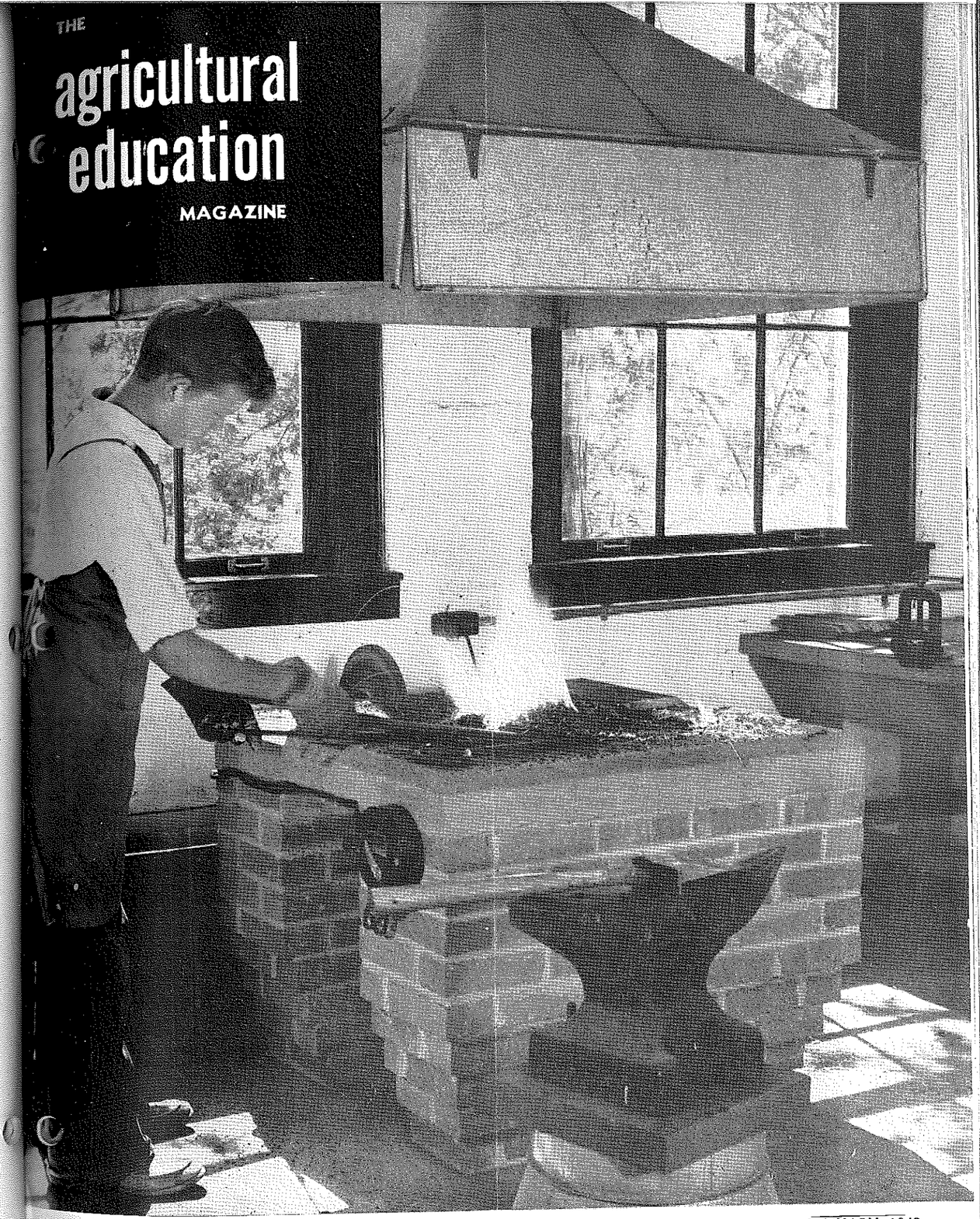
THE

agricultural education

MAGAZINE



View of forge equipment at the Littleton High School, Warren County, North Carolina.—Photo, J. K. Coggin.

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Editorial Comment

Expanding the Young Farmer program

L. R. Humpherys

THE PROGRAM in vocational agriculture in this country has been in operation for 30 years. This is a short period for any program of national proportions. Through these years the major part of designated local, state, and federal funds has been spent for all day instruction. Some of the states have been content to concentrate their funds and efforts on this phase of the program. Other states have pushed the frontier ahead and explored the fields of young farmer and adult education. However, the general public and agricultural agencies for the most part think of the Future Farmers of America when the term *vocational agriculture* is mentioned.

Generally speaking the teachers of vocational agriculture have been well trained, although the selective process has been neglected, moreover the instruction in the high school phase of the program has been acclaimed of a high order by the highly academic and the orthodox progressive educator. The Future Farmers of America has been an effective unit in the all day program, a powerful influence with parents, and an effective agency in promoting good relations with the public at large.

Work With Young Farmers Core of Program

Much of the all day training is pre-vocational. No apology is made for the try-out, exploratory and general education values in all day work. But the training job is just begun. Additional training must be provided and a placement service must be made available. In short the core of vocational education in agriculture is the young farmer program, and our program in the years ahead will be judged in terms of the job we do with the young farmers.

The boys who are going to take over the farms of this country are the young farmers in rural communities who may or may not have graduated from high school, veterans and non-veterans. The typical young farmer hasn't sufficient capital with which to purchase a farm. He may or may not have an opportunity to establish a father-son partnership, purchase a farm or buy an interest in a farm. This unadjusted young farmer was in the minds of our legislators when federal funds were provided with the controlling purpose, "to meet the needs of those who have entered upon or who are preparing to enter upon the work of the farm or the farm home."

The public schools of America have buildings, equipment, the trained personnel, and other necessary facilities to provide the needed training for the young farmers. The American public has always been willing to devise ways and means of raising funds to do an educational job that needs to be done. However, if the training needs of the young farmers are met adequately, there must be an awakening in the ranks of vocational education. The United States Office of Education must exert a vigorous leadership in expanding the educational program for young farmers, and the American Vocational Association must step up the tempo of its efforts in securing the allotment of funds authorized by the George-Barden Act.

Let it be repeated that the most urgent need in vocational education in agriculture today is an expansion of the young farmer program. If the forces in vocational education fail to rise to meet the needs of the hour, then some other agency will take over and do the job that needs to be done.

—L. R. Humpherys, Utah State Agricultural College

Vocational agriculture as an area of education

Recently the writer made some observations in a training center in which the supervising teacher was alert to his responsibilities in connection with certain objectives toward which other teachers in the school were striving. Upon this occasion the instructor was using his program as a medium for teaching English, mathematics, and principles of science.

The administrative arrangements under which we work as teachers of vocational agriculture tend to segregate us from other areas of the school and may cause us to be neglectful of certain responsibilities which we have as teachers. On the other hand we have unlimited opportuntities to motivate interest in the acquiring of abilities which students of vocational agriculture recognize as being desirable.

Cultivation of Abilities Relating to Other Subjects

In one state dairy judging contest the word *Ayrshire* was spelled twenty-seven different ways. There were nearly as many variations in the spelling of *Holstein* and several misspellings of the word *Jersey*. Where else should students learn the correct spelling of terms used in farming if the abilities are not acquired in vocational agriculture?

We like to think that abilities of self expression which F.F.A. members tend to acquire are evidences of training in leadership. Are we careful of our own diction and do we insist upon the use of proper language by the boys?

Where in high school is there a better place to teach mathematics than in vocational agriculture? We use numbers regularly in computing rations, in figuring bills of materials, in measuring fields and in many other ways. Yet the records which the boys keep of their farming programs may carry gross inaccuracies and even though accurate the data may not have been used as a basis for critical analysis and the development of abilities to solve problems.

Applications of the sciences confront us every where we turn. The study of farm power and machines is based largely on principles of physics. The work with plants and animals deals with botany and zoology. Fertilizers and spray materials are compounded according to chemical formula. Yet as we deal with these material things I wonder if we are cognizant of their relationships to sciences which are involved in their formulation and use.

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Where to direct correspondence and copy

AS OF JANUARY 1, 1948, the publisher of the *Agricultural Education Magazine* was changed from *Successful Farming*, Des Moines, Iowa, to The Interstate Printers and Publishers, Danville, Illinois. All correspondence intended for the publisher should be addressed to the Interstate Company at Danville.

Subscriptions are normally made up on the group basis and mailed directly to Interstate. Notices as to changes of addresses are handled by the publisher. Insofar as back copies of issues are available they may be secured at 15 cents each from the publisher. The present subscription rate is $1.50 per year, with a special rate of $0.75 per year to college students majoring in agricultural education.

Inquiries concerning subscription rates may be addressed to W. H. Martin, business manager of the magazine, located at the University of Connecticut. Manuscripts for the magazine should be addressed to G. F. Ekstrom, editor, at the University of Missouri, or to one of the departmental editors whose names and addresses appear on the contents page of the magazine.

Cooperative Activities

Farmer cooperatives and vocational agriculture

MARK NICHOLS, Director Youth Education, American Institute of Cooperation

Mark Nichols

FARMER cooperatives are farmer owned and controlled institutions. Vocational agriculture is an educational service that concerns itself with present and future farmers. Both organizations, therefore, concern themselves with farmers. Both contribute to their economic and social welfare.

Vocational agriculture functions within the framework of patterns established by the Smith-Hughes Act of 1917, and Federal and State laws enacted subsequent to this time. Farmer cooperatives function according to the provisions of the Federal Capper-Volstead Act of 1922 and other Federal and State Statutes which give direction to such organizations. While farmer cooperative businesses and vocational agriculture programs were in existence previous to these dates, their opportunities, responsibilities and limitations were not clearly defined until this time.

10,000 Farmer Cooperatives

There are at present in excess of 10,000 farmer cooperatives in our country. There are approximately 8,000 departments of vocational agriculture. It is evident from these figures that both have wide-spread acceptance by the American public.

Although their specific objections are different, vocational agriculture and farmer cooperatives each have a number of factors of common interest. It would seem desirable, therefore, that the leaders of the two organizations at all levels have a thorough knowledge of the organization, functions, and contributions that each can make in as much as such organization is a device established for one primary purpose—to help the farmer, through rendering a service in the public interest.

In the past much of the instruction in vocational agriculture has been concerned with efficiency of farm production. Special attention has been given to methods of increasing this production—more milk per cow, more corn per acre, and more eggs per hen. While this will always be fundamental to the farmer's welfare, it is apparent to some agricultural leaders that relatively more attention should be given to many of the other business aspects of farming, especially to off-farm operations.

These include the marketing of farm products, the purchasing of farm supplies and the procuring of certain kinds of services that add to the efficiency of farming operations which make farm life more enjoyable. It is in this realm that farmer cooperatives have made their greatest contribution. Farmer cooperatives are, therefore, one type of an off-farm farming operation that farmers should understand.

> Mr. Mark Nichols was granted a leave of absence for the year 1948 by the Utah Board for Vocational Education to serve as Director of Youth Education for the American Institute of Cooperation. Mr. Nichols has now returned to his position as Director of Agricultural Education in Utah.

Inasmuch as the cooperative belongs to the farmer, and he as a member has the responsibility of making his business succeed, it is well that he have a thorough knowledge of the principles and practices that make for its success. This is an educational problem to which vocational agriculture can make a genuine contribution.

The educational activities of vocational agriculture have been very greatly expanded during the thirty years of its operation under the provisions of the Smith-Hughes Act. In recent years the school community canning program, the vocational agriculture department farm, Future Farmer and Young Farmer chapter ownership of livestock and equipment have all come into the periphery of vocational agriculture activities. The forming of a farmer cooperative, with its corporate rights and protection, has been done in many states as a device for the successful operation of these activities.

It would, therefore, seem that there are many factors of mutual dependence which form a basis for desirable cooperation between farmer cooperatives and vocational agriculture. Both can appropriately say to each other, "I do have need for thee."

The following illustrations are given to amplify this statement:

It is estimated that approximately four million farmers in America belong to one or more farmer cooperative. Many of them belong to several. When a farmer becomes a member of a cooperative, he in every deed becomes a businessman. He votes for his directors, who in turn appoint the manager and other officers. Upon these persons rests the primary responsibility of making the farmer cooperative a success. However, quite as important is the factor of an informed, understanding, intelligent membership. Blind loyalty is not sufficient in a cooperative because the members, as well as the patrons, are rewarded when the business succeeds or get injured when it fails. Patrons, as well as members, have a stake in the farmer cooperative. Both share alike in patronage refunds. This is not the case in a proprietary business.

Farmer cooperative leaders in ever increasing numbers are turning to vocational agriculture as an educational agency which can effectively teach the principles and practices of the organization to present as well as future farmers. This is a job of instruction in vocational agriculture. State supervisors and teacher trainers are becoming more aware of this opportunity and are devising improved methods for accomplishing it. Statewide programs for giving impetus to such instruction have been inaugurated in a number of states. In most instances, it is a cooperative activity of the leaders in both organizations.

Cooperative Activities In F.F.A.

Last year 2,884 California Future Farmers participated in the popular "Information Please and Quiz Program," which was sponsored jointly by the state supervisory staff and sixteen large farmer cooperatives operating in the state. This type of program has been conducted for a number of years in that state.

Over 1,200 twelfth grade F.F.A. members in Wisconsin attended nine area conferences last February where the principles and practices of farmer cooperatives were discussed. These conferences were conducted jointly by the executive secretary of the Wisconsin Council of Agriculture Cooperative and the state supervisor of agriculture education.

For four consecutive years the Washington State Farmer Cooperative Council and state Future Farmer adviser conducted an educational quiz program on farmer cooperatives in which a high percentage of the Future Farmers participated.

Future Farmers in the State of New York for a number of years have cooperated with a large farmer cooperative in making community surveys as well as crop and market surveys which has been a means of increasing their understanding of the marketing and purchasing practices of farmer cooperatives, as well as other types of business in the community. Ten area leadership conferences for Future Farmer chapter officers, farm leaders, and farmer cooperative leaders are planned for the current year in New York with the hope these will provide a better understanding of each other's program.

In-Service Training

Recently nine area conferences were held in Pennsylvania, where nearly all of the teachers of vocational agriculture and veteran training instructors participated in a study of farmer cooperatives. The leadership of these conferences was composed of members from the state vocational agriculture supervisory staff, teacher training staff, State Council for Farmer Cooperative, and the agricultural economics department of Pennsylvania State College.

South Carolina gave increased emphasis to education about farmer cooperatives in the 1948 summer conference for teachers of vocational agriculture and veteran training instructors. A copy of seven bulletins on farmers cooperatives published by the Farm Credit Administration, U. S. Department of Agriculture have been procured for each of the 14,000 veterans in the farm training program in this state.

The state teacher training staff of Maine, in cooperation with the vocational agriculture teachers and executive secretary of the Maine Farmer Cooperative Council, has recently published a teaching outline on farmer cooperatives which will be used in Future Farmer classes this year.

Idaho, Utah, and a number of other states are planning to give statewide emphasis to farm cooperative education in vocational agriculture courses during the current year.

It is observed that numerous departments of vocational agriculture in nearly all of the states are doing outstanding jobs with Future Farmers, Young Farmers, and adults in teaching about the principles and practices of farmer cooperatives, particularly of those in their area.

Other Cooperative Activities

It is believed that a great number of vocational agriculture activities could advantageously be incorporated into the framework of a farmer cooperative to give a business training, as well as corporate protection, to both enrollees and teachers. The following examples illustrate this statement:

School community canneries have been established in many states. In most cases the school board owns the cannery building and some of the equipment. Adults use the cannery and its facilities for canning their produce. They feel in most instances that it is economically desirable for them to do so. Thus both educational and business services are being performed in this activity. The school may be expected to provide the educational services which are generally made through the supervision of the agriculture instructor. The business services of the activity may involve the group purchasing of cans, hiring a person to operate the boiler and retorts, and a treasurer to receive and disburse money. These services appear to be beyond the educational responsibilities of a public supported educational program. They are services which add money profits to enrollees through decreasing the cost of food for the family larder. In Idaho and perhaps some other states, the patrons of school community canneries in some centers have set up a corporate cooperative organization through which their business operations at the cannery can legally function for the personal benefits and legal protection of all concerned. This preserves the dignity of the vocational teacher by keeping him in the role of an educational supervisor, and not a roust-about handy man.

In numerous cases Future Farmer chapters have established a farmer cooperative through which to operate and protect their business interests. Kentucky and South Carolina both have organized a state-wide Future Farmer cooperative in corporate form. The Future Farmers of Battleground, Washington, own a farm on which is located livestock and farm machinery. It is incorporated as a farmer cooperative under the state laws of Washington. This has also been done by other chapters in the State of Washington and elsewhere. Such a procedure provides a vehicle through which the business of such an enterprise may be legally operated.

There are some leaders who would oppose the forming of corporate farmer cooperatives in connection with vocational agriculture activities. They question the ethics of such a procedure. In

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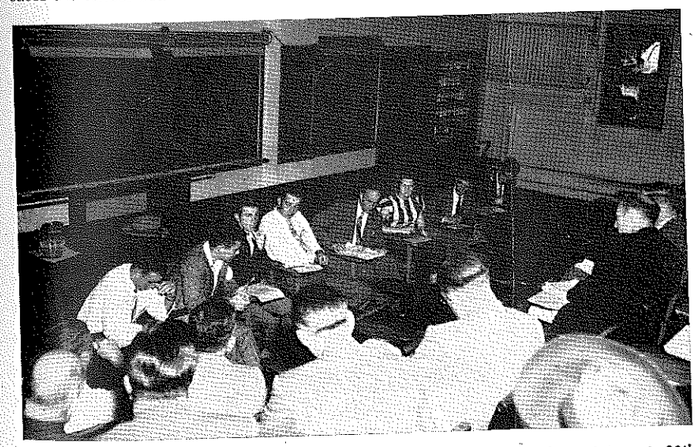

Panel discussion participated in by seven high school youth from four states at 20th Annual Summer Session of American Institute of Cooperation, Amherst, Massachusetts, August 31, 1948. Louis M. Sasman, Wisconsin State Supervisor of Agricultural Education and chairman of Youth Educational Advisory Committee of the Institute was panel leader.

Future Farmers participate in American Institute of Cooperation

FIVE FUTURE FARMERS from three states took part in a youth discussion panel at the Twentieth Annual Summer Session of the American Institute of Cooperation at the University of Massachusetts in August. The panel was composed of seven young people of high school age. Louis M. Sasman, State Supervisor of Agricultural Education in Wisconsin was the panel leader. Mr. Sasman is also Chairman of the Advisory Committee on Youth Education for the American Institute of Cooperation.

The panel participants were selected by farmer cooperatives in their area who also defrayed their expenses to the Institute. Approximately 200 persons listened to them discuss the subject "What Youth Should be Taught About Farmer Cooperatives."

These young men gave a good account of themselves and it was evident that their instruction in vocational agriculture had greatly enlarged their understanding of the principles and practices of farmer cooperatives.

It was the opinion of the group that the forming of junior cooperatives is desirable because it offers a functional approach to the teaching of farm business methods. The participants then actively learn to do by doing, which is a better procedure than learning through the "reading, hearing and observation" process only. It was agreed, however, that teachers of vocational agriculture and other high school subjects could very appropriately spend relatively more time in teaching about farmer cooperatives.

Some of the participants belong to the junior organization of a big regional cooperative. They paid tribute to the experience they are having here because it is on a "doing level."

A number of the participants go to the meetings of the farmer cooperatives operating in their area and take part in them along with their fathers and neighbors. Others have been invited by directors to sit in on directors' meetings and become familiar with the intricate business problems of the cooperative.

Robert Minnis, Future Farmer from Spring Valley, California, who was a participant in the youth panel, gave an address at the closing session of the Institute, talking on the subject "WHAT A FARMER COOPERATIVE MEANS TO ME."

In addition to the panel members four other Future Farmers took part in four regular panels with adults. They were appointed to these discussion groups to give the youth point of view. They conducted themselves in a very pleasing way which won the admiration and pride of their adult panel associates as well as members of the audience who listened.

This intelligent participation by Future Farmers was first hand testimony and evidence that vocational agriculture is making a substantial contribution to the practical education of farm youth.

—Mark Nichols

Teaching cooperation through cooperatives

HOWARD MALCOMNSON, Teacher, Barryton, Michigan

WE MUST practice cooperation or go out of business. This may seem to be a pretty strong statement but I believe we can justify its use. We believe this is true in any activity in our modern world, whether it is agricultural education, or big business or World Politics or the everyday life of the individual. This statement is particularly true in a low income agricultural area such as ours. We do not have the rich soil of the Saginaw Valley or of the corn belt.

The rapid growth of cooperatives is the answer of the weak grouping themselves together to compete with the strong. If boys can learn the important lesson of cooperation during their four years of participation in F.F.A. activities, the time will have been well spent. This emphasis on cooperation is only one phase of our instructional program at Barryton. We have strong individual farming programs as well. Through the cooperatives the boys practice leadership and how to conduct meetings successfully as well as carry out a strong community service program. When boys are accustomed to working and playing together in their F.F.A. program, they work together better in other educational activities. In this way we are able to stimulate the boys to work for higher grades in their work.

Farming Programs Helped By Cooperative Activities

The supervised farming programs of the boys are helped directly and indirectly by the cooperative enterprises of the chapter. Through our cooperative work in poultry the boys learn and put into use the main production practices in that enterprise. We hatch two batches of chicks each year for a total of about 650. These chicks are brooded out in our chapter owned brooder house to the age of twelve weeks. In this poultry enterprise the boys learn to select eggs and operate an incubator as well as how to keep a brooder house clean and how to feed and care for chicks. The important lesson learned is to produce a quality product cheaply and sell to advantage. The work with the poultry is on a volunteer basis and follows a set schedule. Credit is given on our activity chart for all work in cooperatives. In a similar way we carry out our cooperative enterprises with bees and pulp wood cutting.

The most difficult programs to carry out successfully are the cooperative farming projects in the summer. We usually have about three to five acres of potatoes, tomatoes and carrots. This land is then planted to wheat in the fall. Each student is scheduled for 10 hours work during the summer. If he is called for work on a day when he is too busy at home to get away he comes at his earliest opportunity after that day.

We buy feed for our swine programs, and seed and fertilizer for our individual farming enterprises cooperatively. In this way the chapter can pass on to the boys considerable savings.

Our gilt exchange and loan fund help many boys to have larger individual programs at home. Our chapter owned trailer, electric clippers and power sprayer also help the boys programs. The boys use these free of charge but a small fee is charged farmers of the community to pay for the depreciation.

Community Fair

We have a community fair for two days each fall. This fair is put on in cooperation with the local Chamber of Commerce and the Future Homemakers. About 1,000 people attend the fair each year. During the fair we are given an opportunity to show our accomplishments of the year. Farm produce may be exhibited by any producer of the community but the livestock must be owned by F.F.A. members. Last year we gave out more than $300 in premiums. Sixty per cent of the money is furnished by the Chamber of Commerce through purchase of advertising space in our F.F.A. paper. The State Department of Agriculture pays 40 per cent of the premiums. All exhibits are rated A, B, or C, based on appearance and production records. In the case of livestock the pedigrees are also taken into consideration. By using this system of placing we have stimulated our boys to keep 56-day litter weights and Junior D.H.I.A. records.

In all of our work with cooperatives we keep upper-most in mind the fact that we are developing the individual. The boys in our chapter are learning that we must cooperate and get along with others in life situations. When we develop the individual successfully along these lines we need not worry about the development of the group. The group or community will develop by itself.

A strong cooperative program is the result of many factors working through a long period of time. The boys must feel a need for cooperating and get satisfaction from their cooperation. The instructor must feel the need of cooperation and develop that feeling in the boys. The cooperative work must be carried out in such a way that competition among the individuals is stimulated and not killed.

Our chapter is operated on a basis similar to that of an ordinary family size farm. The management class of eleventh and twelfth grade boys make out the program of work and submit it to the group for discussion, amendment and approval. The committees are then appointed, and work schedules and other plans are developed. These committees are made up of a chairman from the older group and membership from the first and second year men. In this way the older boys develop the ability to make decisions wisely and direct the work of the younger group who are learning the techniques of the enterprises. In this way each boy has the opportunity of developing as far as his abilities will permit. The chairmen of the different committees act as a committee of the whole to shape the policies of the chapter.

Members of the F.F.A. chapter at Barryton, Michigan, cut pulpwood from the school forest

In summary let me say there are easier ways of teaching but I believe there are none better. First, the instructor must believe in cooperation; second, the boys must feel a need for cooperation; and third, the boys and the instructor must have a system for carrying out a program of cooperative enterprises.

Farmer cooperatives and vocational agriculture

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reply to this point of view, we shall submit two courses to follow: (1) Teachers of vocational agriculture and enrollees be encouraged to engage only in those educational activities for which a local Board of Education is legally and ethically responsible; or (2) if it is desirable to conduct a vocational agricultural program beyond the scope of legal liability of a local board of education, then a corporation (cooperative or otherwise) may be established to protect those who participate, including the local teacher of vocational agriculture. If the latter procedure is not adhered to, many activities are operated under a common law partnership for which the agriculture teacher or any other participant is in great personal danger with regard to the total liability of the business activity. We are now at the cross-roads in many areas with regard to a wise decision on this question.

Vocational agriculture leaders are, therefore, encouraged to give adequate attention to teaching present and future farmers about improved methods of marketing farm produce, the purchasing of farm supplies, and the obtaining of agricultural services. Farmers should know the various methods employed in conducting such business activities. If they are properly taught in this regard, they will have a proper perspective of the purpose and function of farmer cooperatives and the niche they occupy in the total economy of our democracy.

At Delano, California, four groups gave a demonstration in cooperation when the Future Farmers, Future Homemakers, Young Farmers, and Young Homemakers joined together for the annual banquet held recently.

Cooperative swine programs are educational

CHARLES J. CHALLEY, Teacher, Valley City, North Dakota

PERHAPS no definite date has been established as to the memorable day when Mary's Little Lamb had its day at school but I vividly recall 1937 as the year in which *Swine* became an important part of our vocational agriculture and F.F.A. program. Unlike the lamb, the pigs did not make a personal appearance nor contribute to general disorder; quite the contrary, they became a strong motivating force for the program of vocational agriculture.

Agriculture was beset with drought and depression during this period. In our area farmers were "hanging on the ropes" or had already "tossed in the sponge." A definite aversion to all things agricultural was the natural result of such discouraging circumstances. Student project programs were practically non-existent or at best of a very meager nature. Funds to start projects were not readily forth coming since many parents, living on non-productive farms, had difficulty in securing the essentials of living for their families. Something was needed to encourage the students and to revitalize the program. Members of the F.F.A. decided that projects could be started in a cooperative way. They proposed a cooperative swine program wherein the chapter would secure a purebread gilt and raise foundation stock for distribution to worthy members. In return the members would return a gilt and also a 220 pound market barrow, providing the project returns would make this possible.

Since no funds were available, the chapter operated a hamburger stand at a community function and built an outdoor sign for a local business man as money making activities. The earnings provided the initial working capital for our venture and for the purchase of the first purebred gilt.

Gilt Chain Started

One of the members agreed to keep the gilt for the first year for half the litter. A contract was drawn up and a committee appointed to manage the venture. Thus was set in motion a cooperative swine program which grew beyond our expectations. In a few years many boys were raising purebred swine as their main productive project. The number of gilts kept grew to a point where it was necessary to secure and use boars cooperatively. The committee made buying trips to outstanding breeders and selected the boars that seemed best for breeding. The trips provided boys with their first opportunity to execute authority and take responsibility. It also provided them with valuable business training. Boars purchased and used were later resold, usually at a profit, to breeders in the community. Other cooperative activities were later financed with funds built up from boar sales and from the sale of barrows which were returned to the chapter each year by cooperating members.

Dads Draw Upon Foundation Stock

In numberous cases the boys dads secured foundation stock from the swine projects and in numerous cases adopted practices which were demonstrated by the boys in the conduct of the projects. The mixing of livestock minerals on a cooperative basis was a direct outgrowth of the swine program.

Some of the members expanded their swine projects after graduation and with the wartime rise in market prices were able to make sizable profits which enabled them to securely establish themselves in farming. Others used their earnings to further their education.

At present, the need for financial assistance in starting project programs is not evident. Livestock numbers, including swine, have in general been reduced. From an economical standpoint this may have been desirable but from an educational standpoint it has some disadvantages.

The swine project, and particularly the cooperative program, has educational values desirable for students. It provides real business activity for the F.F.A. to conduct. The rapid turnover in the swine project offers experience in most phases of livestock production and the cooperative plan offers training in leadership, cooperation and business which is difficult to provide in other types of project programs.

Future Farmers of America members from Oregon and Washington exhibited over 400 head of breeding and fat stock at the 1948 Pacific International Livestock Exposition, October 6 to 9, 1948.

Cooperative livestock projects

W. S. COE, Teacher, Sevierville, Tennessee

THE activities of our F.F.A. chapters are financed through such activities as the operation of a food stand at the county fair and the sale of farm crop seeds. The raising of funds through media such as these has given the members valuable training and a source of capital for other undertakings. At present there are 126 members in the chapter.

Beef Cattle Project

In 1947 our chapter purchased two purebred Hereford cows with suckling heifers for $590. The animals were placed by lot in the hands of two members who were privileged to keep the cows with the understanding that the original heifer be returned to the chapter when weaned and that a second calf also be given to the chapter to complete payment for the cow. In the case the second calves should be bulls it was understood that they would be traded to breeders for heifers in order to perpetuate the chain.

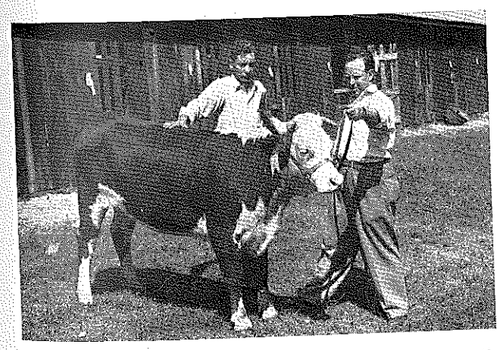
In this second year of the project we have four heifers in the hands of new members. The chapter pays for breeding and registration fees on the animals.

Swine Project

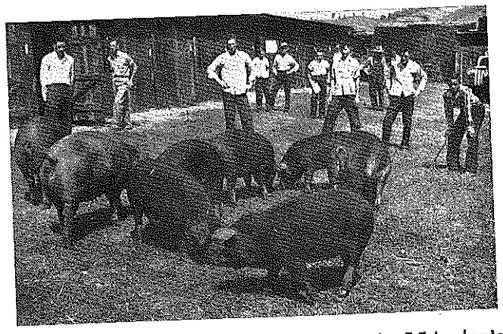
In addition to the Hereford cattle the F.F.A. chapter purchased eight purebred Duroc Jersey gilts and a boar in 1947 to start a pig chain. As was the case with the other project the assignment of the gilts was determined by lot: Each boy who received a gilt was required to return to the chapter two gilt pigs out of the first or second litter.

This cooperative enterprise has been quite successful. During the past summer 29 registered animals resulting from the project were shown at our county fair.

The first F.F.A. leadership training conference in the Territory of Hawaii was held on the Island of Kauai last fall. Nineteen F.F.A. officers from the three chapters on the island, together with the advisers and Mr. Riley Ewing, Assistant Supervisor of Agricultural Education, participated in the conference.



One of the purebred Hereford heifers included in the cooperative project sponsored by the F.F.A. chapter at Sevierville, Tennessee.



A Duroc Jersey pig chain is also sponsored by the F.F.A. chapter at Sevierville. Each boy returns two gilt pigs for the breeding animal he receives.

Professional

S. S. SUTHERLAND B. C. LAWSON

Future programs of agricultural education

H. M. HAMLIN, Teacher Education, University of Illinois, Urbana

H. M. Hamlin

Need for Replanning Our Programs

THIS is a good time for replanning our programs of agricultural education. The disturbances caused by the war are being reduced. We should be getting ready for the long pull ahead. The supply of teachers, our recent limiting factor, is increasing, making possible the provision of agricultural education in more schools that need it, and the addition of teachers in existing departments. We should be converting the veteran's program into a permanent program of adult education in agriculture. The demands upon us are likely to increase. Assuming that we have something worthwhile, it will be hard in a democracy to keep people who need it from wanting it and getting it. Care must be taken that our teachers do not over-extend themselves in meeting these demands. Reasonable loads for teachers need to be planned so that they may do well what they attempt and so that they may have reasonable amounts of leisure. We shall be doing a great deal of building in the next few years; our buildings need to be planned flexibly for a changing and expanding program. More important than any of these considerations, we should incorporate new conceptions of education into our future programs.

"Million-Dollar" Ideas About Education: Their Implications for Agricultural Education

These so-called "new" ideas about education are not basically new, but their meaning and significance have increased in recent years. We have come to realize how basic they are to accomplishing anything worthwhile in education. I shall attempt to indicate a few of these "million-dollar" ideas, as a colleague has termed them, and to indicate their meaning for future programs of agricultural education.

Democracy. We live in a country dedicated to democratic ideals. Our people have had a taste of democracy; they want more and will get more. We recognize, however, that our schools have not operated as democratically as they might have operated and that they have not prepared as well as they might have prepared for democratic living outside of school. We accept democracy as the only right and decent pattern; we do not always recognize it as, in the long run, the most efficient pattern of living. We are learning, however, that democratic practices in education, as elsewhere, utilize human abilities to the fullest, stimulate initiative and responsibility, avoid sullen resentments and blockages of action by those who are left out or discriminated against, create loyalties and morale, and lead to the wisest possible decisions. Jimmy Durante and Carl Sandburg have given us the essence of democracy in their well-known comments that "Everybody wants to get into the act" and "Everybody knows more than anybody." The cardinal principle of democratic practice is that all who are affected by a policy should share in making it. Applied to agricultural education, democracy means:

1. Making agricultural education available to all "who need it, want it, and can profit from it," as C. A. Prosser said long ago;
2. Practicing democracy in high school classes, where we may, as well as in adult classes, where we must;
3. Using the F.F.A. even more than we do as a means of democratizing the high school program;
4. Teacher-pupil collaboration is setting objectives, planning programs and activities, and evaluating outcomes;
5. Using representative advisory councils and committees;
6. Mutual sharing of the responsibilities of state and national programs and organizations by teachers, supervisors, and teacher trainers.

Group Structure and Dynamics. There has been a great deal of study in the past generation of the effects of groups on individuals, the differences between the action of groups and the action of individuals, and effective methods of group work. We in agricultural education have benefited considerably from these studies; we should keep in touch with them and adapt their findings to our use. A very large part of the time of teachers of agriculture is spent with groups. Sometimes they deal with groups as collections of individuals who are really a part of no group. Sometimes they consciously develop functional groups, such as the F.F.A., which have an important influence upon the individuals who compose them, upon the teacher, and upon others. Teachers fluctuate from one role to another as they work with their various groups: sometimes the teacher is the "boss," sometimes the "presiding officer," sometimes the "leader," sometimes a "consultant." One question is whether there should be these varying relationships or whether, in working democratically with groups, a rather constant relationship should prevail between the teacher and his groups. Teachers of agriculture are concerned too with the out-of-school groups which influence their students and often counteract their teaching; they want to learn more about working with these groups so that school and out-of-school influences may be operating in the same direction. Promising developments in the understanding and management of groups include:

1. The development of many self-propelled classes, F.F.A. chapters, and young farmers associations;
2. The allotment of increasing amounts of time to group thinking and planning and the better leadership of these activities;
3. The increase in teachers who prefer the background to the limelight;
4. A greater inclination to consider the total environments of our students, rather than their school environments alone.

"Community Schools." We have many schools in communities but few "community schools." The "community school" idea has been around a long time but it has not been widely accepted because its proponents have commonly thought of the school as a "community center" or a "community service station," rather that a "community educational center." There is no generally accepted conception of a "community school." The author submits his own twelve criteria:

1. The major purpose of the school is to educate the people of the community increasingly to identify their personal welfare with that of the community and the welfare of the community with that of the state, nation, and world.
2. The school district, or the school attendance area, is in some respects a community and is capable of developing more of the characteristics of a true community.
3. There is a maximum of local control over the school, that is, the community does all that it can do well, leaving to area and state schools the functions they can better perform.
4. All in the community are served impartially, regardless of age, sex, race, economic or social status, or any other considerations.
5. The school is operated democratically.
6. The program of the school is based upon the needs of the community, including the need of the community to become better adjusted to the outside world.
7. Education in the school and education in the community are closely interwoven. The teachers recognize that most education takes place outside the school and regard as their fellow-teachers—parents, employers, and others who teach.
8. The school is a community educational center, not a community center or a community service station.
9. The resources of the community (natural resources, people, experience) are fully utilized by the school.
10. There is continuous community study, the school participating and sharing in the findings.
11. The school educates for community planning, cooperates with community planning agencies, and modifies its program to assist with the realization of community plans.
12. The school cooperates with community action agencies (individuals, groups, governmental agencies) but retains its independence of them.

Agricultural education has already gone further than any other branch of education toward the community school ideal. Most of us in agricultural education would be happy to be in a community school and would welcome the support of our own ideals which a community school would give. Promising steps which we have taken toward the community school concept include:

1. Tailor-making programs for our communities;
2. Making community studies;
3. Working with all age groups;
4. Using advisory councils;
5. Using home farms, community agencies, and laymen from the community in instructional programs;
6. Relating our work to that of the families of our students.

Guidance. The need for guidance is implied by increasing democracy in education. Since students increasingly make decisions formerly made by teachers and parents, they need increasing help in making these decisions. Reduced opportunities to farm and expanded opportunities in agricultural occupations other than farming make the choice of an agricultural occupation more complex and difficult. Many teachers have found that desirable personnel in classes in vocational agriculture are best secured through guidance, rather than by attempts at selection of personnel. Some teachers have concluded that guidance is more important than training at the high school level. It continues important in work with young farmers and veterans. The need for guidance is life-long. Steps we have taken toward a better guidance program include:

1. Making vocational agriculture an elective subject, as it was intended to be, the students coming into it as a result of their own choices;
2. Giving increasing attention to guidance in the freshman year and in the senior year of high school;
3. Abandonment of the older idea that our purpose is to keep boys on farms and make farmers of everyone;
4. Reduction of the number of schools in which 100 per cent of the farm boys are in vocational agriculture and of the number of schools in which town boys outnumber farm boys in vocational agriculture;
5. Reduction of enrollments in high school classes in vocational agriculture through guidance and increasing the attention to adults until in an extreme instance the adults enrolled have outnumbered the high school boys ten to one.

Functional Education. We have always aimed to make agriculture education functional, but we have fallen far short of our ideal of "learning to do by doing." Now general education, as well as vocational education, has accepted the ideal of functional education. Nearly everyone is saying that education is for changed behavior and that it shows rather immediate effects upon out-of-school life if there are any effects from it at all. If agricultural education is to be functional, we must determine what students of every age and condition can possibly use out of school and fashion our courses with these things in mind. This will involve postponing to adulthood much that we have tried to teach to children. Students in our classes should be concerned with what they have *done,* what they are *doing,* and what they are planning to *do,* that is, with planning, carrying out, evaluating, and replanning life activities. Functional education is not confined to the skills alone; we must also make functional out of school ways of thinking, ways of working with others, interests, attitudes, ideals, and understandings.

Integration. Bernard Baruch has recently written, "We have seldom tried to understand man as a part of his environment. It has taken the medical profession 2000 years to learn it must cure, not the organ, or even the disease, but the patient." Have we in agricultural education learned that we are not primarily teaching agriculture but people, who are themselves complex and who are a part of a complex environment? A study of farmers in an Illinois county which, after sixteen years had nothing done about mechanical soil conservation practices on two-thirds of the farms needing them resulted in the following conclusions, among others:

1. "The job is as much 'making conservationists' as it is applying conservation measures; conservation in the head is the requisite to getting and keeping conservation on the land;
2. "Each individual has a set of basic motivations, desires, life-goals, or values which he lives by. They are shaped or determined by the group or culture into which he was born or with which he has associated himself. Differences in the prevailing beliefs and values of groups (neighborhoods, communities, regions, nationalities, religious denominations, etc.) are a principal reason for differences in what they do or don't do;
3. "Farmers, like other people, do not automatically change to a new method when it appears. A program to induce change must do two things—it must facilitate effective contact with the new method and it must provide reasons which make sense in terms of basic values, motivations, beliefs, and desires of the people;
4. "Failure to adopt conservation practices is not due to a lack of *knowledge* that they exist and are used in the county."

Integration in agricultural education means making new learning a part of the whole in which it must function, working with the whole individual in his whole environment, teaching that brings out *all* of the important relationships involved. We have gone some distance toward integration through scrambling the high school courses with used to be separate and through the use of problems and projects which bring related matters together. We have a long distance yet to go. Our own program has developed piece by piece and we have never put the pieces together. Class work, supervised practice, and the F.F.A. need to be integrated. The high school, young farmer, and adult farmer programs need to be consolidated into a single program. Agricultural education should be reconciled with the total program of the school. In-school and out-of-school education require integration. Like the physicians of whom Baruch spoke, we need to diagnose our "patients" general needs and related agricultural education to them, instead of prescribing a standard dose of agricultural subject-matter for all which may only further distintegrate their personalities.

Objectives and Evaluation. We have come to recognize that man is a goal-seeking animal, and that he is frustrated and ineffective when his goals are not clear or when he is not making satisfactory progress toward goals which he accepts. Our attempts toward arriving at the objectives of agricultural education have been feeble. We have prepared national, state, and community lists of "objectives," but the effective objectives of agricultural education are individual and personal. Our students have their individual objectives in studying agriculture; some of them are not very good and many of them are unrecognized by their teachers. We have learned that objectives are no better than most New Year's resolutions unless realistic evaluations are applied in determining progress toward them. We have found that when students share in arriving at good evaluations, based on good objectives, the interest of students and the quality of their work improve enormously. The key to improved agricultural education is clearly improved evaluation, since we seldom do better than we are expected to do. Objectives and evaluation must be acceptable to our students. The first principle of education can be derived from the proverb that "You can lead a horse to water, but you can't make him drink."

Inter-Relations of These "Million-Dollar" Ideas

There has been some repetition in discussing these ideas because they are inter-related. The practice of genuine democracy underlies all of them. Group structure and dynamics deals largely with the application of democratic principles to group life. The "com-

(Continued on Page 154)

Methods and Materials

W. A. SMITH

Mapping locations of students

ELLIOTT H. JOHNSON, Teacher, Phelps, New York

HOW MANY times have you thought about making a spot map of your school area where the location of each individual home was clearly marked? Often teachers make a rough map of their school area, write in the appropriate home location and use the map until they are familiar with the area—then discard it. When a new teacher comes into the community, the whole procedure is repeated. Why not make a permanent map that can be kept up to date?

The following paragraphs suggest one way to solve the problem of locating the prevocational, vocational and out-of-school groups.

The Map

For the Phelps area we used a "blown up" geological survey map, size 19 " by 19". This was obtained from the principal who had several made when the school was first centralized some years previous. Such a map identifies each house, road and other characteristics of a given area. Other sources of a map are the county or town highway superintendents, who usually have maps showing the location of all roads in the town or county. The post office department normally has large maps of each county with the location of all the rural free delivery routes. These can be purchased by anyone. Many other sources are available including a hand drawn map.

Marking the Outline

Since geological survey maps are made up in considerable detail, little additional marking was necessary to outline the school area served. This was done with a bright red pencil to outline clearly the entire central school district. Our district is situated for the most part in one town with a very small area in three other townships. In all instances outlines should encompass the total area which the school and your department are serving.

Framing the Map

One problem that most teachers of vocational agriculture have is that of keeping the map clean after it is completed. This was especially true in the Phelps department because at the time the map was being constructed, our shop and classroom were not separated by a partition. In most rooms keeping grime and dust off the map surface presents a real problem. To eliminate the dirt and dust the map was enclosed in a cabinet with a glass front. The cabinet was built of white pine and faced with one-fourth inch plywood so that it could be stained and varnished. The cabinet is 24" by 37" and 8" deep. The sides, top and bottom were grooved with a Dado saw so that the glass front can slide up and down. A light socket has been fastened inside the cabinet at the top with a reflector in order to facilitate readability. An old shaving mirror socket and reflector were used for this purpose. The inside of the cabinet should be painted white or aluminum.

Locating and Marking Individual Pupils

To locate the individuals it is desirable to identify the group and name. To accomplish this colored pins were used, yellow for the prevocational group, blue for the all-day group and red for the out-of-school youth and adults. When the pin was placed in the map to locate an individual, it also served to fasten a small flag (paper) with the name printed in colored ink.

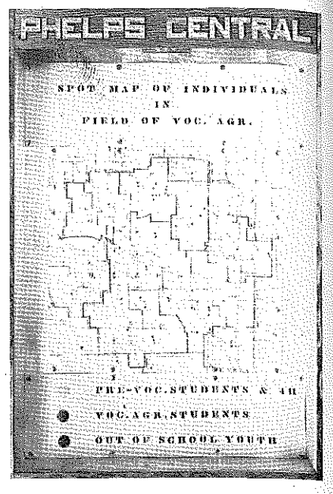
The map case is best viewed by being fastened to the wall at eye level. Two eye bolts were fastened to the top of the case to hold it on the wall, near a wall outlet.

Why I Like the Spot Map

1. I know exactly where each individual lives.
2. I use the map in recruiting prospective class or group members.
3. I find many of the younger group are interested in seeing where they live in relation to the others.
4. I find that the school administration is interested in seeing how completely the department covers the school area.
5. I find that the state supervisors are interested in checking your human resource coverage.
6. I find that field trips can be planned to areas not covered by group members.
7. I believe that the map is especially useful to a new teacher coming into an area, in order that he can easily locate and visit the individuals.
8. I find that the map is easily kept up to date by changing the pin color and names as the need arises.

Construction

The one-by-eight inch pieces of white pine are all grooved or Dadoed three-fourths of an inch in from one side



Map used at Phelps, New York, charting location of students. The map is mounted in a cabinet described in the accompanying article.

with the groove three-sixteenths of an inch wide and one-fourth inch deep. The eight inch pieces are then fastened together with woodscrews to provide a frame 26 inches by 37 inches. The beaver board can then be nailed to the back of the frame. The plywood strips can then be nailed on the sides, top and bottom of the case and the three-fourths inch strips on the front. The top should be attached so that it can be easily removed if the glass must be slid out.

Three-quarter inch plywood may be used if available. This will make the construction easier. Total cost—approximately $6.00, not including labor.

Bill of Materials

2 pcs.	1 in. by	8 in. by	37 in.	White Pine
2 pcs.	1 in. by	8 in. by	24 in.	White Pine
2 pcs.	¼ in. by	8½ in. by	37 in.	Plywood
2 pcs.	¼ in. by	8½ in. by	24 in.	Plywood
2 pcs.	¼ in. by	¾ in. by	37 in.	Plywood
2 pcs.	¼ in. by	¾ in. by	24 in.	Plywood Facing
1 pc.	¼ in. by	3½ in. by	22½ in.	Plywood
1 pc.		26 in. by	37 in.	Beaver Board

1 sheet double thickness glass 24½ inches by 35 inches.

Future programs of agricultural education

(Continued from Page 153)

munity school" is the kind of school a democracy needs. People in a democracy with choices to make need guidance. A democracy must be made up of people who can *do*, not merely people who can think or remember, hence functional education. A democracy seeks to develop "whole" individuals who can act intelligently and unselfishly in an environment which contains millions of other individuals. Education in a democracy aims to develop people who can increasingly educate themselves, hence they must learn to set their own educational objectives and evaluate their own educational progress. These ideas about education are important because education is critically important. "All I am I have learned; all I shall be I shall learn."

Forestry schools in Virginia

T. V. EWING, Assistant State Supervisor (Forestry).

ONE HUNDRED four Virginia teachers of agriculture, during the past summer attended a special forest summer school, sponsored by the Department of Vocational Education at Virginia Polytechnic Institute, together with the Virginia Forest Service and the Divison of Agricultural Education, State Department of Education.

Personnel from the Virginia Forest Service, and commercial foresters furnished instruction. The school was held in one of Virginia's state forests. College credit was given by V.P.I.

The summer school was designed to give intensive training in forestry, with the idea of preparing the teachers of agriculture to play a larger part in Virginia's program of forest conservation.

The daily schedule followed in the summer school was:

6:30-7:00—Breakfast.
7:30-8:30—Forestry teaching methods
8:30-12:00—Field and class work
12:30—Lunch
1:30-4:30—Field and class work
5:30—Supper
6:00-7:30—Recreation
7:30-9:30—Special topics and visual aids

The following phases of forestry were taught during the week:

Forest management (established woodlands)
Forestry management (young growth)
Reproduction and identification of species
Fire prevention and control
Diseases and insects
Thinning, cutting pulpwood
Measurement and marketing
Treating fence posts

It is planned to hold a similar summer school each year, until all of the teachers of agriculture have received this basic course in forestry.

The instruction was given in the woods for the most part and made as practical as possible. The teachers of agriculture received their instruction in forestry in the same manner they are expected to teach their students all day, part time, veterans and evening class members.

Lesson plans for teaching each forestry job were prepared by the teachers and taken home with them.

A similar summer school was held for the negro teachers, under the sponsorship of the Department of Agricultural Education, Virginia State College.

F.F.A. Forestry Camp

Forty-five Virginia Future Farmers attended the Forestry Camp last July held at Holiday Lake in Appomattox County. The camp was sponsored and managed by the Virginia Forest Service, in coorperation with the Virginia members of the Southern Pulpwood Conservation Association and other wood industries in Virginia, who underwrote the cost of the camp.

Boys doing the best work in forestry on their home farms were given scholarships to the camp on an achievement basis. The number selected was limited to sixty. The number of Future Farmers aiming for one of the scholarships is increasing each year.

The boys arrived Monday evening and departed the following Saturday morning. The first half of each day was devoted to the study of forestry, including such activities as measurement, forest management, cutting and loading logs, tree identification, wildlife management, disease and insects, fire prevention, and observing the operation of a saw mill.

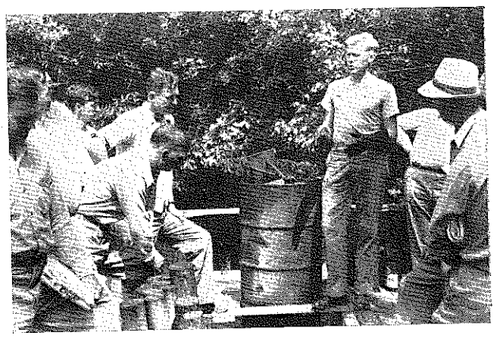
The afternoons and evenings were given over to recreation and contests. The camp is located on a beautiful lake; therefore, swimming formed a big part of the recreation program. Other forms of recreation were popular too, including such games as horse shoe pitching, soft ball, base ball, and volley ball. After supper the boys gathered in the recreation hall, where their activities were directed by a trained recreational director.

A forestry judging contest was one of the features the last afternoon in camp. Prizes were awarded the winner in each event. The best camper was given special recognition.

This forestry camp for farm youth has been operated the past three summers. It is planned as an annual event in the future.

Teachers of agriculture get first hand information on managing established woodland.

Teachers of agriculture, in class on Management of Young Forests, go through the woods and mark the trees to be weeded out and then go back, cut the trees down, saw them up, and rack the pulpwood.



George Olson, Dow Chemical Company, Midland, Michigan, showing the teachers of agriculture how to treat fence posts.

Vocational agriculture as an area of education

(Continued from Page 147)

Because of the opportunties which we have for motivating interest in our instructional procedures, perhaps we should take the initiative in making arrangements with teachers in other areas for coordinating the efforts which we have in common. Too, it is quite possible that the other teachers can help us in the realization of objectives which we set out for our departments. Certainly the teachers of English, of mathematics, of the social studies, of the sciences, of music, and those persons interested in guidance have contributions to make which will help develop in students of vocational agriculture the abilities which we should like to have them possess.

Farmer Classes

J. N. WEISS — MARK NICHOLS

Developing criteria to evaluate progress made by veterans

GORDON SWANSON, Teacher, Alexandria, Minnesota

Gordon Swanson

EDUCATIONAL evaluation involves the passing of judgment on the degree of worthwhileness of some teaching process or learning experience.. Always involved in such evaluations are two factors; *the observed results* and the *observer's set of values.* Since the observer's set of values will usually determine what will be observed or counted, it seems necessary that before we device means with which to measure the progress of veterans in their training, we review the objectives of vocational education in agriculture, and determine the place of these objectives in planning programs for veterans.

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

For the purposes of program planning, these objectives as given in vocational Monograph No. 21, U. S. Department of Education, may be grouped into five main classes:

1. Those related to planning—plans to become successfully established in farming, plans to use scientific knowledge and procedures in a farming occupation, etc.
2. Those related to production—production of agricultural products efficiently and the performance of appropriate and economical farm mechanics activities, etc.
3. Those related to management—financing a farm business, managing a farm business efficiently, marketing agricultural products efficiently, etc.
4. Those related to cooperation and participation in worthwhile activities—conservation programs, civic, and socal activities, selection and recognition of worthy leadership, etc.
5. Those related to the farm home—adequate plumbing, heating home beautification, and other conveniences that contribute to a higher level of living.

These five classes of objectives serve as a guide in the establishment of a long time plan for each individual farm. This long-time plan should be made up of goals that are attainable and meet the needs of the trainee and the community. As the trainee becomes more proficient in farming his goals will be advanced and his long time plan will be subject to revision.

As a part of the long time plan, there should also be a short time or annual plan consisting of annual goals which contribute to the long time plan. The success of the institutional on-the-farm program in thus improving individual farm programs may be the deciding factor in interesting veterans to enroll in young farmer or adult farmer classes when their period of entitlement is ended.

Evaluation of Individual Farms

In attempting to evaluate an institutional on-the-farm program, one must confine himself to the evaluation of progress on individual farms. He must remember that there is no best plan for farming although there may be a best plan for an individual farm, and in order to arrive at this best plan it must be preceded by good planning and good records. Many measures have been devised to evaluate progress in farming. These individual measures in and of themselves do not constitute evaluation, they merely provide us with data with which to evaluate an individual farming program taken as a whole.

Following is a brief discussion of six different items which may be and are frequently used as measures determining the relative proximity of an individual trainee to his goals in farming.

(1) *Financial Progress*

This item is considered first not because of its importance but because of the importance frequently attached to it. It must be remembered that farmers are motivated by personal choice as well as by monetary returns. Likewise, financial progress, although it may be a worthwhile goal, may be quite unrelated to farming efficiency. Some observers contend that much of a farmer's success or luck thereof depends on when he was born. His time of birth, it is believed determines that phase of the business cycle in which his farming activities commence. Whether his farming activities begin in a period of rising prices or declining prices may be of even greater importance from a financial success standpoint than farming efficiency.

(2) *Approved Practices*

Approved practices are the backbone of an improved farming program and through their recognition and adoption, farming goals may be most effectively approached. They provide a good means of evaluating progress on an individual farm. As a common denominator for comparing progress on a group of farms they may not serve as a good measure since an approved practice which is very essential to one farm may not be applicable to another. Likewise it is difficult to compute values for approved practices partially adopted.

(3) *Farm Organization*

Farm organization implies the number and kind of livestock and the acres and kind of crops grown on an individual farm. The physical farm organization is probably one of the earlier goals established. These goals may change frequently as a result of increased efficiency or other cost-price relationships. The proximity of the trainee's present farm organization to his goal provides a substantial measure of progress.

(4) *Production Levels*

Production levels in terms of pounds of butterfat per cow, feed per 100 pounds gain in hogs, eggs per hen, crop yields as percentages of county averages, as determined by farm record analysis give highly important data for use in evaluating farming programs as well as for suggesting futher approved practices.

(5) *Efficiency Factors*

Efficiency factors in terms of crop yield indexes, return per $100 worth of feed fed to productive livestock, size of business in work units, work units per worker, as determined by farm record analysis also give highly important measures of progress toward an individuals farming goals and also serve as a basis for recommendations to intensify certain enterprises and perhaps even to eliminate enterprises for which the individual has questionable capabilities.

(6) *Level of Living*

Level of living includes home conveniences and comforts, participation in community civic and social activities, farmstead beautification and other similiar items which make farm life more desirable which are included in the long time farm plan. Although difficult to measure objectively, their importance cannot be overlooked in evaluating the total farming program.

These six items are among the more important which may serve as criteria for determining the degree of worthwhileness of the teaching processes and learning experiences involved in institutional on-the-farm training. It should be a continuous process and in terms of goals to be achieved if it is to contribute to good teaching.

Agencies cooperate in instruction of veterans

FRED M. WHITEMARSH, Veterans' Teacher, Antigo, Wisconsin

EFFECTIVE group instruction for veteran on-farm trainees is being planned and conducted in cooperation with local agencies and business firms at the Antigo, Wisconsin Vocational School. It is agreed that a major portion of group work should and will be conducted by the instructor in the classroom. Still, some farming operations are most successfully demonstrated in the field and outside help and equipment will be needed.

Representatives of governmental agencies, the extension service, farm cooperatives, tractor and implement companies, feed companies, veterinary supply houses, fertilizer firms, milk plants, together with outstanding farmers are among those that may actively contribute to a group meetings and demonstrations for veteran trainees. Adequate guidance of the planning for such an event is an important responsibility of the instructor. He must give consideration to the following problems:

1. Will a need of the veterans be fulfilled?
2. Is the topic suited to a field trip or shop demonstration?
3. Is it related to a teaching unit in the training program?
4. Will the available outside help make an educative contribution?
5. Will the business representative avoid excess commercialism?
6. Will the outside personnel give adequate explanations and be able to answer questions?
7. Is the needed amount of time allotted?
8. Is the date scheduled so as to avoid excessive conflict with farm work of the veterans?

It is imperative that the planning be started early. Last minute arrangements are highly unsatisfactory and often result in loss of student interest and enthusiasm. At the outset, the out-of-school personnel should be indoctrinated as to the fundamental purpose to be accomplished with the veterans group. This can be easily accomplished in a short friendly chat with the farmer, or whomever is involved, providing the instructor himself has clarified his own thinking on the matter and has something definite and practical to suggest. Do not allow the on-farm program to become too closely allied with that of a commercial company or it will lose its identity in the eyes of the student.

Advantages of a group meeting cooperatively planned with an outside school firm or agency include:

1. A better understanding and greater acceptance of on-farm-training by local business firms and organizations.
2. Makes on-farm training more of an integral part of community.
3. Introduces veterans, especially those new in the area, to business firms or governmental agencies.
4. Helps prepare the veterans for active participation in farm and business organizations existing in community.
5. Utilizes the educational services of commercial companies and educational organizations.
6. Helps acquaint veterans with both technical information and mechanical equipment related to approved farming practices.

Services of the county extension office and other governmental agencies should be given early consideration in planning outside group instruction, in order to fit the contributions into the training program. The veterans will find it to their advantage to establish and maintain contacts with such groups. However, the present trend of many commercial companies in bringing an educational service related to their line of endeavor directly to the consumer through local dealers behooves instructors of on-farm training to capitalize upon significant parts of their training programs.

At the regular session of the veterans class following an outside group meeting a frank review of the previous program should be held. Conclusions may be summarized. Any part of the presentation at variance with recommended practices as presented in other meetings may be analyzed. Bits of "high pressure" by company representatives may be detected either by veterans or instructor and compared with sound facts; such procedure goes far in preparing the veterans to cope with the wiles of an occasional unscrupulous fly-by-nite salesman.

Tractor Maintenance School

A three-day tractor maintenance school is typical of that part of the group instruction planned and conducted with local agencies and business firms at Antigo. The objective was to acquaint the veterans with proper care, operation, and maintenance of farm tractors through lecture and laboratory work.

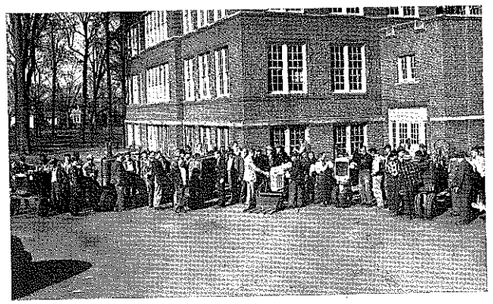
Included in the planning were the school director, on-farm instructors, the county extension agent, a university extension specialist from the University, seven local tractor and implement dealers and an oil company representative. The tractor and implement dealers each provided a tractor, a district field man for demonstrational work, and operation manuals. Lectures were given by the extension specialist and the representative of the oil company. Discussions, augmented by actual tractor parts, charts, film strips and movies were held in a class room followed by demonstrations on the tractors in the school shop. The class of fifty veterans were divided into seven groups with each group assigned to one of the seven tractors, at which the company field man for the district demonstrated the operation just discussed in the classroom. Following is an example of one day's program:

9:00 a.m.	Lecture — "Air Cleaner Service"
9:45 a.m.	Lab.—"Air Cleaner Service"
10:30 a.m.	Lecture—"Cooling System Service"
11:00 a.m.	Lab. — "Cooling System Service"
12:00 m.	Lunch
1:00 p.m.	Lecture.—"Engine Lubrication"
2:00 p.m.	Lab.—"Engine Lubrication"
3:00 p.m.	Lecture — "Transmission and general lubrication"

Another joint field meeting was the setting of a temporary welded wire silo and filling it with grass silage. Cooperating in the demonstration work were the field man for the local milk plant, dis-

(Continued on Page 163)

Nationally recognized dairy cattle authority with a feed company explains the significant parts of a cow to On-Farm trainees at a jointly sponsored dairy tour.



Veteran trainees attend tractor maintenance school jointly planned by On-Farm instructors, County Extension Agent, local implement dealers, and an oil company representative.

Training and servicing veterans' teachers

H. W. SANDERS, Teacher Education, Virginia Polytechnic Institute, Blacksburg, Virginia

H. W. Sanders

IT IS TOO early to evaluate the veterans' training program in the high schools although some evidences of its effectiveness are becoming apparent. These evidences are increasing daily in number and in definiteness. The time is rapidly approaching when it will be possible to answer the two significant questions: (1) How many of the veterans who were entitled to the training, needed the training, and could profit by it did we actually train? (2) How effectively did we train them? If we can answer these two question satisfactorily, it may be assumed that the program of training and servicing veterans' teachers was a satisfactory one also.

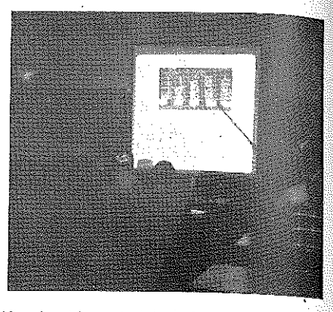
In January, 1948, the combined supervisory and teacher training staffs in Virginia attempted to answer the question: How many veterans should we train if we are to meet our full responsibility? The Veterans Administration, using available figures, estimated that the program should embrace 22,000 veterans. Separate estimates as to the actual number of prospective enrollees were made by the teachers of agriculture and the extension workers. They agreed that the number was approximately 12,000. Existing plans were then revised and a careful estimate made of the number of teachers needed to do the job. The chief responsibility for recruiting was placed upon the supervisory staff since the teacher trainers had exhausted their man-power. There were not enough fully trained teachers to fill the vacancies in the ranks of the regular teachers.

As soon as eight or ten prospective teachers were located, they were sent to the Agricultural College for an intensive one week's orientation course. It is safe to say that more learning takes place in this week than in any other similar period of time. Among the topics included in the course are: The background of the veteran's training program, regulations governing the program, setting up training programs, preparing teaching calendars, planning and teaching lessons, use of visual aid equipment, farm shop principles and practices, reporting, supervising the veteran on the farm, and observation of veterans classes taught in the community. Moreover the new teachers establish contacts with subject matter specialists in the college, learn sources of information, secure available publications, and have an opportunity to ask innumerable questions. This is admittedly a heavy schedule for so short a period, but is generally conceded to be indispensible.

Group Conferences

Follow-up of employed teachers constitutes a more serious problem. Obviously teacher trainers could not hope to accomplish very much by individual's visits. At present the best solution seems to be group conferences. From ten to twenty teachers are called in to some central school for not more than a day and an evening. Sometimes the meeting starts in the afternoon and closes about 9:00 or 9:30. A characteristic of these conferences is that only one major problem is considered. Current needs of the teachers determine what this problem will be. Plans are now being made to reach every veterans teacher in the state before the end of the year in a group conference to be devoted to farm record keeping. After some experimenting and numerous trials and errors, it was found that a special record book was needed for members of veterans classes. These have been printed and placed in the hands of the teachers, but all of them need instruction in their use. If the conferences accomplish this objective, they will be fully justified. With 200 veterans teachers, this will require some ten or fifteen meetings.

It is difficult to estimate the amount of teacher training done by the district supervisors and members of the state staff. Their part in the program is, of course, indispensible although supervisory problems rather than teacher training problems naturally demand most of their attention. Another valuable service rendered by them is the spotting of weakness in the teachers' programs and suggesting content of the short, intensive, two-weeks short courses offered in the summer school.

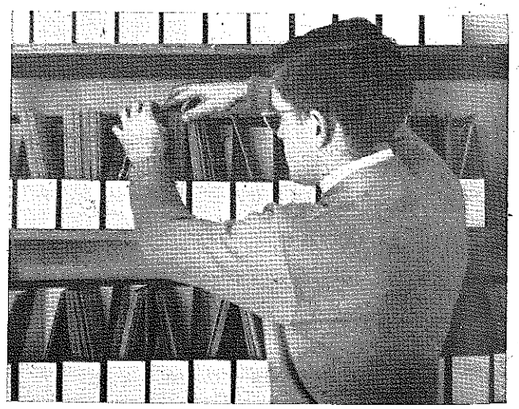


Visual aid material being used in the veterans' training class.

Teaching Aids Supplied

Servicing the teachers constitutes an important supplement to the classroom and group instruction. This takes several different forms. Here again, we have gained much from trial and error. Early in the program, four mimeographed lists were prepared especially for use by veterans teachers. They consisted of: I—Books; II—Teaching Aids; III—Charts, Pictures, and Specimens; IV—Filmstrips. Having provided the best possible lists of needed and available materials, our next step was that of providing supplementary materials.

Supplying teachers with lesson plans prepared by the teacher trainer has some advantages and some obvious disadvantages. If the teachers know how to use them the advantages probably outweigh the disadvantages. Results seems to indicate that it is desirable at least to supply teachers with plans of key jobs or units that are generally applicable throughout the state. Some of these plans are adapted from those prepared by student teachers in the regular training program.



Workers in the Department of Agricultural Education at V.P.I. preparing visual aid materials to send to teachers of agriculture. Mimeographed factual data are prepared on heavy cardboard and filed for use in the opaque projector.

But the most persistent and pressing problem of the veterans teacher is *what* to teach rather than *how* to teach. Necessity forces the development of a pattern of teaching that meets, at least in some degree, the needs of the veterans enrolled. The initial groping for suitable techniques of teaching soon gives way to a continuous search for subject matter organized in a usable form. Since visual aids seemed to provide one of the best means of helping teachers to solve this problem, efforts have been concentrated on providing them.

Slide Projections Provided

After trying various types of visual aids and methods of providing them, it soon became apparent to teacher trainers charged with this responsibility that a decision would have to be made as to the kind of equipment the veterans teacher should be expected to have. This would provide some basis for planning the preparation of materials. As a result each school was provided with a projector for 2" x 2" slides and strip films and an opaque projector. With this equipment, the teacher can show all of the materials prepared for their special use.

All material is organized on a uniform basis, whether slides or factual data, and key numbers are used to designate enterprises. Factual data, reproduced on standard size mimeograph paper, is sent to teachers as rapidly as it can be prepared. By arrangement with the Chilean Nitrate of Soda Educational Bureau, a set of colored pictures showing plant food deficiencies in crops was made available to teachers as a supplement to the factual data. Teachers are urged to paste these on rigid cardboards or similar material and file by enterprises. Experience has shown that opaque projection is difficult unless mimeographed material is properly mounted.

The 2" x 2" slides are practically all in color. More than 250 original prints have been sent away to be processed. Three hundred prints will be made of each of them. This will provide each school with a complete set. Additional slides will be added as they become available. Writing identifying numbers and titles on each slide and preparing descriptions that will enable teachers to use them intelligently require work that is both tedious and time-consuming. Mass production methods seem necessary to justify this work.

It is sometimes suprising to find out how many people have good color slides they will let you use for the asking. Specialists in technical departments have proved a most important source. Teachers themselves are improving in their ability to get good pictures. Many of these pictures are suitable for duplication and use on a state-wide basis. Getting good pictures is not as difficult as it was a few years ago. Then, too, there is always the possibility of taking them yourself.

The procedures outlined here are not suited to all states. But, they do seem to work satisfactorily in a state with approximately 200 teachers and 5,000 veterans in training. In the regular

(Continued on Page 163)

Veterans assist with farm face-lifting for classmates

W. R. CRAYBILL, Virginia Board of Education, Richmond, Virginia

TWENTY-SIX Cumberland County Virginia veterans, who knew what team work did on the islands of the Pacific and the battlefields of Europe, showed what that same spirit can do in peacetime "down on the farm," when they teamed up to do a day's work for two of their number on Friday, August 27th.

The day's work, done on the farm of brothers Ernest and Granville Higgins, the first who lost a leg while fighting in Europe, and the other who brought home some sixteen Jap slugs from the Pacific, was a modernized version of an old-time corn husking, barn raising and fence running affair.

Conceived as a day of supervised training, of which they are required to have 100 hours over a year's time in addition to 200 hours of supplementary classroom work, the day proved in addition to be a great help to the veterans brothers who are striving to change their farm from old-fashioned operations to modern, scientific methods.

Technical Aid

On hand to assist the veterans with technical problems, and to give to the days work as much instructional value as possible were the class instructor, F. D. Irving; County Agent, J. F. Blair, and Soil Conservation representatives N. L. Patrick and Joe Terry. Previous meetings of these men had laid the groundwork for the days operation, and supplied the technical and essential information for the successful carrying out of the vast one-day program.

Following an early morning briefing on the spot by instructor Irving, the veterans split into previously assigned groups, and with their own and other equipment loaned for the day by interested farmers of the county, went to work. When the day was finished the tally showed these accomplishments:

A cinder block pumphouse well started; an old tobacco barn torn down, and materials salvaged and neatly stored; three fence rows; cleaned off and pulled down fences built to enclose a meadow; a days' boost with the job of building a 20-stanchion dairy barn, low in the process of construction on the farm; excavation of a drainage ditch outside the new barn; leveling of the new barn floor, and construction and seeding of a meadow strip with Kentucky Fescue 31.

Equipment Loaned

To assist with the job, arrangements were made for four tractors with equipment, a jeep with a power shovel and scoop, a single-row corn picker, and many hand tools. Three mule teams stood by for instant use in any part of the farm.

Out with the old, in with the new, might well have been a caption of the days effort by the veterans, for that is just what their work accomplished or got well under way.

Under the supervision of soil conservation technicians the men built, fertilized and seeded meadow strips, designed to carry water from contours across the low spots in the crop land.

An old tobacco barn was torn down and help was given in the construction of a dairy barn during the work-day on the Higgins farm.

Two adjoining crop fields had the dividing fence removed along with a row of cedar trees. The fields were combined with the fence moved over to one far side of the new field. Soil men have laid out the field into contour strips which will give longer rows, require less power to operate equipment, and when planted, the system of alternate sod and cultivated strips will hold water and control erosion.

Want Dairy Farm

The two veterans brothers are building up a dairy farm, and one of the days big tasks was the tearing down of an old tobacco barn on the site of which a silo will be erected. Already in progress is a new 20-cow dairy barn.

The brothers have just received their conservation plan from the Robt. E. Lee District and the work was tied in with those plans. They will follow a five year conservation plan with all crop lands on the contour. When the program is finished the 120-acre farm will have 45 acres of crops, six acres of alfalfa and four acres of supplementary grain pasture, 12 acres in clover and orchard grass, and 27 acres of other approved pasture mixtures. The remainder of the land, 23 acres, is in woodland.

The work on the Higgins farm was under the supervision of instructor Irving who had high praise for the manner in which the veterans took hold and carried out the farming operations. It was a convincing demonstration of what can be done when the work of a class room is carried out intelligently with technical assistance now available to every farmer. It was, moreover, a demonstration of the good American trait of rural helpfulness, and cooperation.

In order to help finance trips for representatives to the National Contests at Waterloo, Iowa and to the National F.F.A. Convention members of the Midway, Idaho chapter each picked potatoes one-half day for commercial growers. Approximately $150 was realized from the undertaking.

Development of our veterans training program

B. R. MILLS, Teacher, Live Oak, Florida

IN A RURAL area such as Suwannee County, here in North Florida, we are dependent upon the farmer for our income. Suwannee County has a population of 18,000, of which more than 11,000 are located on farms. This farm population consequently, supplied a large number of draftees during the past war. The G.I. educational program now provides an opportunity for many of our young farmers to learn while earning.

The Suwannee department of vocational agriculture was established three years ago. During the three years the regular school enrollment in vocational agriculture has grown from 38 the first year to 132. Last year four adult education classes were operated in farm machinery repair, and six on-farm training classes for veterans have been in operation for two years. Possibly the most outstanding development has been the veterans program.

The local program of Institutional On-Farm Training was inaugurated on June 10, 1945 with an enrollment of 20 trainees. In order to contact these potential trainees the newspapers of our county ran articles advising the G.I.'s of the educational opportunities available to them. The local V.A. service officer advised those inquiring regarding entitlements under the various Congressional Bills of the program we were offering. As the demand increased for admittance, additional instructors were employed. We have, at present, 129 trainees receiving both farm and classroom instruction weekly from a planned teaching program.

Program of Studies

We found soon after organizing our first class that we were going to have difficulty in organizing a course of study for this type of instruction. Class periods varied in length from two to four hours. This caused conflicts both ways since four hours was a long time to hold a group's attention and two-hour classes made meetings necessary twice weekly. Varying educational levels represented in the classs made it extremely difficult to teach on a level which all trainees could comprehend. Also, the turnover in enrollment created a situation where by some new trainees meet in classes with one and two-year members. After many months of work and innumberable conferences, we have developed a teaching program which we feel will be practicable for our agricultural conditions.

We are stressing problems of national scope first, including soil conservation, water supply, health, farm management, better livestock, forestry and safety. Our teaching program is divided into four courses with 200 hours of classroom time and 100 hours of farm instruction yearly for each trainee. We have distributed the content so as to give some instruction in each area every year in order that those trainees not having a long entitlement may learn something regarding all of our problems.

Groups instruction is given when possible if it is felt valuable to all the class. At one time we made trips to distant points with large groups for instruction but have found these trips to be of less value than trips made with smaller groups. An example of our teaching program is given below.

Sample Job Outline

Subject: Beef Cattle
Job: Possibilities with Beef Cattle
Objectives:

1. Utilize extra land
2. Develop more farm income
3. Spread labor
4. Develop pastures
5. Use manures for soil improvement.

Problems for Study and Discussion:

1. What natural advantages do we have locally for beef cattle production?
2. What improvements are needed most in our section?

This type of teaching plan gives the instructor a chance to bring out the points of importance without varying from his subject. It also gives the inexperienced teacher a guide in preparing for his classes. We find response greatest where a discussion-type lesson is taught.

Conclusions

We have tried, in planning our program, to give well-balanced instruction, leaving out only those things that carry little economic or personal value. In cases of specialized farming such as poultry we have tried to group the interested trainees under one instructor since special problems are confronted in specialized crops and livestock that the average teacher does not have time to review before bringing to the group. We have tried, too, whenever possible, to assign new enrollees to the last class started and to gear the teaching to their background of experience.

One might ask, What has the program done for Suwannee County? There is nothing as hard to point out as accomplishment in an educational program. However, in this type of vocational agriculture we do have some evidences of outcomes.

Five hundred dairy calves have been brought in from dairies for our trainees as future sources of milk for sale and home consumption. Considerable savings have resulted from cooperative purchases and sales. A county Duroc Breeders Association has been organized. Many items have been built or repaired in the farm shop resulting in further savings to the enrollees. The status of many trainees has been changed from share croppers and renters to that of owners. The students are buying machinery, securing electricity, joining farmers associations and in general taking part in community activities.

To close without saying something about the present problems would not be fair to one who is unfamiliar with the program of veterans education. We have always had a problem in coordinating our classes into a single teaching program. Some teachers and some groups will spend too much time on subjects in which they are most interested. It is extremely difficult to keep qualified personnel. The turnover in teachers has been high due to a feeling of insecurity. Reports are troublesome to all of us and detail records are hard to keep.

Twenty-two F.F.A. chapters in Nebraska listed their annual banquet or fun feed as the most outstanding meeting of the past year.

The Fairbury, Nebraska, F.F.A. chapter collected 120,000 pounds of scrap in a drive last spring. The proceeds were used to purchase a pick-up truck.

Beef Production

JOBS	1st year Hrs.	Mo.	2nd year Hrs.	Mo.	3rd year Hrs.	Mo.	4th year Hrs.	Mo.
1. Determining possibilities	2	3			2	3		
2. Breeds	2 (v)	3	1 (v)	3	1 (v)	3	1 (v)	3
3. Selecting stock (Breeding and feeder)	2	3	1	3	1	3	1	3
4. Equipment needed	2 (s)	3	2 (s)	3	2 (s)	3	2 (s)	3
5. Beef cattle feeds			2	1	1	1	2	1
6. Fattening beef cattle	2	1	1	1	1	1	1	1
7. Wintering calves and bedding stock	2	10	2	10	2	10	2	10
8. Preventing and controlling parasites and diseases	2	5	2	5	2	5	2	5
9. Summer management			2	5			2	5
10. Castrating, dehorning and branding			2	6			2	6
11. Breeding beef cattle	2	5			2	5		
12. Care of cow and calf at calving time			2	5			2	5
13. Marketing	2	6			2	6		

(v) Visual: (s) Shop

Farm Mechanics

R. W. CLINE

Charting the course in farm mechanics

DAVID R. McCLAY, Teacher Education, Pennsylvania State College, State College, Pa.

David R. McClay

MANY beginning teachers of vocational agriculture find that the farm mechanics phase of their program is the most difficult to organize and to plan. Experienced teachers often go for years before arriving at a plan for teaching farm mechanics that offers them satisfaction. The plan mentioned here, although not new in its entirety, is offered as a suggested approach to the problem of planning and organizing a four year program of farm mechanics instruction in vocational agriculture. It would seem logical to approach the problem according to the following steps:

Procedure

1. Consider all major factors in arriving at a plan for teaching farm mechanics.

Factors of greatest importance are:

a. Number of students enrolled for each year or class
b. Emphasis or time to be spent in farm mechanics each year, week and length of shop periods
c. Experience of boys in farm mechanics to-date
d. The supervised farming programs of the boys
e. Teacher's abilities, skills and other qualifications
f. Shop facilities and equipment available
g. Source and availability of supplies
h. Storage facilities available
i. Shop facilities found on the boys' home farms

2. Decide which units or phases of farm mechanics are important in a particular situation and which should be taught.

3. Decide which year or years each unit is to be taught.

4. Make a time allotment for the teaching of each unit. This will indicate the emphasis to be given to each unit in relation to the total source. See Fig. 1.

5. Take each year separately and arrange the units in the order they are to be taught in the course. Figure 2 is a suggested program for the ninth year course.

6. Decide what is to be emphasized to the whole class as a group and the methods to use; whether demonstration, field trip, movie, or the method. This might be indicated by writing under each unit on the chart, the jobs to be taught and the main methods to be used.

FIG. 1. A Suggested Time Allotment for Teaching Various Units in Farm Mechanics

Units of Instruction	Year to be Taught and Time to be Spent				
	9th	10th	11th	12th	Total
1. Drawing and Sketching	4				4
2. Woodworking	6	4	4	4	18
3. Tool Fitting	6	4	2	2	14
4. Cold Metal Work	2	2			4
5. Forge Work	2	2			4
6. Rope Work	3				3
7. Painting and Glazing	3				3
8. Leatherwork	1				1
9. Soldering and Sheet Metal Work		2			2
10. Farm Electricity and Motors			6		6
11. Concrete Work				4	4
12. Plumbing and Water Supply			3	2	5
13. Sewage Disposal			1	2	3
14. Power Transmission				2	2
15. Tractors and Engines		2	2	4	8
16. Farm Structures				4	4
17. Farm Machinery	4	6	6	6	22
18. Welding		2	2	2	6
19. Fencing		4			4
20. Contouring-Leveling and Drainage			2		2
21. Home Farm Shop	5	8	8	4	26
TOTAL	36*	36	36	36	144

*Numbers indicate double periods and the minimum emphasis for farm mechanics in a program according to the standards of a great number of states. Teachers who offer double periods in farm mechanics each week might find it feasible to double the time allotted to each unit on this outline.

FIG. 2. Suggested Program for Ninth Grade

Year 1947-48 **Group** 9th Grade **EXAMPLE**

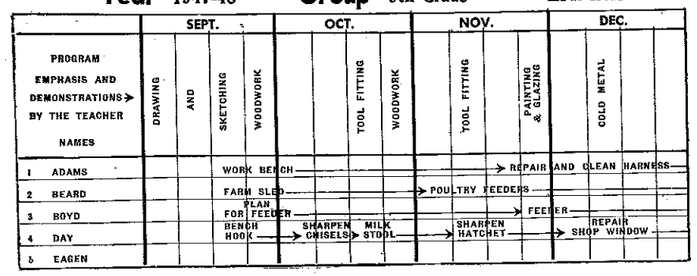
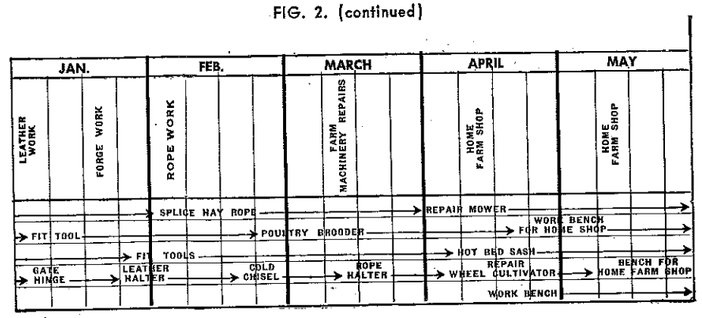


FIG. 2. (continued)



For example, under cold metal work listed for December in the course of study (Figure 2) the following notes would appear: "Demonstrate: 1. Building forge fire, 2. Making chisel and punch. Allow time for student participation and drill."

The *Farm Mechanics Calendar,* Fig. 3 was developed in Pennsylvania to aid teachers of vocational agriculture in planning, teaching and recording their farm mechanics programs.

FIG. 3. Farm Mechanics Calendar.

Month		September							
Program emphasis and demonstrations by teacher									
	Names								
1	Adams								
2	Beard								
3	Boyd								
4	Day								
5	Eagen								

Using the Calendar

1. Fasten a plywood back on the calendar and drill two holes at the top for hanging on the wall of the shop. Have a calendar for each class. Between classes, the calendars should be stored or covered to keep clean.

2. Across the top, under each month, write in the units and/or jobs to be taught.

3. Write names of class members in column to the left of the form.

4. Opposite the boy's name and under the proper date, write in the job that each boy does. (See Figure 2.)

5. Give demonstrations as scheduled, to the whole class at the beginning of the period, before the boys start on incompleted jobs which at the time may or may not be related to the demonstration. Provide for drill necessary to clinch the lesson (facilities permitting) immediately following the demonstration.

6. Assist each boy in selecting jobs to do between all-class group instruction periods. Such jobs should be related to the boy's supervised farming program and should include those in which he has had some prior instruction. Immediate need will however occasionally require a boy to perform a job on which he has had no prior training. In this case, the teacher can either change his teaching plan and make the boy's problem the subject for discussion by the class as a whole, give individual instruction to the boy, or allow a boy who has had experience doing the job in question to help the boy in need.

Values of Calendar

1. Every boy will receive instruction in the important phases of farm mechanics sometime during his four high-school years.

2. This plan allows the boy to have a farm mechanics program that fits his home farm and supervised farming needs, at the same time receive a well rounded program of instruction in farm mechanics.

3. This plan is flexible and can be altered to fit the unexpected.

4. The teacher knows where he is going when using this plan.

5. The boy knows what to expect and can plan *his* program accordingly when this plan is used.

6. School administrators and supervisors can grasp quickly the job being done when this plan is used.

7. Filing the calendars from year to year gives a complete record of the farm mechanics program of a particular department. This information could be of great value to schools where teachers change.

8. This plan makes for rapid and accurate inspection of the total farm mechanics program of a department.

Course content in welding and farm machinery*

DWIGHT L. KINDSCHY, Teacher Education, University of Idaho, Moscow

THIS investigation was planned to determine opinions of former students of vocational agriculture, now engaged in farming concerning course content and organization of farm mechanics instruction in vocational agriculture. Opinions were obtained concerning the following items: first, course content in acetylene and arc welding, farm implement repair, and farm engine and tractor repair; second, the importance of some of the abilities now usually included in a farm mechanics program in vocational agriculture; third, the amount of time that should be devoted to a four-year program in vocational agriculture; and fourth, the most effective way to teach farm mechanics in regard to course integration. An attempt was made to determine what differences, if any, existed in respect to the items just mentioned.

Procedure

The questionnaire method was used in conducting this investigation. Twenty-three instructors of vocational agriculture, in schools throughout the five types of farming areas in Iowa, distributed the schedule to former students of vocational agriculture. The sample schools selected from each farming area were chosen because of their participation in either the veterans' institutional on-farm training program or young-farmer class work. The fact that these students were enrolled in a currently organized class facilitated the introduction, explanation and completion of the forms. Also, schools were selected which had an average or better than average farm mechanics program at the time of the study.

A total of 246 questionnaires from five schools in each of the farming areas were summarized and tabulated. Four schools carried the survey to completion in each of the other two areas. The five farming areas were as follows: Northeastern dairy, Eastern livestock, cash grain, Western livestock, and Southern pasture.

The tables showing the importance of the farm mechanics skills and abilities surveyed were computed on the percentage basis. In each case the percentage of the items checked important was based upon the total number of persons checking the items. It was decided that if 50 per cent or more of the respondents rated an item as important it perhaps should receive emphasis as course content in farm mechanics instruction. However, it should be recognized that certain abilities which were rated as important by less than 50 per cent of the former students may be very important for some members of the class. Perhaps some individual instruction or instruction for small groups of students in the class would provide an opportunity for the teacher to meet the needs of such individuals or groups. The 50 per cent figure was arrived at through discussion with workers in agricultural education; further justification for its use was beyond the scope of this investigation.

Content on Welding

It may be concluded from the tabluations in Table 1 that the ability to determine what pieces can be satisfactorily welded, the ability to recognize a good weld when the work is done by a tradesman, and the ability to arc weld to the extent that the student can weld cast and malleable iron for average farm repair and construction should be included in vocational agriculture courses in Iowa. Acetylene welding could be stressed rather briefly, if at all. Perhaps special attention should be given to the survey of local conditions where the instruction is to be given concerning the need for instruction in acetylene welding. Also it could be concluded that the importance of the need for welding abilities listed in the schedule varies from type of farming area to area.

TABLE 1

Percentage of Former Students Rating Welding Abilities as Important

Abilities	Per cent
Select pieces to be welded	85.0
Recognizing a good weld	78.5
Ability to gas weld	52.0
Ability to arc weld	75.2
Ability to gas and arc weld	56.5

Repairing Farm Machinery

Of the 23 abilities listed on the schedule, Table 2, with respect to farm implement repair, 15 were listed as important by 80 per cent or more of the respondents from all areas. The ability that received the highest rating (93.5 per cent) of importance by former students was the ability necessary to maintain and adjust the farm implements on the average Iowa farm. Other abilities having a high rating of importance by respondents were those dealing with the repair and adjustment of the implements that receive the most use on the average farm with respect to the particular type of farming area. The following four abilities dealing with farm implement repair ranked below 40 per cent of importance as indicated by the results from all areas: The ability to sharpen cultivator shovels, the ability to sharpen disks for tillers and plows, the ability to sharpen plow lays, and the ability to construct repair parts, harrow teeth, etc. The reason that these ratings were so low might be explained by the hypothesis that such work is usually done by tradesmen and therefore need not be stressed in vocational instruction in agriculture. This hypothesis was not tested in the study.

TABLE 2

Percentage of Former Students Rating Farm Implement Repair Abilities as Important

Abilities	Per cent
Maintain and adjust implements	93.5
Paint farm implements	42.7
Inspect for needed repair	83.7
Make repair lists	64.6
Construct parts	37.8
Replace parts, gears, etc.	80.1
Replace studs, pins, etc.	68.5
Replace machine gears	76.8
Adjust belts and chains	78.5
Replace all bearings	73.6
Pour babbitt bearings	17.5
Sharpen cultivator shovels	39.4
Sharpen disks for tillers	36.2
Sharpen plow lays	32.9
Build up worn shaft	22.4
Repair and adjust mower	84.6
Repair and adjust seeder	80.9
Repair and adjust plow	89.8
Repair and adjust weeders	87.0
Repair and adjust pickers	91.1
Repair and adjust binders	64.2
Repair ensilage cutters	45.1
Repair and adjust combine	87.4

Farm Engines and Tractors

Of the 14 abilities listed on the questionnaire with respect to farm engines and tractors, Table 3, three abilities were ranked very high in importance by respondents from all areas. These were: the ability to care for and maintain a farm engine; the ability to test, clean, and to adjust ignition systems of farm tractors and trucks; and the ability to test, clean, and to adjust the fuel systems of farm tractors and trucks. The importance of five additional abilities listed on the schedule was rated above 50 per cent by respondents from all areas. However, abilities that require a higher degree of training to accomplish, such as the ability to repair a transmission and differential, were rated in importance by respondents below 50 per cent. This might also be explained by the hypothesis that this work is usually not done on the average Iowa farm but is a service furnished by a trained mechanic.

TABLE 3

Percentage of Former Students Rating Farm Engine and Tractor Abilities as Important

Abilities	Per cent
Care of farm engine	95.9
Selection of engine	71.1
Knowledge of small engine	48.8
Repair small gas engine	34.1
Adjust ignition, farm tractor	85.8
Remove head from tractor	69.9
Adjust tappets	68.7
Repair valves, test springs	46.7
Adjust fuel, farm tractor	90.7
Time tractor or truck engine	77.6
Replace piston rings	45.9
Service rods and bearings	50.0
Overhaul clutch	43.3
Transmission and differential	41.5

Other Abilities

Of the former students from all areas rating the additional abilities usually taught in farm mechanics, 50 per cent or over rated only five of the thirteen abilities listed on the schedule as important. These five abilities are as follows: the ability to select the proper tools for a given job; the ability to do wood work and farm carpentry; the ability to sharpen and fit hand tools and the ability to do cold metal work such as hack sawing, drilling, riveting, threading, etc.; and the ability to do simple installing and maintaining of electrical equipment.

There was a wide variation in the percentage of persons rating as important the remaining eight abilities with respect to additional items usually taught in farm mechanics. In view of the fact that some of the ratings with respect to the importance of the additional abilities usually taught in farm mechanics were so low, especially careful study should be undertaken by those responsible for determining course content in farm mechanics before a decision is reached concerning the emphasis to be placed upon such abilities.

Course Organization

In view of the opinions concerning the amount of time to be devoted to instruction in farm mechanics in relation to the four-year vocational course in agriculture, it might be concluded from the results of this survey that at least one-fourth of the time devoted to a four-year program of instruction in vocational agriculture be spent in farm mechanics instruction. It was beyond the scope of this study to recommend any definite percentage of time to be allotted to farm mechanics with respect to the four-year program of instruction in vocational agriculture.

The results of the ratings concerning the opinions of former students relative to making instruction in farm mechanics more effective by course integration showed that a large majority of the respondents from all areas were of the opinion that integration of farm mechanics instruction in vocational agriculture would result in more effective instruction.

*From summary of a thesis for the Master's Degree at Iowa State College.

Agencies cooperate in instruction of veterans

(Continued from Page 157)

trict farm service men for a milk company, and a Sisalkraft paper representative. Previous to the actual farm demonstration the topic of silage making was discussed at a regular group meeting of veterans. Also a movie on temporary silos was shown. The local milk plant made available the wire to all veterans whether patrons or not. In two years nearly thirty temporary silos have been filled by the veterans with scarcely any spoilage or without mishap. A number of veterans have reported that their neighbors come to them for direction and help in erecting temporary silos.

A 2, 4-D weed control program and field demonstration was organized in conjunction with a local implement dealer and a chemical company representative. The field meeting was held on the farm of a trainee where a trial plot of pre-emergence spraying was observed. Local farmers other than veterans were also invited to attend.

A judicious amount of on-farm group instruction cooperatively planned with local agencies and business firms brings practical and up to date information to the veterans and builds good will for the program in the community. Business firms are anxious to cooperate in such work provided they are indoctrinated as to the basic aims of the on-farm program. They are quick to visualize the long-time sustained purchasing power and community stability created through soundly trained citizens of agriculture.

Training and servicing veterans' teachers

(Continued from Page 159)

teacher training program (1) pre-service training, (2) in-service training, and (3) follow-up service rank in about that order. In the veterans training program the order is reversed. Follow-up services, since it ranks first in importance, should be carefully planned and efficiently executed. A few services that are consistent and dependable may furnish a greater contribution to the desirable outcomes of our program that a wider variety of services that may not be readily utilized by the teachers.

FIG. 1—CORN: Fertilizing.—Effect of Nitrogen on the Yield of Corn, Strickler Farm, Loudoun County, Virginia, 1947. (An example of the form in which factual data are provided teachers of agriculture by teacher trainers in Virginia. Mimeographed copies are mounted and shown by means of an opaque projector. More than 500 such units have been sent to teachers.)

Treatment per acre			Yield bu./A.
Check,	Basic treatment*		67.9
50 lbs. N +	"	"	91.6
100 lbs. N +	"	"	100.5
150 lbs. N +	"	"	104.1
200 lbs. N +	"	"	105.3

*All plots received a basic treatment of 300 lbs. 1.5-32-32 fertilizer per acre.

Source: Oct., 1947 Information Leaflet, Va. Agri. Exp. Sta.

Explanation: Hybrid Illinois 200 was planted at the rate of 12,000 plants per acre. The soil was Cecil Clay with a pH of 6.2. Additional nitrogen was applied as a side-dressing when the corn was 14 inches high. Japanese beetles severely damaged the crop.

Twenty-five Texas F.F.A. members were awarded the American Farmer Degree by the National Organization in 1948.

Future Farmers of America

H. N. HANSUCKER

F.F.A. sponsors soil-air tour

MARSHALL J. SCOTT, Teacher, Fisher, Ill.

M. J. Scott

TONGUES wagged for a week before the date for the first Soil-Air-Tour sponsored by the Fisher, Illinois F.F.A. chapter.

The people, typical of those in small communities, were discussing the advisability of having five planes carry F.F.A. members and others around the community and over their own farms to study the soil.

"Why don't they teach school instead of risking their fool necks pleasure riding around in those danged airplanes?"

"What's this world coming to, anyway?"

"It sure ain't like the good old days when they really had school and taught them kids English, and Latin, and Algebra."

"There's one thing certain, my kid ain't gonna fly."

"Wonder what they'll try next?"

Back in 1946 and again in 1947, about one third of the F.F.A. members hired a C-47 to take them out to Kansas City to attend the National F.F.A. Convention. Adults, many of them council members, filled in to make a full load and to enjoy the trip with the boys.

Statements heard over and over again on these trips sounded something like this:

"Gee! I wonder if our farm looks like that?"

"Look at that soil erosion!"

"Do you suppose our farm looks that bad from the air?"

Some of the older boys began talking seriously of having an air tour back home. They felt that it would create a lot of interest in better land use in our own community.

With the full support of our General Advisory Council, the F.F.A. boys went ahead in spite of some unfavorable public opinion and asked Mr. Ellis Birkey, a garage owner whose hobby is aviation, to help plan a community soil-air tour. Mr. Leslie Heiser, former member of the advisory council and present chairman of the Champaign Soil Conservation District, also aided in planning the tour. We used a half mile strip of alfalfa for a landing field located on Mr. Heiser's farm.

Arrangements were finally made to hire five airplanes, including one three-passenger, one two-passenger and three single-passenger planes. Pilots included Mr. Earl Taynor, co-owner and manager of the Champaign airport; Clifford Thurman, a young farmer; Ellis Birkey, local garage owner; and Professors, Frank Andrew and C. Van Doren from the College of Agriculture, University of Illinois.

Monday, September 27, was a crystal clear, moderately warm day, with about a ten-mile-an-hour wind, made to order for flying.

Fifty-six out of sixty-two F.F.A. members had wangled their parents into signing statements permitting them to fly. The F.F.A. committee went out to the landing field at twelve o'clock to make last minute arrangements and to set up headquarters and parking space.

Anticipated Observations Studied

All classes in vocational agriculture has spent some time in preparing themselves so they might benefit more from their 15 minute trip. Attention was called to soil color, stands of corn and beans, field arrangement and size, building arrangement, per cent of land in cash grain crops, per cent of land already fall plowed, erosion, practices which prevented erosion such as contouring, grass waterways, and the like.

At 1:15 P.M. the first plane took off, starting a steady procession of take-offs and landings with eager F.F.A. boys watching every movement. Pilots and adult bystanders remarked often about the orderly way in which the passengers were handled, and the safety precautions adhered to by the Soil-Air-Tour committee.

As each plane returned passengers were plied with questions about what they had seen. During the afternoon Mr. H. J. Engelking, Assistant State Supervisor of Vocational Agriculture; Mr. Tomlinson, District Conservationist, and others, spoke briefly concerning soil conservation, to the crowd of boys and adults gathered in one corner of the landing field.

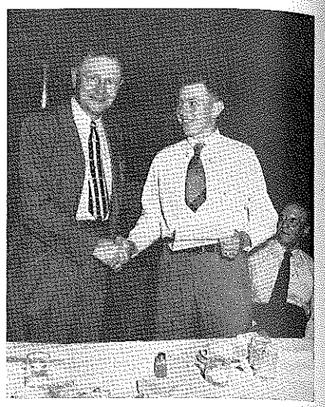
After making the trip, one boy stated that he thought the land looked like it had been drawn on paper. Another lad saw some contouring on a neighbor's farm which he didn't know was there. Several boys mentioned that there was more contouring, more soil erosion, more corn, more beans, more fall plowing, in fact, more of everything than they realized we had in our community.

Practically everyone was impressed with the beauty of our community as viewed from the air. In opening new vistas and giving everyone a new perspective of our community agriculture and its problems, we probably have never spent a more profitable afternoon.

By 5:30 P.M. one hundred and twenty people had been given a new view of their neighborhoods, several farmers were contemplating owning planes of their own, and passengers from two years of age to seventy had taken their first airplane ride, with only one boy being overcome with air-sickness.

The tongues continued to wag for about a day, but the discussions were generally favorable and mixed with pride in the fact that the project was so successful and had won such wide acclaim.

Indiana Farm Bureau Assists State F.F.A.



—Courtesy C. W. Stall, Managing Editor, the Hoosier Farmer.

To further help in the development of Indiana farm youth, the Indiana Farm Bureau contributed $350 to the Hoosier F.F.A. organization, last June 23, to defray the expenses of Indiana's 12 district to the National F.F.A. convention, which was held in Kansas City, Missouri, November 14 to 18.

In making the presentation to Ralph Smith, Plainfield, state F.F.A. president, at the annual conference for teachers of vocational agriculture at Purdue, Hassil E. Schenck, president of the federation praised the work of the organization and pointed out that the Indiana Farm Bureau is interested in any program that has the development of tomorrow's farm leaders as a goal.

For many years, the Farm Bureau and Purdue University have jointly sponsored Indiana Rural Youth, for farm young people between the ages of 18 to 28.

To the H. F. Metters family of Lodi, California, goes the distinction of having eight sons go through vocational agriculture and the Future Farmer chapter. Today every one of the boys is engaged in farming, either for himself or in partnership with his parents.

The Twentieth Annual Convention of the New Mexico Association of Future Farmers of America was held at Camp Inlow, West of Estancia, August 10-13, 1948, with 150 members attending from thirty chapters.

Eleven years with the F.F.A. and Y.F.A.

P. D. WICKLING, Teacher
Xenia, Ohio

ELEVEN YEARS ago the Xenia F.F.A. chapter, Ohio was chartered with 39 members. Now in 1948 we may look back at our achievements, made possible not by the work of a few students, but by the joint endeavors of a large number of former members, many of whom are active in our Young Farmers' Club. This club cooperates with the Future Farmers in many of its activities as well as carrying on many of the projects started by the members while in high school. Three boys are now in Ohio State University as beneficiaries of scholarships.

We have gained the rating of Gold Medal chapter each time we has participated. During the war years we did not compete as we were too busy with war efforts.

Cooperative Undertakings

Our chapter assets exceed $4,000, made from gilt chains and breeding chains. At one time the chapter owned five boars, all top quality, to which the boys bred their gilts. We have a chapter-owned tractor and a full line of equipment with which we carry on a thriving business of custom plowing, lawn levelling, seeding and mowing, and have all of the recreational parks in the city under our care. Several cooperative corn, sweet corn and truck projects are operated by groups within the chapter. We purchased a hay baler last year and pressed about 12,000 bales.

During the war our members sheared approximately 25,000 sheep and dipped about 30,000 sheep for lice and ticks. These projects have been taken over by individual members of the Young Farmers' group. Our most outstanding sheep shearer was the junior champion at the Ohio State Fair last year.

Our strong suit at present is having cooperative groups within the chapter that operates as a unit, getting all the profits themselves but benefiting by the patronage of the other members and by the publicity the chapter is able to give them. Some of these are seed cleaning, sheep dipping and spraying, weed spraying, sheep shearing and paint spraying. Each year we hold an annual sale of registered livestock and in addition the Young Farmers last year held a large community sale of machinery.

Ninety per cent of the boys have registered animals for production projects. Twenty per cent show in local fairs and at the state fair, showing both in the junior fair and in open classes.

The Xenia chapter conducted scrap drive in 1948.

Virginia forest farmer

R. T. Lassiter, Jr., a member of the Boykins F.F.A. chapter was selected from the 7,000 Virginia Future Farmers as the best Forest Farmer last year. He was given this honor by the Seaboard Airline Railroad.

Young Lassiter is now a senior in the Boykins High School where he is continuing his study of forestry.

Among his forestry activities during the past year, were the following:

Set out 2,500 loblolly pine seedlings.

Managed 25 acres of woodland on home farm, removing the defective, overcrowded and diseased trees.

Marketed 80,000 board feet of timber.

Helped the chapter prepare a roadside forest management improvement demonstration, putting up appropriate signs.

Took an active part in the work of the local Keep Virginia Green crew.

Tom Downing, Assistant Supervisor, Agricultural Education, Virginia, presenting certificate to Virginia's best forestry conservationist, R. T. Lassiter, a member of the Boykins chapter, Future Farmers of Virginia.

During the past year the F.F.A. chapter at Medicine Lake, Montana, financed the purchase of 6,000 cans for the community cannery.

In Oregon meetings of regular instructors and teachers of veterans are held in ten centers at monthly intervals throughout the year. About one-half of the attendants are registered for college credit.

Cooperative activities of our F.F.A. chapter

LUDVIK GRANDE, Teacher
Bisbee, North Dakota

THE BISBEE department of vocational agriculture was established in July, 1947. Shortly after school opened in the fall the F.F.A. chapter was organized with 34 charter mem-members. During the year several cooperative endeavors were carried out by the chapter.

bers. During the year several co-was that of a 30-acre potato project in which a local farmer furnished the land and seed with the chapter furnishing the equipment and labor. The work of preparing the land, cutting and planting the seed, cultivating, dusting, and harvesting the crop was done by the members during free periods, after school and on Saturdays.

The potatoes were sold locally and the chapter realized an income of about $600 from its share of the sales. The actual expenses for the operation of power equipment, sacks, dusting compounds and miscellaneous items amounted to approximately $250.

A scrap iron drive sponsored by the chapter netted approximately $300. For this activity the membership was divided into five groups to canvas the community. Over 18 tons of scrap were collected and sold for $16 a ton.

The chapter owns a seed sprayer which the members may use at operating costs to spray grain projects. The chapter realizes some revenue from the sprayer by renting it to farmers in the community when it is not being used by chapter members.

Other cooperative activities of the chapter included the taking of orders for baby chicks and grain projects consisting of four acres of barley and a like acreage of oats.

The association of agricultural teachers in Hawaii is planning to publish a pictorial annual or magazine at the end of the present school year. The publication will feature pictures and accompanying articles pertaining to activities of teachers in the territory.

* * * *

Robert A. Manire, State Director of Vocational Education in agriculture for Texas, spent three months during the fall in Korea working with the U.S. government assisting in the rehabilitation of agricultural education in Korea.

* * * *

Ten F.F.A. chapters in Texas are exchanging correspondence with ten groups of German boys as a part of the "Youth Help Youth" project sponsored by the Armed Forces in Germany.

* * * *

Thirty F.F.A. chapters in Texas participated in the 1947-48 planting of 89,500 slash pine seedlings distributed free by the Texas Forestery Association in cooperation with the Texas Forest Service.

* * * *

The 9th annual convention of the California Young Farmers will be held at Fresno, February 3-5, 1949.

BOOK REVIEWS

LAW ON THE FARM, by H. W. Hannah, pp. 399, published by The Macmillan Company, list price $4.50. Essentially a handbook of useful information in which the average farmer is interested. The procedures that are necessary to the proper conduct of farming as a business are presented in a clear and concise manner. The discussions on "Contracts," "Farm Land and Real Estate," "Rights in Land," "Personal Property," "Landlord and Tennant," "Taxation and the Farmer," "Marketing," and "Local Government," should be read by every farmer. The legal information contained in the book furnishes ready references on most farm topics, and is indexed for convenience. Representative samples of legal forms in common use in the farming business will prove both interesting and useful. This book should prove most helpful not only to farmers in understanding their legal problems, but to instructors of vocational agricultural and other agricultural education leaders.—A. P. Davidson, Kansas State College.

A. P. Davidson

* * * *

AMERICAN FARMERS' AND RURAL ORGANIZATIONS, by David Edgar Lindstrom, edited by H. H. Hamlin, pp. 457, published by The Garrard Press, Champaign, Illinois, list price $4.75. This book brings up-to-date the subject of Farmers' and Rural Organizations. The text has been organized for use into five parts: Part I, The Field of Farmers' and Rural Organizations; Part II, Historical Backgrounds; Part III, Present-Day Farmers' Organizations; Part IV, Comparative Structures, Functions and Processes; and Part V, National Policies, Rural Values and Human Welfare. Selected readings and questions to encourage further study are listed at the end of each chapter. The book will be of value to upper grade high school students, to their instructors, and to all persons interested in the forms and functions of organizations in which farm people take part.—A.P.D.

* * * *

SOIL FERTILITY DIAGNOSIS AND CONTROL, by Charles H. Spurway, Lithoprinted, pp. 175, and sold by Charles H. Spurway, 436 Division Street, East Lansing, Michigan, list price $3.50. The text is supplementary to the Simples Soil Testing System, and contains information on how to diagnose the fertility of farm, garden, and greenhouse soils.—A.P.D.

The Kearney, Nebraska, F.F.A. chapter sponsored a tractor driving contest at the local county fair last summer. Each contestant drove through a course of 28 flagged stakes with a three-section harrow.

OUR LEADERSHIP

Frank B. Cale

FRANK B. CALE, State Supervisor of Agricultural Education for Virginia, graduated from Appomatox High School in 1913 and from Virginia Polytechnic Institute in 1917. He has done graduate work at Cornell University, Louisiana State University and at V.P.I.

After graduating from college Mr. Cale was assigned to teach vocational agriculture in Charlotte County. Shortly thereafter he found himself in the Army. Following World War I he became instructor of vocational agriculture at Sparta and stayed in that community for 12 years, a part of which time he served as high school principal. As a teacher Mr. Cale organized a county seed growers cooperative and was a leader in organizing the Virginia Crop Improvement Association to which he was elected president in 1929.

In 1931, Mr. Cale became district supervisor of vocational agriculture located at Appomattox. He served in that capacity until promoted to his present position in 1946.

H. M. McDonald

PRIOR to his appointment as state supervisor of vocational agriculture in Maryland in 1946, Mr. H. M. McDonald had been principal of the Sparks school in Baltimore county for 14 yrs.

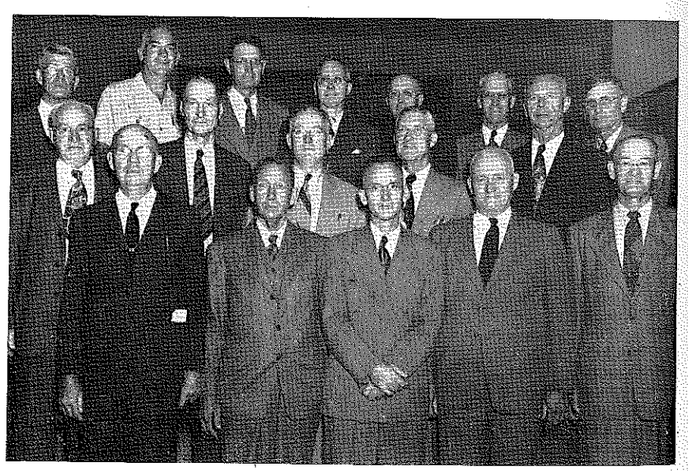
Mr. McDonald was reared in in Maryland and educated in that state, receiving a degree from the University of Maryland in 1920. He received the Master degree from Columbia in 1923 and has done some additional graduate work at the University of Chicago, the University of Wisconsin and John Hopkins.

Mr. McDonald taught vocational agriculture at Frederick, Maryland for 7 years.

As an attraction for their 1948 fair the F.F.A. chapter at Linden, California, planted a plot to 32 kinds of pasture and range grasses. Aside from serving as a demonstration at the fair, the tract is being used for plant identification purposes by the department.

A series of ten leadership training schools for officers of F.F.A. chapters was held in Wisconsin during the month of October.

Twenty-five Year Club Formed in Missouri



Missouri joins the states which have organized clubs for workers in agricultural education who have served 25 or more years under federally aided programs. Other points regarding eligibility require that the person recognized have been employed in Missouri during the past year or that he was employed in the state at completion of the 25th year of service. Recognition of the group presented herewith was given at the annual state conference held at Columbia, September 23-25.

Left to right: Front row—F. C. Wilkins, veteran instructor, Rolla; J. C. Wolfe, instructor, Leeton; W. W. Hoy, Southwest Missouri State College; Frank Gillett, instructor, Fredericktown; A. Gorrell, instructor, Mexico.

Second row—J. A. Wisdom, veterans instructor, Brookfield; L. E. Morris, veterans instructor, Tipton; Frank Smith, instructor, Canton; Glenn Hillhouse, instructor, Marionville; H. J. Deppe, instructor, Lebanon.

Back row—W. L. Magruder, instructor, Macon; C. D. Thorp, veterans instructor, Columbia; R. P. McWilliams, instructor, Gallatin; G. F. Ekstrom, University of Missouri; Guy James instructor, Glasgow; J. R. Whitman, instructor, Centralia; T. C. Wright, instructor, Tuscumbia.

Absent—W. L. Barrett, Consumers Cooperative Association; Sherman Dickinson, formerly, University of Missouri; G. J. Dippold, Oklahoma Board for Vocational Education; Ira Kunkel, veterans instructor, West Plains; T. C. Wells, instructor, Bowling Green.

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R. E. Naugher—Part-time and Evening
E. J. Johnson—Program Planning
A. H. Hollenberg—Farm Mechanics
W. N. Elam—Program Planning

d—directors
ad—assistant to director
s—supervisors
as—assistant supervisors
rs—regional supervisors
ds—district supervisors
t—teacher trainers
it—itinerant teacher trainers
rt—research workers
Nt—Negro teacher trainers
sms—subject matter specialists

Note—Please report changes in personnel for this directory to Dr. W. T. Spanton, Chief, Agricultural Education, U. S. Office of Education.

ALABAMA
d—R. E. Cammack, Montgomery
s—J. C. Cannon, Montgomery
as—L. Sellers, Auburn
as—H. F. Gibson, Auburn
as—T. L. Faulkner, Auburn
as—H. R. Culver, Auburn
as—B. P. Dilworth, Auburn
as—H. W. Green, Auburn
as—J. L. Dailey, Montgomery
t—S. L. Chesnutt, Auburn
t—R. W. Montgomery, Auburn
t—D. N. Bottoms, Auburn
t—W. A. Broyles, Auburn
sms—E. L. McGrew, Auburn
Nt—Arthur Floyd, Tuskegee Institute
Nt—F. T. McQueen, Tuskegee Institute
Nt—E. L. Donald, Tuskegee Institute

ARIZONA
d-s—J. R. Cullison, Phoenix
t—R. W. Cline, Tucson
t—W. A. Schafer, Tucson

ARKANSAS
d—J. M. Adams, Little Rock
s—C. R. Wilkey, Little Rock
as—S. D. Mitchell, Little Rock
ds—T. A. White, Monticello
ds—O. J. Seymour, Arkadelphia
ds—J. A. Niven, Russellville
ds—V. H. Wohlford, State College
t—Roy W. Roberts, Fayetteville
t—LaVan Shoptaw, Fayetteville
Nt—L. R. Gaines, Pine Bluff

CALIFORNIA
d—Julian A. McPhee, Sacramento
ad—Wesley P. Smith, Sacramento
s—B. J. McMahon, San Luis Obispo
rs—E. W. Everett, San Jose
rs—B. R. Denbigh, Los Angeles
rs—Howard F. Chappell, Sacramento
rs—A. G. Rinn, Fresno
rs—H. H. Burlingham, Chico
rs—J. C. Gibson, Los Angeles
t—S. S. Sutherland, Davis
sms—Geo. P. Couper, San Luis Obispo
sms—J. I. Thompson, San Luis Obispo

COLORADO
d—E. G. Comstock, Denver
s—A. R. Bunger, Denver
t—R. W. Canada, Ft. Collins
t—E. J. F. Early, Ft. Collins

CONNECTICUT
d—Emmett O'Brien, Hartford
s—R. L. Hahn, Hartford
t—W. Howard Martin, Storrs

DELAWARE
d—R. W. Heim, Newark
s—W. L. Mowlds, Dover
t—Paul M. Hodgson

FLORIDA
d—Colin English, Tallahassee
s—Harry Wood, Tallahassee
t—E. W. Garris, Gainsville
t—W. T. Lofton, Gainsville
ds—J. G. Smith, Gainsville
ds—F. L. Northrop, Gainsville
ds—T. L. Barrineau, Jr., Tallahassee
Nt—L. A. Marshall, Tallahassee
Nt—G. W. Conoly, Tallahassee

GEORGIA
d—M. D. Mobley, Atlanta
s—T. G. Walters, Atlanta
ds—George L. Martin, Tifton
ds—C. M. Reed, Carrollton
ds—J. N. Baker, Swainsboro
ds—J. H. Mitchell, Athens
t—John T. Wheeler, Athens
t—R. H. Tolbert, Athens
t—G. L. O'Kelley, Athens
t—A. O. Duncan, Athens
t—T. D. Brown, Athens
Nt—Anna Tabor, Fort Valley
Nit—S. P. Pugate, Fort Valley

HAWAII
d—W. W. Beers, Honolulu, T. H.
s—W. H. Coulter, Honolulu, T. H.
as—Riley Ewing, Honolulu, T. H.
as—Takumi Kono, Hilo, Hawaii, T. H.
t—F. E. Armstrong, Honolulu, T. H.

IDAHO
d—William Kerr, Boise
s—Stanley S. Richardson, Boise
as—Ed. Lovell, Pocatello
t—H. A. Winner, Moscow
t—Dwight L. Kindschy, Moscow

ILLINOIS
d—Ernest J. Simon, Springfield
s—J. E. Hill, Springfield
as—J. B. Adams, Springfield
as—A. J. Andrews, Springfield
as—H. M. Strubinger, Springfield
as—P. W. Proctor, Springfield
as—H. B. Danisch, Springfield
t—H. M. Hamlin, Urbana
t—G. P. Deyoe, Urbana
t—J. N. Weiss, Urbana
t—L. J. Phipps, Urbana
sms—Melvin Henderson, Urbana
sms—H. J. Rucker, Urbana
sms—Harold Witt, Urbana

INDIANA
d—Ben H. Watt, Indianapolis
s—H. B. Taylor, Indianapolis
t—B. C. Lawson, Lafayette
rt—S. S. Cromer, Lafayette
it—K. W. Kiltz, Lafayette
it—H. W. Leonard, Lafayette
it—E. E. Clanin, Lafayette
it—I. G. Morrison, Lafayette

IOWA
d—L. H. Wood, Des Moines
s—H. T. Hall, Des Moines
as—M. Z. Hendren, Des Moines
t—Barton Morgan, Ames
t—John B. McClelland, Ames
t—J. A. Starrak, Ames
t—T. E. Sexauer, Ames

KANSAS
d—C. M. Miller, Topeka
s—L. B. Pollom, Topeka
t—A. P. Davidson, Manhattan
it—L. F. Hall, Manhattan

KENTUCKY
d—Watson Armstrong, Frankfort
s—E. P. Hilton, Frankfort
as—B. G. Moore, Frankfort
as—S. S. Wilson, Frankfort
t—Carsie Hammonds, Lexington
it—W. R. Tabb, Lexington
it—Stanley Wall, Lexington
Nt—P. J. Manly, Frankfort

LOUISIANA
d—John E. Coxe, Baton Rouge
as—J. J. Arceneaux, Baton Rouge
as—L. N. Carpenter, Baton Rouge
as—J. J. Stovall, Baton Rouge
t—Roy L. Davenport, Baton Rouge
t—J. C. Floyd, Baton Rouge
t—M. C. Garr, Baton Rouge
sms—Harry Braud, Baton Rouge
t—A. Larriviere, Lafayette
t—A. A. LeBlanc, Lafayette
Nt—M. J. Clark, Scotlandville
Nit—D. B. Matthews, Scotlandville

MAINE
s-t—Herbert S. Hill, Orono
as-t—Wallace H. Elliott, Orono

MARYLAND
d—John J. Seidel, Baltimore
s—Harry M. MacDonald, Baltimore
t—Arthur M. Ahalt, College Park
Nt—J. A. Oliver, Princess Anne

MASSACHUSETTS
d—M. Norcross Stratton, Boston
s—John G. Glavin, Boston
t—Jesse A. Taft, Amherst
t—Charles F. Oliver, Amherst

MICHIGAN
d—Ralph O. Wenrich, Lansing
s—Harry E. Nesman, Lansing
s—Luke H. Kelley, Lansing
s—Raymond M. Clark, Lansing
s—John W. Hall, Lansing
t—H. M. Byram, East Lansing
t—G. C. Cook, East Lansing
t—Paul Sweany, East Lansing
t—Guy Timmons, East Lansing

MINNESOTA
d—Harry C. Schmidt, St. Paul
s—Ray Cochran, St. Paul
t—A. M. Field, St. Paul
t—M. J. Peterson, St. Paul

MISSOURI
d—Tracy Dale, Jefferson City
s—C. M. Humphrey, Jefferson City
ds—J. A. Bailey, Jefferson City
ds—Joe Moore, Mt. Vernon
t—G. F. Ekstrom, Columbia
t—C. V. Roderick, Columbia
sms—Joe Duck, Columbia

MISSISSIPPI
d—H. E. Mauldin, Jr., Jackson
s—A. P. Fatherree, Jackson
as—R. H. Fisackerly, Jackson
ds—E. E. Gross, Hattiesburg
ds—E. E. Holmes, Oxford
ds—V. P. Winstead, State College
t—V. G. Martin, State College
t—N. E. Wilson, State College
t—J. F. Scoggin, State College
t—O. L. Snowden, State College
sms—D. W. Skelton, State College
sms—A. E. Strain, State College
Nt—A. D. Fobbs, Alcorn

MONTANA
d—Ralph Kenck, Bozeman
s—A. W. Johnson, Bozeman
as—Arthur B. Ward, Bozeman
t—R. H. Palmer, Bozeman
t—H. E. Rodeberg, Bozeman

NEBRASKA
d—G. F. Liebendorfer, Lincoln
s—L. D. Clements, Lincoln
as—H. W. Deems, Lincoln
t—C. E. Rhoad, Lincoln
t—C. C. Minteer, Lincoln

NEVADA
d—Donald C. Cameron, Carson City
s—John W. Bunton, Carson City

NEW HAMPSHIRE
d—Walter M. May, Concord
s-t—Earl H. Little, Concord

NEW JERSEY
d—John A. McCarthy, Trenton
s-t—H. O. Sampson, New Brunswick
as—O. E. Kiser, New Brunswick
as—W. H. Evans, New Brunswick

NEW MEXICO
s—L. C. Dalton, State College
as—Alan Staley, State College
t—Carl G. Howard, State College

NEW YORK
d—Oakley Furney, Albany
d—A. K. Getman, Albany
s—R. C. S. Sutliff, Albany (acting)
s—W. J. Weaver, Albany
as—J. W. Hatch, Buffalo
t—Roy A. Olney, Ithaca
t—E. R. Hoskins, Ithaca
t—W. A. Smith, Ithaca
t—W. R. Kunsela, Ithaca

NORTH CAROLINA
d—J. W. Smith, Raleigh
s—Roy H. Thomas, Raleigh
as—R. J. Peeler, Raleigh
ds—E. N. Meekins, Raleigh
ds—J. M. Ostcen, Rockingham
ds—T. H. Stafford, Asheville
ds—T. B. Elliott, Woodland
ds—N. B. Chesnutt, Whiteville
t—Leon E. Cook, Raleigh
t—L. O. Armstrong, Raleigh
t—J. K. Coggin, Raleigh
t—F. A. Nylund, Raleigh
Nt—S. B. Simmons, Greensboro
Nt—C. E. Dean, Greensboro
Nt—W. T. Johnson, Greensboro

NORTH DAKOTA
d—A. F. Arnason, Grand Forks
s-t—Ernest L. DeAlton, Fargo
as—Winston H. Dolve, Fargo
t—Shubel D. Owen, Fargo

OHIO
d—J. R. Strobel, Columbus
s—Ralph A. Howard, Columbus
ds—B. O. Bolender, Columbus
ds—W. G. Weiler, Columbus
ds—F. J. Ruble, Columbus
ds—D. R. Purkey, Columbus
t—Ralph E. Bender, Columbus
t—W. F. Stewart, Columbus
t—Harold G. Kenestrick, Columbus
t—A. C. Kennedy, Columbus
t—R. J. Woodin, Columbus
rt—Ray Fife, Columbus

OKLAHOMA
d-s—J. B. Perky, Stillwater
as—W. R. Felton, Stillwater
ds—Byrle Killian, Stillwater
ds—Hugh D. Jones, Stillwater
ds—Cleo A. Collins, Stillwater
ds—Benton F. Thomason, Stillwater
FFA—Tom Daniel, Stillwater
t—C. L. Angerer, Stillwater
t—Don M. Orr, Stillwater
t—Chris White, Stillwater
it—Robert R. Price, Stillwater
Nit—D. C. Jones, Langston

OREGON
d—O. I. Paulson, Salem
s—Ralph L. Morgan, Salem
as—M. C. Buchanan, Salem
t—H. H. Gibson, Corvallis

PENNSYLVANIA
d—Paul L. Cressman, Harrisburg
s—H. C. Fetterolf, Harrisburg
s—V. A. Martin, Harrisburg
t—Henry S. Brunner, State College
t—William F. Hall, State College
t—C. S. Anderson, State College
t—David R. McClay, State College
it—Glenn Z. Stevens, State College

PUERTO RICO
d—L. Garcia Hernandez, San Juan
s—Nicholas Mendez, San Juan (on leave
s—Samuel Molinary, San Juan (acting)
as—Rafael Muller, San Juan
as—Frederico A. Rodriguez, San Juan
as—Juan Acosta Henriquez, San Juan
ds—Frederico Carbonell, San Juan
ds—Juan Melendez, Cayey
ds—Gregorio Mendez, Arecibo
ds—Nicolas Hernandez, Aguadilla
t—Juan Robles, Mayagues

RHODE ISLAND
d-s—George H. Baldwin, Providence
t—Everett L. Austin, Providence

SOUTH CAROLINA
d—Verd Peterson, Columbia
s—R. D. Anderson, Columbia
as—P. G. Chastain, Chester
as—W. E. Gore, Columbia
ds—W. M. Mahoney, Hones Path
ds—J. H. Yon, Loris
ds—W. R. Carter, Walterboro
t—B. H. Stribling, Clemson
t—J. E. Monroe, Clemson
t—T. E. Duncan, Clemson
t—F. E. Kirkley, Clemson
t—W. C. Bowen, Clemson
Nt—Gabe Buckman, Orangeburg
Nt—J. P. Burgess, Orangeburg

SOUTH DAKOTA
d—J. F. Hines, Pierre
s—H. E. Urton, Pierre
t—Stanley Sundet, Brookings

TENNESSEE
d-s—G. E. Freeman, Nashville
as—J. W. Brimm, Nashville
ds—H. N. Parks, Gallatin
ds—L. A. Carpenter, Knoxville
ds—Ben Douglas, Jackson
ds—S. L. Sparks, Nashville
t—N. E. Fitzgerald, Knoxville
t—B. S. Wilson, Knoxville
rt—A. J. Paulus, Knoxville
rt—E. B. Knight, Knoxville
Nt—W. A. Flowers, Nashville

TEXAS
d—W. E. Lowry, Austin
s—Robert A. Manire, Austin
as—R. Lano Barron, Austin
as—George H Hurt, Austin
ds—O. T. Ryan, Lubbock
ds—Vannoy Stewart, Commerce
ds—C. D. Parker, Kingsville
ds—A. B. Childers, Mart
ds—O. M. Holt, College Station
ds—W. E. Williams, Alpine
ds—J. B. Payne, Stephenville
ds—L. I. Samuel, Arlington
ds—J. A. Marshall, Nacogdoches
ds—T. R. Rhodes, Huntsville
t—E. R. Alexander, College Station
t—Henry Ross, College Station
t—L. V. Halbrooks, College Station
sms—W. A. Sherrill, College Station
t—J. L. Moses, Huntsville
t—Ray L. Chappelle, Lubbock
t—S. V. Burks, Kingsville
it—E. V. Walton, College Station
it—G. H. Morrison, Huntsville
it—B. Wines, Kingsville
it—L. M. Hargrave, Lubbock
it—Feral M. Robinson, Huntsville
sms—Kyle Leftwich, Huntsville
Nt—E. M. Norris, Prairie View
Nt—O. J. Thomas, Prairie View
Nit—E. E. Collins, Texarkana
Nit—S. E. Palmer, Tyler
Nit—Gus Jones, Caldwell
Nit—Wardell Thompson, Prairie View
Nit—Paul Rutledge, Palestine

UTAH
d—E. Allen Bateman, Salt Lake City
s—Mark Nichols, Salt Lake City
as—Elvin Downs, Salt Lake City
t—L. R. Humpherys, Logan

VERMONT
d—John E. Nelson, Montpelier
s—C. D. Watson, Burlington
t—James E. Woodhull, Burlington

VIRGINIA
d—Richard N. Anderson, Richmond
s—F. B. Cale, Richmond
as—R. E. Bass, Richmond
ds—W. R. Emmons, Boykins
ds—J. O. Hoge, Blacksburg
ds—W. R. Legge, Winchester
ds—J. C. Green, Powhatan
ds—W. C. Dudley, Appomattox
ds—J. A. Hardy, Blacksburg
t—H. W. Sanders, Blacksburg
t—C. E. Richard, Blacksburg
t—C. S. McLaren, Blacksburg
Nt—J. R. Thomas, Ettrick
Nt—A. J. Miller, Ettrick
Nt—M. A. Fields, Ettrick

WASHINGTON
d—H. G. Halstead, Olympia
s—Bert L. Brown, Olympia
as—M. C. Knox, Olympia
as—H. M. Olsen, Olympia
as—E. M. Webb, Pullman
ts—Oscar Loreen, Pullman

WEST VIRGINIA
d—John M. Lowe, Charleston
s—H. N. Hansucker, Charleston
as—S. D. McMillen, Charleston
t—D. W. Parsons, Morgantown
t—R. C. Butler, Morgantown
Nt—W. T. Johnson, Morgantown

WISCONSIN
d—C. L. Greiber, Madison
s—Louis M. Sasman, Madison
t—J. A. James, Madison
it—Ivan Fay, Madison
it—Clarence Bonsack, Madison
t—V. E. Nylin, Platteville
t—J. M. May, River Falls

WYOMING
d—Sam Hitchcock, Cheyenne
s—Percy Kirk, Cheyenne
t—Jack Ruch, Laramie