schools represented in the study. About the same percentage of student-sharing in net

Teacher-Training Curriculum in Vocational Agriculture

G. A. SCHMIDT, Teacher Education, Colorado State College, Ft. Collins

G. A. Schmidt

AT Colorado State College all curricula have been revised for the postwar period. The material is assembled and ready to go to the printers for a new college catalog just as soon as the war comes to a close. The curriculum for training teachers of vocational agriculture was completely revised and set up to meet postwar needs.

The college offers seven majors in the Division of Agriculture. One of these majors is a course in General Agriculture. The course in General Agriculture is offered for those desiring a general course rather than a specialized major. Students wishing to qualify as teachers of vocational agriculture must take the course in General Agriculture including all the prescribed teacher-training subjects. Those students not interested in becoming teachers, but desiring a general course, may elect any subjects desired in place of the educational subjects required for prospective teachers of vocational agriculture.

The three Livestock Management courses combine classwork and practicums on the college farm. Livestock Management A is devoted to beef cattle and horses; Livestock Management B to sheep and hogs, and Livestock Management C to dairy cattle and milk production.

Only the course in General Agriculture requires any training in the field of farm mechanics and in this course, 16 quarter hours are required. It is believed that this amount of training in the field of farm mechanics is essential to enable the future teachers of vocational agriculture in Colorado to give adequate training in this increasingly important field.

The first year's work in General Agriculture and in the Animal Husbandry major are identical and differ from the other majors only in one respect—a third quarter of Botany replaces Fitting and Showing Livestock.

The real differentiation of the majors in the Division of Agriculture starts in the sophomore year. In place of more mathematics, chemistry, physics, and other sciences, the course in General Agriculture includes subjects in Farm Mechanics, Meats, and Poultry.

A complete summary of the subjects and credits in the various fields is given in outline form. It is believed that the course in General Agriculture is well balanced to meet the needs of teachers of vocational agriculture of Colorado where general farming prevails. Then, too, students qualifying to teach vocational agriculture have 18 hours of free electives that can be used to get more specialized training along some particular type of farming.

In the senior year the entire winter quarter is given over to courses in teacher training, thus enabling the trainees to go on campus basis and devote all their time to apprentice teaching.

Colorado State College is at present installing a school-community food processing plant for family use in co-operation with the local public school district. This is going to be a complete plant in which people may do their own canning and dehydrating and prepare their food for freezing. In the postwar period every trainee in vocational agriculture will be required to take a three-hour course in operating and in supervising a community food-processing plant. He will get this training in a plant now being installed.

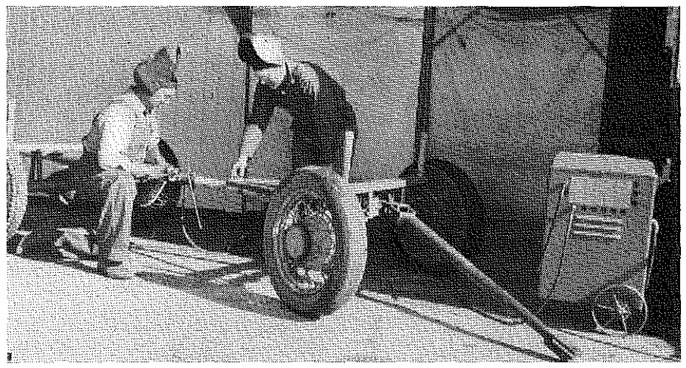
The teacher-trainer in vocational education in agriculture at Colorado State College is in charge of the course in General Agriculture because it is essentially a teacher-training course. He is on the faculty of the Division of Vocational Education and Guidance. He meets with the staff of the Division of Agriculture whenever problems regarding technical subjects in the course in General Agriculture are under discussion. It is his responsibility to see that prospective teachers of vocational agriculture get the type of training needed to do a good job of training present and prospective farmers for proficiency in farming.

Summary of the Technical and Educational Subjects in the Revised Curriculum for Training Teachers of Vocational Agriculture

Livestock Production		*Crop Production*		*Economics*	
Market Types	4	Gen'l Horticulture	4	Economics	5
Fitting and Showing Livestock	4	Crop Production	4	Agri. Economics	4
Meats	4	Crops Laboratory	3	Agri. Marketing	4
Poultry	4	Soils	5	Farm Management	4
Livestock Feeding	4	Soils Laboratory	3		
Livestock Mgt. A	4	Irrigation Farming	3		
Livestock Mgt. B	4	Range and Pasture Management	4		
Livestock Mgt. C	4	Vegetable Crops	5		
Animal Hygiene	4	Economic Entomology	5		
Total Qr. Hrs.	36	Total Qr. Hrs.	36	Total Qr. Hrs.	17
Sem. Hr. Equiv.	(24)		(24)		(11⅓)
% of Curric.	17.14%		17.14%		8.09%

Farm Mechanics		*Professionalized Education*	
Blacksmithing and Welding	2	Vocational Education	3
Farm Carpentry	2	Job Analysis	3
Tractor and Motor Repair	3	The Teaching Process	3
Farm Machinery Repair	3	Special Problems in Agricultural Education	3
Rural Elec. and Sanitation	3	Observation of Teaching	3
Misc. Farm Shop Skills	3	Problems in Projects and Shop Work	5
		Ed. Psychology	3
		Student Teaching	9
Total Qr. Hrs.	16	Total	32
Sem. Hr. Equiv.	(10⅔)		(21⅓)
% of Curric.	7.62%		15.24%
Total Technical Courses	49.99%	Total Educational Courses	15.24%

WILMS' WOMEN WELD IN WAR WORK



Six farm women were enrolled in the RWPT shop course conducted at Minburn, Iowa, under

Future Farmers of America

A. W. TENNEY

F.F.A. Chapter Handles Loans to Members

JAS. L. ROBINSON, Farm Security Adviser, Kansas City, Mo.

SINCE 1937 the Effingham, Kansas, F.F.A. Chapter has made the loans its members needed to carry on their farming programs. During the four-year period, 1940–43, it received advances totaling slightly over $10,000 from the Atchison Production Credit Association. Since no loss has been taken on any of these loans, a good job of granting credit must have been done.

Earl Johnson, a former teacher of vocational agriculture, with the support of Principal Hunn, worked out the plan for the F.F.A. Chapter to handle the loans. It has been continued under A. G. Jensen, the present teacher, who has depended on it each year in developing his farming programs with his students.

Boys Approve Loans

The loans are largely student managed. A loan committee made up of F.F.A. members, usually officers, examines and passes on each application. At least three votes are necessary to approve a loan. Either the principal or the teacher of agriculture always meets with this loan committee. About the only time, however, that guidance is needed is when the boys become too critical of some application, for they take their responsibility seriously. Minutes are kept of all meetings and action taken. Usually several applications are considered at one meeting, but a single application will receive attention when necessary. These meetings are usually held during the lunch hour since most of the boys eat their lunch at the school.

Each boy who wants to obtain a loan from the Chapter fills out an application form telling something of his farming program, how the money will be used, when and how it will be repaid, and who will cosign the note with him. On the back of this mimeographed form are the 16 rules which have been approved as guides for students in using the credit.

A variation of the usual trustee plan for handling the loan has been used. The F.F.A. Chapter makes out checks to the boys who have submitted cosigner notes. The Chapter sends the trustee's master note and the supporting cosigner notes to the association. The production credit association then sends its check to the Chapter to cover the amount of the latter's checks to the boys. When a car of lambs is ordered, the Atchison office is notified and the production credit association handles the draft. Notes are made out and sent in to take care of the credit and a check is made to the association for the cash part of the deal.

Largely Lamb Loans

While the purchase of feeder lambs has been the most important use the Effingham Chapter has made of its credit, members have also borrowed to buy breeding ewes, breeding gilts, feeder pigs, dairy cows and poultry. In 1943, two double deck cars of feeder lambs were bought, nearly all going to members of the Chapter, most of whom used credit.

Seven of the F.F.A. Chapter members including several of the officers attended the Tenth Annual Meeting of the Production Credit Association in Atchison on January 31, 1944. Charles Armstrong, the Vice President of the Chapter, in responding to the invitation to comment on their activities said that six out of the seven present had used a Chapter loan to buy feeder lambs during the past year. He expressed appreciation for the low rate loans they had received, and said their members were proud of their repayment record. The loans made to 20 boys in 1943 had amounted to $3,278.67.

THE Chapter charges a fee of $1.00 for handling each loan, and collects 5½ percent interest. Out of the one percent interest margin and the loan fee, the Chapter has paid for 30 shares of stock ($150) and has a surplus of $120.60 with the association. This sum is used in making loans to the students, as the master note on which the Chapter pays interest is less than the sum of the individual's notes by this amount. This results in the Chapter getting 5½ percent interest on this amount for the time it is loaned.

A ledger is kept of all transactions. This is provided by the Production Credit Association and is similar to the one they use in their files. The secretary of the association comes over once each year and checks over the files and also sends a statement of accounts several times each year.

A few of the boys have been a few days late in meeting their obligations and some have had bad luck and were granted extra time by the association. The secretary and other officers of the Production Credit Association, particularly Mr. William Stutz, a director living in the Effingham community, are very much interested in the program and have worked closely with the Chapter and the vocational teacher.

The plan was made with the idea that it would furnish credit to worthy boys, that student management would be good training for the members, and that it would also provide an excellent check on the Chapter's investments. Mr. Jensen says, "It has made possible larger farming programs, has taught the boys proper use of credit, has furnished credit at a fair rate of interest, and has increased the net worth of the F.F.A. Chapter." Needless to say, the purchase and sale of the lambs in co-operative car lots, as well as the co-operative plan for providing credit, is giving the students excellent training in co-operative methods of doing

Organized Boy Power

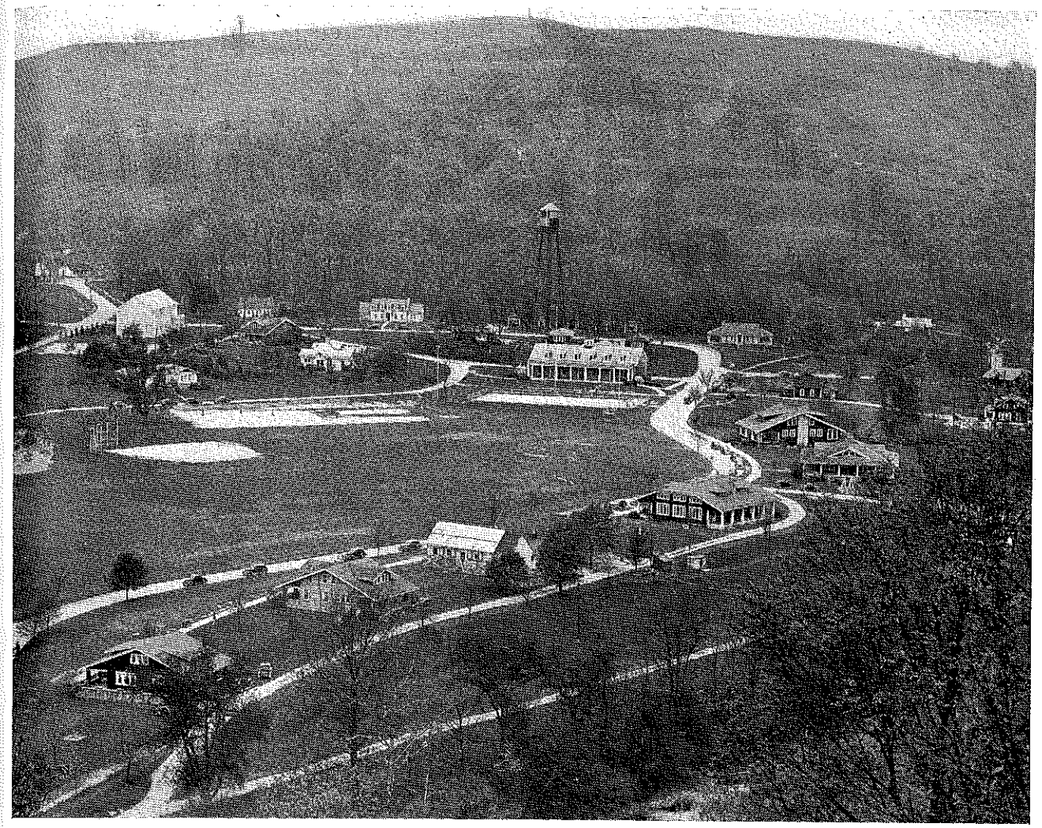
J. A. Hardy, Teacher of Agriculture
Draper, Virginia

EVERY dark cloud has a silver lining if a person looks for it from the right direction. The duties of the teacher of agriculture has so increased with America engaged in total war that it is often hard to see any bright spots. However, it seems that "organized boy power," made imperative by the war situation, has been a silver spot that shines thru the tempest.

Each year for seven years I have attempted to teach the job of controlling seed-born diseases of small grains, using a combination of group and individualized instruction. I have made rotary barrel seed mixers which were always ready when the fall term opened. I have had infected seed samples, pictures, bulletins, and pamphlets for study. After studying the job we usually gave an article to the local newspaper, stating the method to be used and offering to treat small grain at a cost of material only for any farmer who would bring his seed to the shop. I have also taken classes out to individual farms and treated seed, demonstrating our mixers and the new improved Ceresan Method. But I was never able to get very much grain treated.

At the beginning of the 1943–44 term I realized that, with all the other duties of the teacher of agriculture, perhaps I would let the small grain treating job go as one of the improved practices which should be, but is seldom, carried out. It was evident that the time had come to eliminate a few responsibilities. I decided to drop the less important jobs and to spend more time and effort on first things and to try to use boys in every way possible in the community. The Department Advisory Council felt that the job of controlling seed-born diseases of small grains was one of the most important. The Draper F.F.A. Chapter decided to make seed treating a community project.

All classes in agriculture studied the job as a group. I put the problem squarely up to the boys as to what needed to be done. The department decided to form community training-rings to treat seed grain, one in the Shiloh community and one in the Draper Valley community; to make one Minnesota type treater for use by each group; and to offer a prize to the ring that treated the most grain. Each group built its own treater from material furnished by the department. The department also furnished improved Ceresan for treating. The local newspaper carried an article on the service being offered by the rings and gave the names of the chairmen to contact. The treaters were taken to various farms centrally located in each section where farmers brought in seed grain to be treated. The only charge merely covered the cost of Ceresan. Three hundred eighty-two bushels of seed were treated with the Valley ring winning first place by treating 229 bushels. The Chapter expects to form several more rings



WEST VIRGINIA STATE CAMP

"The grandest state camp in the world" is the editor's judgment of this, the state camp of West Virginia. Any prairie-reared boy can sit and look at this view by the hour.

The camp grounds include over 500 acres located at Jackson's Mill in western West Virginia, the boyhood home of General "Stonewall" Jackson. The mill on the old farmstead stands along the stream showing at the lower center of the picture. The camp is supported by state aid and is under the direction of the Agricultural Extension Service. It is used for meetings of all rural organizations including teachers of vocational agriculture, F.F.A., County Extension workers, 4-H campers, livestock breed associations, the Grange, the Farm Bureau, and the Rural Ministers' Association. In the center is the large dining hall seating nearly 500 diners. Dormitories are seen spaced along the main drive. Many of these are donated by county organizations such as the Grange, and provide sleeping accommodations for from 40 to 60 persons each. In front of the dining hall is a swimming pool. Other accommodations include an assembly hall, an administration building, a museum, the home of the director who is the state club leader, a livestock pavilion and barns for exhibiting livestock, and a small airport. A monument on the grounds marks the location of the boyhood home of the great General. An open-air amphitheater on a sloping hillside is being developed, a gift from the state organization of Women's Clubs. Surely these accommodations and this beautiful site justify our West Virginia friends in claiming the most beautiful state camp in all the world.

Iowa Falls Accomplishments

A FEW high-spots of the Iowa Falls, Iowa, department (Scenic City F.F.A. Chapter) include the completion of three part-time and evening classes, also three RWPT classes. Nearly 500 farmers and victory gardeners purchased certified seed potatoes. The chapter owns two treating vats in which they treated over 1000 bushels of seed; also two fanning mills and are purchasing a third; they shipped a carload of Tama seed oats to Minnesota growers. In their co-operative activities they did over $32,000 worth of business during the school year. They held five sales of purebred Durocs with animals going to commercial breeders and producers in 12 states. They own 10 herd boars and recently purchased were in the treasury to cover the purchase without assessments. Their activities reached the equivalent of every farmer in two townships in the surrounding community. They are conducting a sow-testing program consisting of 195 litters. In crops and soils they are conducting a corn-yield test plot on 40 varieties, potato variety test plots on 8 varieties, and are growing certified Tama oats and Richland soybeans. The adviser is Clarence E. Bundy.

The revised F.F.A. Manual, January 1931, included the music to The Future Farmer March, composed by Capt. W. J. Stannard, and dedicated to the ideals of country life and the Future Farmers of America. Words and music to "Future Farmers of America" was also included in this issue of the Manual. The words to this song were written by Joe Duck, yo-

F.F.A. Cow—$10,000 Bonds

A JERSEY cow given by the Atoka, Oklahoma, F.F.A. sold for $10,000 in bonds at the War Bond sale held at the courthouse. The businessmen of Atoka helped the chapter buy the cow. Other property sold at the sale and later given to the F.F.A. boys by bidders included a calf, a gilt, a goose, an axe, and a sack of feed.

A tract of land of approximately four acres located near the high school is being purchased by the F.F.A. The boys plan to fence and improve this acreage and use it to carry on group projects. The chapter also purchased 18 shoats to feed out as a group project. The members have been carrying on an active campaign against grub infections by treating

Objectives for a Farm Mechanics Program

BERNARD BUTCHER, Teacher,
Van Nuys, California

IT IS our primary objective as teachers of agriculture to help prepare the boys in our classes today to operate successfully the farms of tomorrow. It would seem logical to assume that the postwar farm will be even more highly mechanized than the farm of today. Bearing this assumption in mind, we should evaluate our farm mechanics program to determine whether or not we are devoting sufficient time in our schedue for this phase of the work, and whether or not our teaching objectives in farm mechanics are broad enough to be of the maximum value to the student in preparing him to meet the demands of a highly-mechanized type of farming.

The possibilities of increasing the efficiency of nearly every farming operation thru the use of new and improved types of machinery are almost unlimited. Their introduction into the field by the farm machinery companies has been delayed because of the inability or the unwillingness of the great majority of farmers to care properly for such machinery. It does not seem that agricultural progress can be held back much longer on this score. Many types of new and specialized equipment will be introduced in the years after the war. The farmer who has a knowledge of the principles of mechanics and an appreciation of the proper care and maintenance of such equipment will reap the benefit.

More Machines—More Instruction

It would be safe to conclude that if the mechanization of farms is to be increased, so also should the time allotted to the farm mechanics program in the school be increased. This is not to imply that more time be spent in the school shop itself, but rather that the mechanics phase of the various farming enterprises under study in the classroom be considered as much in detail as any other aspect of farm production. For example, a unit on the production of alfalfa that covers only such items as are included in cultural practices would be only a partly-finished unit. To complete the study considerable time should be spent learning the operation and care of the pieces of equipment used in the production of alfalfa from the corrugated roller for firming the seedbed to the hay baler.

If the farm mechanics program is to be of the maximum value to the student, it should be based on objectives broad enough to enable him to cope with the intricacies of mechanized farming. When we consider the limited number of hours which we have at our disposal, it would seem to be difficult to justify the use of very much time in the school shop to the construction of some piece of equipment such as a poultry feeder, a set of calf stanchions, or the making of a pair of hay hooks in the forge. These are jobs best done at home on the student's own time.

The time which we allot to the farm mechanics program should be the most truly vocational of any during the school day. There the student should be taught first of all to develop an appreciation of

he should be taught to operate those tools properly and with the maximum efficiency. Then he should be taught to maintain, adjust, and repair the tools which he must use.

Industry is today accusing the public schools of being lax in foresight by not preparing the students to meet the present increased demands for skilled labor. Let us make certain that our farm mechanics program is organized with an eye to the future so that agriculture will not one day criticize us for having failed to prepare our students to meet the situations which will confront them as farmers of the future.

Dairy Farmers Take the Offensive

(Continued from page 30)

the many individuals who helped generously with time and encouragement.

Work of the Supervisor

Below are the duties of the local supervisor of a FPWT Program, as the writer sees them:

1. Sell himself on the program and assume the responsibility for promoting it
2. Initiate the program, seek and promote enrollments, and get help with the promotion
3. Search for and select good special teachers
4. Be present to help launch each class
5. Keep in touch with each class by occasional visits and by offering and giving assistance to special teachers
6. Hold meetings for special teachers and assist them as much as is advisable
7. Ask for and use any suggestions which will help the total program.

Results From the Program

Benefits of the program are both economic and social. The immediate economic benefits are in the production of more milk with less time, labor, and feed, and an increased profit to the farmer. These are in line with the objectives of the Production Program.

Altho the whole program is easily justifiable on these immediate economic grounds, there are other benefits. The Faribault High School Food Production Program has brought into direct relationship with education 1,400 out-of-school persons and has made them conscious of the work we are doing. (Compared with 1,100 persons regularly enrolled in our entire all-day high school). As a definite social benefit, the persons enrolled have talked and worked together; they have studied and solved local problems together. These people will not want to give up this program when the emergency is over. Already there is talk of continuing the program and extending it at local cost.

To the writer, education is living and doing. Education is *more than learning how* to do better what is done. The responsibility continues to *actually get it done better*. It uses the results of past education to provide opportunities for further education and to get still more done still better. Education is a living, growing process.

You can't broaden a man's vision if he

Banquet Banter

Toastmaster: Ladies and gentlemen, our banquet would not be a success without remarks from our teacher of agriculture, Mr. Brown. Five years of service in this department have developed many changes of lasting value. While we boys never fully agree with him when *work* should begin, nevertheless we do get along fine and are proud of him as our teacher. Am told he had difficulties even before he tackled the job of teaching us boys. One experience rather peculiar. When attending Ohio State, worked part time at doctor's home on edge of Columbus. One fall, upon returning to school, doctor and wife decided to take short vacation so left our teacher in charge of home. Rather late one evening telephone rang and there was a call from country home for doctor. Mr. Brown took call and said he would be out later. Nerve, I'd say. Finished his studying and with some difficulty found farm home, late and tired. Had assumed would be case of small child with stomach ailment which little peppermint would cure. Just as he knocked at door realized had come without any of doctor's equipment—no stethescope, no watch. Too late now—door opened and of course he could only walk in and ask to see patient. Quite to his surprise, not a child but young lady about 20 years of age seated in comfortable old chair. Mr. Brown, I am told, pulled his chair up to hers, held one of her hands lightly at wrist to catch her pulse and put his ear over her chest to check her respiration. He asked her to count the seconds slowly, one — two — three—four. As I get story, and you may believe it or not, when Brown woke up, young lady was still counting 5,671, 5,672, 5,673. Ladies and gentlemen, our teacher of agriculture.

Speaker: Don't need to tell you this is one of very happy occasions of year. Our banquet is just that every year. It is pleasure to work with your boys in department and our Future Farmer Chapter. They are just lively lads that help keep any teacher young. However, we do have some rather interesting experiences. One time I recall that toastmaster was making quite a claim for intelligence of animals—farm animals in particular. As evidence, pointed to appreciation of animals when kindnesses are done to them. Chief illustrations were cases from experiences with dogs, but he claimed it was equally true with other animals and said he would prove it. One day we were coming back from a field trip and, as we passed farm pasture, we noted small calf had slipped into muddy pond and the cow was standing at edge looking helplessly on. Our toastmaster saw his chance, had the bus stopped, announced that he would now demonstrate his point. He climbed over fence and pulled small calf out of pond, left it at mother's side and stood there. Surely enough, cow licked off calf and then turned to toastmaster and licked him likewise. Bill was delighted and came bounding over fence and said, "Did you see that cow's appreciation? That shows intelligence, just as I claimed!" That was all right until little "Beanie" had a chance to speak, when he said, "Bill, you are all wrong. That was not intelligence. The old cow

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