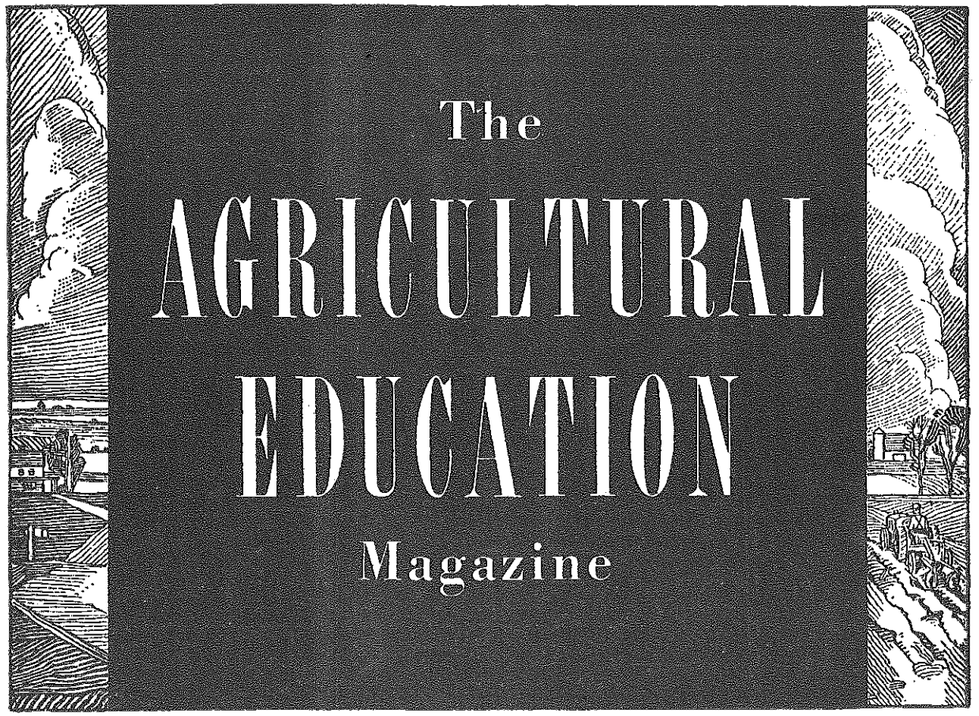
Vol. 16 July, 1943 No. 1



EDUCATION must be considered in peace plans as surely as ammunition must be included in war plans —Ex-Senator George W. Norris in his last speech to Congress.

The Agricultural Education Magazine

A monthly magazine for teachers of agriculture. Managed by an editorial board chosen by the Agricultural Section of the American Vocational Association and published at cost by the Meredith Publishing Company at Des Moines Iowa.

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Subscription price, $1 per year, payable at the office of the Meredith Publishing Company, Des Moines, Iowa. Foreign subscriptions, $1.25. Single copies 10 cents. In submitting subscriptions, designate by appropriate symbols new subscribers, renewals, and changes in address. Contributions should be sent to the Special Editors or to the Editor. No advertising is accepted.

Entered as second-class matter January 21, 1929 at the post office in Des Moines, Iowa, under Act of Congress, March 3, 1879.

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Editorial Comment

Our Program—Good or Poor?

J. A. Starrak

THIS humble person was extremely flattered recently to receive an invitation to write an editorial for the *Agricultural Education Magazine*. He has in the past, when the spirit moved him, and the editors acquiesced, contributed articles of the ordinary garden variety; but this is the first time he has ever approached within writing distance of the portals of the sacred editorial chambers, and that upon invitation.

But the invitation, tho flattering to my vanity, was not without its sting. How a man's reputation continues to plague him even after he has reformed! My unsavory reputation as a disputatious controvertist had evidently reached the ears of our editor, since he tactfully, but pointedly, suggested that my contribution be a criticism of the program of vocational agriculture in the secondary schools.

The Need for Critical Evaluation

I accept the challenge and its imputations. I believe a critical attitude is a healthy one, especially if the criticism is directed against the critic's own behavior. Anyone who loses the power of self criticism seems to me to have already begun to slip. Any organization that is not critical of itself and its works is thereby displaying symptoms of the deadly disease of institutionalism and has already begun to die of dry rot. A critical attitude may be the outcome of high standards and ideals of performance, and of a clear and extended vision of the task to be accomplished, and not necessarily be due to habitual irascibility. Personally, I am extremely critical of everything I write and do. My teaching and my writing, my bridge and my golf are never half as good as I think they should be. For instance I think this introduction is terrible.

Just another little alibi. While in our immediate family of agricultural teachers I am quite critical of our program, in larger educational circles I am wont to battle valiantly and vociferously, if not brilliantly, for our program in vocational agriculture and for those engaged in it.

Probably I possess at least one qualification as a critic of vocational agriculture. Of late years I have not been as closely connected with the program as I used to be, having been drawn or pressed into other more general fields in education. Altho I have endeavored to keep in close touch with its development, I am partially, at least, an outsider and should therefore be able to appraise your program with less partiality (if also with less information) than if I were wholly absorbed in it.

Favorable Criticism

Criticism may be favorable as well as unfavorable, and to confound my critics, who may read this, I shall lead off with some favorable criticisms.

First, the program of vocational agriculture in the high school is a most important, essential, and urgent one. Agriculture is still, and probably will remain, our basic industry. Our national welfare and safety depend upon it. To develop, maintain, and perpetuate a prosperous, efficient, progressive, agricultural and rural life is the great task and mission of agricultural educators. The work of no other educational group, except it be the teachers of home making, can compare with ours in fundamental importance.

Second, our current program has already demonstrated its essential soundness. It has already amply justified itself to all informed and thoughtful leaders of agriculture, business, and education. And its potential contribution to agricultural progress in this country is much greater than its actual accomplishment to date. Given another 25 years of normal expansion and improvement, we will have gone a long way toward preparing the next generation of farmers to solve their baffling problems and to bring to agriculture and rural life the prosperity, efficiency, and the stability which they must have if this nation is to remain great.

Third, the leadership in vocational agriculture is quite generally progressive, well-trained, and equipped with large social and educational vision. While our leaders are well grounded in their specialty, they are not all narrow specialists. Those possessing doctorate degrees, and an unusually large percentage do, have taken much of their advanced work in the more general phases of education, including psychology, philosophy, and sociology. I am convinced that no other field in education can claim a more enlightened, professional minded, and progressive leadership.

Fourth, due to this leadership, doubtless, we have succeeded in establishing, thru research, a sound foundation for our instructional program. Probably in no other subject matter field has so much research of a thoroly functional character on the problems of objectives, content, and method been done. It is doubtful also that in any other field is there as large a percentage of leaders actively engaged in research activities of a truly functional character.

Fifth, the teachers of vocational agriculture in our secondary schools are also relatively competent and professional minded. The majority of them have had some postgraduate work, and many have master's degrees. Their annual conferences and the swiftly changing scene on the agricultural front with which they are necessarily in close contact keeps them continually alert to the kaleidoscopic nature of contemporary society, especially the agricultural industry, and to the consequent exacting demands of their task.

Sixth, as a logical outcome of all this, we have gained the confidence and support of our adult clientele on the farms, and also of the alert business leaders of the town. Probably no other part of the school program is scrutinized quite so closely and intelligently as is our agricultural instruction, nor so enthusiastically supported. In many communities in this state, and I suppose the same is true of other states, departments of agriculture have been introduced into the local high school in order to satisfy the insistent demands of the farmers for adult evening classes in agriculture. This summer and fall many superintendents in Iowa were out searching over this and near-by states for teachers of vocational agriculture to replace those they had lost to the draft or to other types of work. They were doing this at the insistent demand of the farmers in their respective communities as much as to satisfy their own desire to keep this type of instruction in their school programs.

Some Weaknesses of the Program

Now I have been nice and agreeable about as long as I can, and much longer than some of my readers have expected me to be. I should, I suppose, stop at this point and leave you with a kindly feeling toward me. But if I did, even my hardened conscience would trouble me for having told a half-truth. Our program is not faultless, as I am sure all of you will agree; and many of the weaknesses and deficiencies I see in it stem from the fact that it is a school program. In other words, it shares with other school subjects, tho perhaps not to the same extent, the stultifying effects of institutionalism, a deadly disease which threatens and usually infects, to a more or less degree, every social institution.

In our program this is particularly true of the administration and supervision, which has the disadvantage of operating at long range from a centralized control station in Washington. It seems that the more distant the control, the longer and more tangled the red tape and the more deadening its effects. This is not to be taken as an attack on any individual; it is simply a statement of fact and is inherent in the situation no matter who constitutes the personnel, altho the character of the latter does make considerable difference. Tho well aware of the weaknesses resulting from local control of education, I am very much of the opinion that the remedy lies in the improvement of this local control rather than in substituting for it centralization in any state or national government.

(Continued on page 9)

Professional

S. S. SUTHERLAND — R. W. GREGORY

Sears Roebuck Foundation Makes $25,000 Grant to Vocational Agriculture

MARK NICHOLS, Secretary of the Agricultural Progress Committee
Salt Lake City, Utah

Mark Nichols

VOCATIONAL agriculture recently received a $25,000 grant from Sears Roebuck Foundation for the year 1943. It is to be used to encourage increased food production among enrollees in all-day and day-unit classes. Every state and territory having a vocational agriculture program may share in the funds. This in brief is the story of a project which should prove to be a great morale builder, and result in much good to the vocational agriculture program thruout the United States, Hawaii, and Puerto Rico.

For a number of years several states have been the recipients of funds from Sears Roebuck in the developing of worth-while activities in vocational agriculture. Most of these participating states were in the western region with Washington, Oregon, Idaho, California, Utah, Colorado sharing in the funds. Georgia, Texas, and Arkansas likewise had such programs.

At the 1942 A.V.A. National Convention in Toledo, officials of Sears Roebuck Foundation and representatives in agricultural education discussed the possibility of a money grant to vocational agriculture. At the final business meeting of the Agricultural Section it was decided that vocational agriculture would accept the $25,000 thru the agricultural section of A.V.A. and that the newly elected president of the Agricultural Section, Mr. J. A. Guitteau, state supervisor of agricultural education of Washington, should appoint a committee to work out the details of the acceptance.

In compliance with the request made at the A.V.A. Agricultural Section meeting, Mr. Guitteau appointed the following committee which is known as the Agricultural Progress Committee of A. V. A. to work out the program in connection with the $25,000 grant:

R. A. Manire, state supervisor of agricultural education, Texas, representing the Southern region.

H. C. Fetterolf, state supervisor of agricultural education, Pennsylvania, representing the North Atlantic region.

F. E. Moore, state director of vocational education, Iowa, representing the Central region.

Mark Nichols, state supervisor of agricultural education, Utah, representing the Western region.

The above committee, with J. A. Guitteau as chairman, together with Dr. W. T. Spanton and W. A. Ross of the U. S. Office of Education who acted in advisory capacity, met with Sears Roebuck Foundation representatives in Chicago on January 25–27, 1943, and set up policies and plans for the administration of the grant. The check covering the entire grant was given to the committee at its first session. Mr. E. J. Condon, assistant to the president of Sears Roebuck and Company, made it very plain to the committee that the money was now in its hands; that agricultural education was to write its own ticket; and that his organization had every faith that the national leaders in vocational agriculture would make this small contribution count to the utmost in stimulating increased food production.

On a national basis the funds will be disbursed by the national treasurer of A.V.A. upon recommendation and authorization of the Agricultural Progress Committee representing the Agricultural Section of A.V.A.

Following are the recommendations of the committee concerning the "Food for Victory" Achievement Awards:

Purpose

The funds for 1943 are to be used to encourage increased production of those farm commodities which have been designated by the Secretary of Agriculture as critical and to stimulate increased attention to the operation, care, and repair of farm machinery.

Each state may select or determine which of the above fields or combinations of the above fields will be selected for the allocation of the awards since it is recognized that agricultural conditions in the various states vary greatly. The awards are, therefore, to be used as a means of encouragement and stimulation to greater achievement in the production of food, and in the care, repair and operation of farm machinery and equipment, and in the development of improved farm practices.

All regularly enrolled all-day and day-unit students of vocational agriculture in the United States, including Hawaii and Puerto Rico, whose supervised farm practice programs are selected from the above fields of farming activities, are automatically considered as participants, either as individuals or members of department or chapter groups.

Method of Administration and Distribution of Funds

Not more than $1,500 will be used for administrative expenses on the national level. The $23,500 will be allocated and distributed to the states and territories as follows:

1. Each head state supervisor of agricultural education will notify Mr. J. A. Guitteau of Olympia, Washington, on or before March 15, 1943, as to whether his state wishes to participate in the grant.

2. Each participating state or territory will be alloted a minimum of $150.

3. The total of all minimum allotments of $150 each made to each participating state or territory will be added together and this sum subtracted from the total of $23,500. This unallotted balance will be allocated among all participating states or territories on the basis of the ratio that each state or territory bears to the total enrollments in all-day and day-unit classes of all the participating states and territories.

4. The enrollments in all-day and day-unit classes used in this calculation shall be those included in the annual statistical report made by the several states and territories to the U. S. Office of Education for the fiscal year ended June 30, 1942.

5. The minimum amount of funds allotted to each state or territory varies from $162.87 to $1,789.28 according to the above mentioned formula.

6. Upon receiving the funds in any state, the head supervisor will have the responsibility of seeing that they are deposited and properly safe-guarded until the awards are made within the state.

Administration of the Program Within the State

The head state supervisor of agricultural education or persons designated by him will be responsible for administering the program within the state or territory.

In promoting this program, good soil conservation practices should be emphasized.

The state may make awards either to outstanding individuals or to vocational agriculture groups or to any combination of the two.

In making awards, the accomplishments of individuals or members of department or chapter groups may be determined either by the productive market value of the farm commodities produced, increased value of farm machinery repaired, or by a point system devised in such a manner as to emphasize the importance of the commodities produced or machinery repaired in terms of the war effort. Various types of point systems for scoring or evaluating the program have been successfully used by several states.

It is recommended that awards be made in the form of high-quality livestock, poultry, seed, tools, farm machinery, farm equipment, or fertilizer, in preference to cash.

Report of Accomplishments

A final report of accomplishments will be made in duplicate to Mr. J. A. Guitteau, Olympia, Washington, not later than February 1, 1944. These reports will be summarized, compiled, and sent to representatives of the Sears Roebuck Foundation by February 15, 1944. Attention is directed to the importance of each state's sending in one outstanding human interest story along with the regular accomplishment report. Pictures of outstanding activities may be submitted with the report.

A Genuine Opportunity

The 1943 Sears Roebuck Foundation grant offers a fine opportunity for vocational agricultural teachers to obtain added interest in the production of food in the war effort. It is hoped by the committee members that every state and territory will use the funds this year and make them serve as a means for promoting and stimulating greater efficiency and achievement in agricultural production.

Our Nation is calling for increased effort on the farm front, and these funds should provide added impetus to this important call. A wise and judicious use of these funds this year may make for greater and continuing opportunity in years to come.

The Farm Labor Situation in Ohio

RAY FIFE, Teacher Education, Columbus, Ohio

Ray Fife

AT THE time when this article is being written, much of the 1943 season is ahead of us. However, we have had sufficient experience with the farm labor problem in 1942 and the early months of 1943 to know that Ohio high-school students can provide invaluable assistance if their services are utilized properly.

Labor Problem Serious

Ohio's farm labor problems are serious, and a complete solution is not yet in sight. Ohio ranks second in the United States in industrial war production with the accompanying migration of farm workers to industry. The state ranks first in the production of vegetables under glass, fifth in the United States in the production of canning crops, and high in the production of fresh vegetables for direct consumption. These crops along with fru ts and sugar beets require a large number of seasonal workers. In addition the dairy industry requires year around labor while general farming needs labor with a wide range of abilities. In several counties, devoted almost entirely to general farming, careful surveys indicate that the demand for non-farm high-school labor has increased 43 percent over 1942. In addition to the normal demand for spring labor in 1943, thousands of acres of corn and soybeans from the previous season remained to be harvested and high school students have harvested much of this crop. Where high schools reorganized their schedules so as to release needed students earlier in the day, a large percentage of the students have been retained in school. When no attempt was made by local school officials to meet the problems, then the percentage of absence has been very heavy. Where the demand for both farm and non-farm high school labor extends from approximately March 10th to November 1st or later, it is important that state, county, and local school officials work out co-operative arrangements with food production committees so that the education of high-school youth will not suffer too seriously.

While the labor situation is serious there is no need for panic. Some schools have dismissed seniors prior to the close of the school year when it was not necessary. In one Ohio county, a careful personal survey by local principals and the county attendance officer indicates that approximately 25 percent of the absences are not necessary. The farm labor situation has provided an avenue of escape for parents and youth who are not interested in education. In Ohio it has proved to be more satisfactory from the standpoint of both farm work and student health if needed students are released early in each school day rather than excused for one or two days per week. Our leading county superintendents of schools are emphatic in their opinion that school people should take the initiative and prepare plans which will aid the labor situation without too pronounced sacrifices educationally.

Material Available

In general the plan of analyzing needs for non-farm high school labor as described in Mimeo No. 1, The Employment of Student Labor on Farms in Ohio, Dept. of Agricultural Education, O. S. U. has been very beneficial. First it called attention to the availability of non-farm high school youth for farm labor; second, it created a more tolerant and favorable attitude toward the use of such labor; third, it provided a basis for selection, training and placement based upon the opinions of farmers themselves; and fourth, it stimulated farmers to discuss other means of solving their labor problems locally by exchanging labor and making wider use of labor saving machinery already available in the community.

Mimeo No. 2, The Employment of Student Labor on Farms in Ohio, which deals with training non-farm youth, has needed considerable adaptation for use in individual communit es, as was expected. When the labor demand has been acute there has been almost no attempt at screening or selection of students except for work on individual farms. Careful local surveys indicate that village non-farm high-school boys in most part already have had experience in milking, driving teams and tractors, and similar skills. Generally in towns of 2,500 population and larger, training in the preceding skills is needed. In many such towns in Ohio, however, the demands of industry and business are so strong that comparatively few students are available. Several high-school work crews have been employed in pruning commercial orchards. This work required careful training and follow-up but it has been more satisfactory than expected. Both non-farm students and students not enrolled in vocational agriculture need training in servicing farm machinery including, of course, lubrication and maintaining parts in proper adjustment.

Surveys Needed

There has been an inclination on the part of some local school officials and teachers of vocational agriculture to make a careful analysis of the skills and abilities of high-school students without making a previous or parallel survey of labor needs in the community. This has been proved to be a serious mistake. The entire program should be built upon a careful local survey. This survey will be more satisfactory if it is made in co-operation with a local farm community, even tho the teacher performs the actual work. In the survey particular attention needs to be given to special crops which will require the importation of labor, crops which are highly perishable, and peculiar conditions which require prompt harvesting of some crops. For example one teacher states that practically all corn in his community is grown on "bottom land," hence it must be harvested promptly to avoid autumn floods.

There has been some neglect in securing the consent of parents for non-farm students to work on farms. Experience has indicated that unless student work crews are carefully supervised it is more satisfactory to organize boys in smaller groups. The principal dissatisfaction on the part of farmers this year has resulted from the assignment of large groups without adequate supervision.

Co-operative Program

While some work camps for non-farm youth have been conducted in the state, our experience with them has not been sufficiently extensive to make recommendations for improvement. Under the co-operative agreement between the Agricultural Extension Service and the State Department of Education in Ohio, teachers of vocational agriculture will have no responsibility for such camps except as there may be some special local arrangements. The state is very fortunate in having a functioning State Food Production Committee with representatives from the Farm Bureau, Grange, AAA, FSA, USES, Agricultural Extension and the State Department of Education. The Assistant State Director of Education and the State Supervisor of Vocational Agriculture are members of this State Committee. The President of the State Farm Bureau Federation and the Master of the State Grange act as co-chairmen.

The various agencies have co-operated well in helping local communities to help themselves. So far as vocational agriculture is concerned with farm labor, the teacher is the key to the situation. If he does not assume his obligations, then supervisors and teacher-trainers are helpless. Food must be produced. Labor must be made available to produce it. The major portion of such labor will be made available within local communities and not from a government bureau. It would be a severe indictment of vocational agriculture if it were necessary to employ some one else within the local community to perform work which should be one of the primary responsibilities of the vocational agriculture teacher.

Methods

G. P. DEYOE

Methods and Measurements in Farm Planning and Swine Production

J. I. THOMPSON, Livestock Specialist, San Luis Obispo, California

ONE of the chief aims of vocational agriculture is to assist boys who wish to farm to become well established in farming, and to give them the sound training and work experiences that will make their chances of succeeding very good. To induce the boy or his parents, or both, to have him carry the project or combinations of projects that will best accomplish this is not always easy, at least in California.

Farm Planning Is Emphasized

In order to furnish needed but often unavailable data on which to base such conclusions, we are giving some attention in our vocational agricultural program to what we call "Farm Planning." The things that we are attempting here are much more elementary than those things generally discussed by adults under the title of "Land-Use Planning." Here are some of the conditions that exist in this state:

1. One crop, often a specialty, is the rule on a large number of ranches in California. We believe that in many instances more diversity is needed.

2. Sometimes when more diversity is attempted, the enterprises that are added do not fit together economically. One too common error is that of adding variety which adds still more to the serious peak labor load, which in August and September often requires as many as 150,000 itinerant laborers.

3. We have quite a number of large ranches, some of which were inherited and many of which were purchased with money accumulated outside of agriculture.

4. We also have a considerable number of very small farms, many of which are too small to provide a family with a fair income.

5. Acreage is often not an indication of income. A 2,000-acre dry-land wheat ranch may yield no more net income than a three-acre flower seed farm.

Because of all of these variations and many others, we have not attempted to have the agricultural teachers follow a very definite pattern in farm planning. There is no such thing as a typical farm or ranch in this state.

Two Farms Are Compared

We have suggested that teachers select (in their district) two farms, somewhat similar in size and in the main enterprise. These are likely to be dairy farms for those students primarily interested in dairying. We prefer that these be as near family size as they can find; that is, apparently capable of properly supporting a man, wife, and three children.

Considering previous studies and realizing that acreage is not necessarily an indicator, we have used $1,500 to $1,700 labor income as the amount that seems necessary for most families, altho many seem to get along nicely on much less. So far, the surveys indicate that at price levels of recent years, an investment of $10,000 to $15,000 is the minimum that can reasonably be expected to yield such an income.

Then we ask the agricultural teacher to study the two farms he has selected, with the junior and senior students who are interested. They make a map of each, showing the acres in each crop, orchard, vineyard, pasture, etc., indicate the kind and amount of livestock, buildings, equipment, etc., and then they compare the two. Why the comparison? We believe it is easier for boys to see differences between comparable things. (We do this in livestock judging; instead of using one cow and comparing her with an imaginary ideal chart, we compare two or more cows as to type, conformation, udders, etc.) Several of our teachers have already found a considerable difference in the labor income of two different farms of about the same size, when the number of cows was about the same. Some of this was due to managerial ability, some to the producing ability of the cows, and in several cases to the different acreages devoted to pasture or hay or grain or some cash crop.

This same procedure is followed with as many types of farms or enterprises as are of major interest to most of the students. After the above surveys have been completed they try to figure out what changes, if any, might be made on a particular farm to increase the labor income, and what such changes would cost, always keeping in mind that the fertility of the soil must be maintained or increased.

Unless the owner asks for the results of their study, no attempt is made to get him to carry out any of these conclusions; but many young-farmer groups, that make similar studies actually make some or all of the purposed shifts, and later on report what the results are. In this State, young-farmer groups (composed of young men generally from 18 to 25 years of age) are organized under the direction of the agriculture teacher.

Data Useful in Teaching

Many teachers tell us that the material gathered in this way is the best teaching material they have. Why do we think this is important? If a project is planned so that it can be developed into a major enterprise, we believe that it will be expanded much more sensibly than if, like Topsy, it just grows. All of this may not be discussed with the freshman, but if the teacher has found thru his farm-planning studies that in his area one-half acre of ladino or alfalfa pasture and one ton of grain is needed for each sow and her litter, he gets most of his projects of this type started on the farms where they can expand as they should; in other words, they fit.

This sort of thing might not be of much importance in areas that show a marked uniformity and standardization. But in this state where even the soil often varies enormously on the same farm or between two adjoining farms, patterns are seldom found; they must be produced.

Most producers in this state like to do things on a large scale. Again using hogs as an example, while we produce not over 40 percent of the pork we consume, we have what may be the largest plant in the country, where 1,000 or more pigs are produced and marketed every week of the year, generally 50 to 60 thousand annually. Quite a few outfits plan hog set-ups of from 200 to 500 brood sows. Some of these have been started where they did not raise an acre of grain, and in most cases they did not last long.

We believe that if our agricultural teachers know enough about the various sized units that seem to fit together well on particular farms they will do a better job of instructing youngsters as to what some of these limitations are.

I have used as illustrations only dairy cows and hogs. When you are reminded that there are 230 different products that are regularly produced commercially in this state, I think it is evident that there are a lot of patterns to produce and that each of these patterns can contain a lot of different varieties.

In normal years, quite a few senior boys and even more young farmers hope to buy or rent a farm. The more data we can collect on family-sized units, the more definite is the information that can be passed along to them as to the amount of credit and cash that they will need in order to get soundly established. As indicated above, conditions vary so much in this state, that we have not yet found, and doubt if we will find, that many of the plans of one small area can be transposed to very many, or any, other areas.

Most of this farm planning seems to be an individual farm proposition. Quite a lot of land in this state is irrigated. Much of it must be contourcd, or leveled and contoured before it can be irrigated. This often costs a considerable amount; and the wells, pumps, engines or motors, and ditches or pipe lines add up to plenty more. This, plus the fact that much of the farming is done with tractors and tractor-drawn equipment, means that the investment in equipment alone totals a lot.

The data that are being collected thru farm planning on what seems to be adequate and properly related equipment for a definite acreage of crops, trees, or vines will have a lot of value. We believe that these lists can and will be the determining factor as to what a young farmer will buy, rather than the persuasiveness of the salesman for the equipment concern.

We try to hold the survey to the smallest number of necessary items that we can. We seldom try very hard to get the labor income figures from the owner. If he gives us the acreage, his average yields, the amount of hired help, a list of the equipment, perhaps its cost when new, we can generally complete it. Then we use going prices or five or ten-year average prices for that area to determine income and we seldom inquire whether or not the place is free from debt. We do often ask what forms of credit the owner finds most helpful, and we usually ask him what he thinks is a reasonable value of his farm or ranch per acre.

Just now increased food production is taking about 90 percent of our time, but we hope that when this does not take so much effort we can resume our farm planning studies, for we are concerned with what the picture will be after the war ends.

To quote from the minutes of the Commonwealth Club, "We are sure that there will then be a huge back-to-the-land movement. Will our returning soldiers and war industry workers simply swell the supply of migratory workers, badly needed by many outfits for a short period, but not permanently for 10 or 11 or 12 months of the year; or will those who are qualified farmers find opportunities to operate farms of their own?" Quite a percentage must be properly located, if utter chaos is to be avoided.

Evaluating Efficiency in Swine Production

Another method that we have set up and used quite satisfactorily has to do with measuring the feed required to take market hogs from weaning, or about 40 pounds weight, to market weight or about 210 pounds. The procedure was to collect data, such as the beginning and final weight of the pigs, the number, approximate age, and a complete, detailed list of the pounds of feed used, plus the number of days, if any, of pasture used and the kind. The various feeds are reduced to a common denominator on the basis of their digestible nutrients and this final total is expressed as pounds of feed. The average of all these is used as the goal that must be exceeded if the feeding is to be considered efficient.

Most chapters use these summaries as guides to indicate to their students what kind of a performance is expected. One of the very interesting indications already evident from these summaries is that some areas regularly produce feed (both pasture and grain) that has quite a little higher feeding value than the feeds grown in most of the other areas.

We are slowly getting quite a number of schools started on another method, namely, weighing some litters of pigs at birth, and all of them at weaning or 56 days of age, in order to have one definite yardstick for measuring the rate of growth of pigs from birth to market time. Several swine registry associations have established Advance Registry lists on this same basis. It has been definitely established that in at least 90 percent of the cases the heaviest litter of pigs at weaning time will reach market weight the quickest, and on the least feed.

If there is little difference in the individuality of two gilts, one from a litter of eight that weighs 340 pounds at weaning and the other from the same sized litter from the heavier litter should be kept. This is just one method of finding useful ways and means to help measure the efficiency of meat animals for production.

Something must be found that will lead to a wiser selection of meat animals for the breeding herd, just as the Babcock test and scales have benefited dairying, and the stop w tch the breeding and selection of race horses.

Ours is only a small beginning, we hope to progress much further and faster in the near future or at least as soon as the interference of Schicklgruber and Tojo

Future Farmers and Future Homemakers Co-operate at Largo, Florida

E. W. GARRIS, Teacher Education, Gainesville, Florida

THE high-school boys and girls in Largo have been demonstrating the principles of co-operation. The co-operative educational program at school is a joint one developed by Mr. G. C. Howell, teacher of agriculture, and Mrs. F. R. Yearwood, teacher of home economics.

The first step in making the joint educational program was to get a Progress and Achievement Survey from each farm family. A summary of the survey indicated the most important problems of the community. The social and recreational problems as well as the agricultural problems were considered in making the joint program. The boys and the girls assisted in making and in summarizing the surveys.

Co-operative Activities

The following examples will give a picture of a few of the co-operative experiences. The Future Farmers decided to have a parent-and-son banquet. It was voted at one of the meetings to ask the girls to assist them. A joint committee was appointed to plan the menu for the banquet. The boys were familiar with available food products from their supervised farming programs, and the girls knew the food and the vitamin value of each food product. The girls also knew the amount of food necessary to serve a given number of people. The Future Home Makers agreed to make the place cards and the nut baskets, and to cook and serve the meal. Jointly the girls and the boys decorated the banquet hall, prepared the food for cooking, and washed the dishes.

With the facts secured from the Progress and Achievement Surveys the teachers saw that food production and conservation was one of their big problems. They put the following plan into operation:

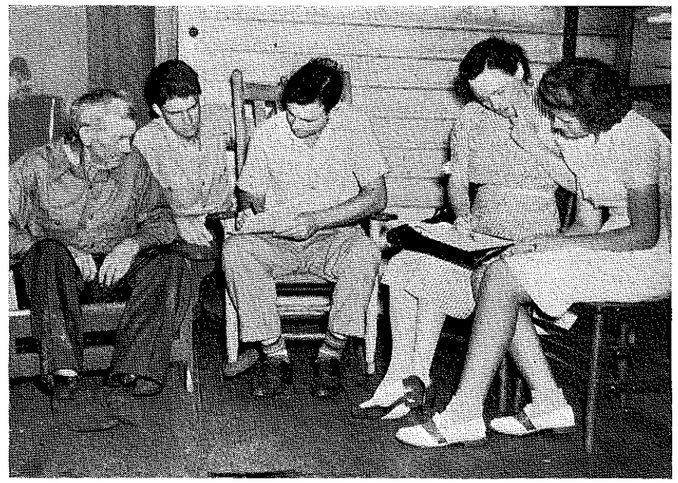
1. A food program was designed for each farm family that was represented by a boy and/or by a girl.

2. By exchanging classes Mr. Howell taught the girls how to produce vegetables and poultry.

3. The boys and the girls were asked to collect all available glass jars for use in canning fruits and vegetables.

4. They were taught jointly how to can fruits and vegetables that were produced on the land laboratory or as a surplus at home. More than 1,000 quarts were actually canned by them during the school year 1941-1942.

5. The boys were taught how to kill and butcher a beef animal. Both the boys and the girls were then taught how to can the meat.



The Teacher of Agriculture and the Teacher of Home Economics Visit a Brother and Sister Project

The girls wanted to construct an addition to the home economics building—one room to be used for social and recreational purposes and two kitchens. The boys gave several money-making types of entertainment and raised the needed funds. The boys also grew ornamental plants to use in landscaping the grounds around the home economics building. The girls painted the inside of the recreational hall and renovated furniture for it.

Brother and Sister Projects

Mr. Howell and Mrs. Yearwood have

Supervised Practice

C. L. ANGERER

Wartime Adjustments in Agricultural Education

MARVIN J. NICOL, Teacher, Marengo, Illinois

THE Community High School at Marengo, Illinois, is situated in the heart of a prolific milk-producing area supplying fluid milk to the Chicago milk shed. With the entry of the United States into the war, the citizens of the community unanimously pledged themselves to the patriotic duty of increasing food products for the United States and Allies.

Since December 7, 1941, the local board of education, the high school administrator, and the vocational agriculture instructor have been mindful of the adjustments which must necessarily be made to meet the ever-changing demands of a country at war. These adjustments have been made in the interests of increased farm production with less labor and equipment available.

Farm Labor

The first major problem which faced the school shortly following Pearl Harbor was the farm labor situation. Draft calls and enlistments were collecting their toll. The first popular impulse of a number of the people in the community was to shorten the school year. However, the board of education, principal, and faculty quietly went to work to study the situation.

After a careful survey of several weeks duration, the board of education and faculty jointly made the recommendation that they "did not think it to the best interests of the school to curtail the education of the student body or to shorten the school year when the services of only a limited number were actually required for the emergency." In view of the fact that there were some situations where exceptions occurred, new provisions were made whereby more extensive and liberal excuses were granted. However, the responsibility of student attendance as a contribution to the war effort by those not needed at home was emphasized by all faculty members.

Students Plan to Work on Farms

The special responsibility of supplying workers from the high school to the farms of the local community was accepted by the school. A student survey was conducted to determine the available students for farm work, the period during which the student would be available, and the type of work he was trained to do.

A special student bureau was set up in which all of these registration blanks were classified according to type of work and availability. Thru satisfactory publicity by students, the local newspaper, and various community agencies, the farmers as well as the small local industries and enterprises could determine what labor with the local student agencies. To date, approximately 40 satisfactory contacts have been made between employer and student employee.

Altho the student body, for the most part, may be classified as rural, there are a few town boys who have had limited agricultural experiences and training who have indicated their intention and desire in the student survey to serve on farms. Provisions have been made for these students.

Arrangements have been made to have these students accompany members of the various regular vocational classes to their home farms for overnight visits and to participate in the various operations and practices until suitable proficiency is demonstrated. Furthermore, individualized elementary instruction is being offered to these town boys by the agriculture instructor. The classroom instruction is being integrated with the actual work experience.

Dairy Herd Improvement

In the Agriculture Department there have been many adjustments made during the past 18 months. With "Food for Victory" the hue and cry and a seven percent increase in milk production requested by the AAA committee, the all-day students set about to see what they could do in a practical way. These students recognized that dairy herd improvement work was an ideal contribution to increased production.

With local herd testers being drafted every day, these students organized and carried to completion their own Junior Dairy Herd Improvement Association. All members of the all-day classes carried on a complete program on the home farm, and a number of additional farmers who were being hampered because of a scarcity of regularly qualified testers were included in this program.

No charge was made for any of the service, the expense being absorbed by the local agriculture department. The plan carried out was the same as a full-fledged adult dairy herd improvement association. The milk from each cow was weighed and butterfat tests run each month. On the basis of this information, the value of the product was calculated and checked against feed, labor, and other costs to determine profit or loss. With feeds available and production as a basis, rations were worked out and feeding recommendations were made.

There has been 100 percent participation in the program by 48 class members, and 37 co-operating farmers during the past 16 months. The program has resulted in the disposal of approximately three percent of the cows which on test ture of the program is an estimated 10 percent increase in milk production with less than a two percent increase in the number of cows.

The stress of wartime production demands has had a stimulating, rather than retarding effect upon the progress and growth of the Marengo 400 Club. This club was organized approximately 18 months before the war and has as its primary objective the establishment of dairy herds with a minimum of 400 pounds of butterfat from twice daily milking for 305 days. The basis for this program was the purchase of calves from dams with records of a minimum of 400 pounds on the above basis and "proved sires" or sires with dams making a minimum record of 500 pounds of butterfat.

Since the war this organization has increased from 35 calves to 52 calves of the above qualification. Many of the first calves purchased in this organization are now in production and are living up to expected production. A number of the boys are definitely on the way to a complete dairy program of high caliber. As a local enthusiast put it: "With only conservative progress within this group, in three or four years, these boys will own one-half of the highest producing cows in our county."

Other Wartime Changes

During the past year, 90 percent of the vocational agriculture students have increased their productive project enterprises 40 percent. Of this number, 36 percent have shown an increase of 100 percent or greater. The increased units have been designated as "victory units" and are restricted to the "Food for Victory" program.

The Marengo Future Farmer Chapter assisted in two local scrap and salvage drives. Pledge cards on which the donors listed amounts and kind of scrap were distributed in the community. The date of the pick-up was designated and the chapter members along with other students and the local businessmen picked up the scrap. The total scrap collected reached an unbelievable total of 205 tons. Chapter members served as township chairmen and the chapter advisor as general chairman of the drive.

Local F.F.A. chapter members have also been conscientiously contributing to the purchase of stamps and bonds which at the present time exceed $3,000 for the student body.

Adults Participate

Adult agricultural demands by patrons in the district have increased with the wartime emergency. Personal calls in the department and services rendered have more than doubled over former years. During the past winter two OSYA courses in dairy production were conducted by the local department. Practices affecting economical production of

Editorial Comment

(Continued from page 3)

Program Academic

The few adverse criticisms which might legitimately be made of our program include the following. First, I believe the program is still quite academic and bookish; it is still too much a class room subject, and subject to the not always salutary influence of traditional educational philosophy and practices. This is probably not due so much to the inadequacy of the teacher or the program, as to the failure of the local school superintendent or principal to appreciate the unique nature and significance of the program and the part it should play in the active life of the community.

Poorly Supervised Practice Programs

Second, because the above accusation is at least partially true, supervised farm practice programs are too often non-existent except in the reports submitted to the state supervisor. Of course, all teachers may have one or two supervised farming practice projects to which they can point with pride, and a few teachers may have several, but I am personally convinced from my own observations and from confessions of teachers themselves that a serious discrepancy exists between the state reports on supervised practice and the actual supervised programs in existence on the home farms. ~~If I am seriously wrong on this, I would welcome evidence to the contrary for it is a matter of major concern to me, as it should be to all involved. Aside from the moral implications of the discrepancy referred to,~~ our program cannot attain its maximum efficiency unless the supervised farm practice is real and genuine, rather than imaginary and deceptive.

Reach Too Few Students

Third, in Iowa, and I suspect in other states where large numbers of small high schools abound, our program in agriculture is failing to reach all or even a majority of our farm youth. While the existence of these small school units cannot, of course, be charged against our program, it is still true that these small high schools are the ones which should offer vocational education in agriculture since it is in them that so large a proportion of our farm youth receive all their formal education. This is particularly true of the 50 percent destined to be farmers. These schools cannot meet the regulations governing the current program in vocational agriculture, and hence their students are deprived of its benefits. Of the 921 high schools in Iowa, probably over 800 are attended by substantial members of farm youth. At no time have there been more than 200 schools with departments of vocational agriculture. The few large urban school systems do not feel the need for it, while the 460 odd with 75 or less students enrolled in the four high-school grades, are not able to meet the standard requirements in enrollment and equipment.

Fourth, the accusation we have made that the program is still too academic and bookish involves a considerable number of different but closely related items. I choose to mention at this time as being quite fundamental, first, our quite general failure to develop in students the habit and ability of close sound thinking, and second, the common use of competition as a motivating principle. Of course we are no worse in these two respects than are the teachers of other subjects, and perhaps not as bad, but that does not excuse us.

Not Enough Emphasis on Systematic Thinking

Perhaps a little elucidation of each of these points might be in order. I believe that our teachers do make frequent use of problematic situations of a sort in their teaching, and of course this is imperative if we are to give our student practice in thinking. But it is not enough. The quality of the problems employed and the manner in which the students are led to think their way thru to correct solutions are the really important factors which determine the quality and amount of the thinking done by both teacher and the students. On the basis of observation of actual teaching situations I am forced to the conclusion that far too often the quality of the thinking permitted is pretty "sloppy." Even tho the correct solutions may often be reached, due either to chance or to the advance information possessed by the instructor, it is clear that arriving at correct solutions by wrong methods will not provide the consistent practice in close critical thought which is necessary to develop the habit and ability of sound thinking in students.

Too Much Emphasis on Competition

The other point, that of the use of competition, is equally as fundamental. It has become crystal clear to this writer that co-operation between individuals, groups, and nations rather than competition must be the keynote of the future, if permanent progress toward a peaceful, well-ordered and just social order is to be achieved. This is particularly true concerning the future of agriculture and of rural life. I believe that there is abundant evidence in modern psychology, that human beings have capacity for, and receive satisfaction from, both co-operation and competition. But expression is one of the fundamental laws of growth, and we must admit that in our schools, and in many other agencies which attempt to work with children and youth, a great deal of opportunity and encouragement has been given for the expression of competition and very little for co-operation.

We give lip service to co-operation, because anybody above the level of a moron can appreciate the basic necessity for it, but we rarely provide opportunity for actual wholehearted participation in co-operative activity. This, in spite of all we say about learning by doing. I have in my files an interesting exhibit of announcements of competitions in which valuable prizes were offered for the best speeches and articles on co-operation, peace, and more paradoxical still, on "Christ, the Prince of Peace." Competitions bring anything but peace and good will and might therefore be said to be definitely anti-Christian.

The weakest point in the whole Future Farmer program is to be found in the emphasis it places upon state and national competitions. By so doing it is teaming up with the rest of the school in the unholy but powerful combinations of advertising agencies, with their subsidiaries, the press, and the cinema, so-called "service clubs," and "public spirited, self-made" individuals whose competitive ability enabled them to compete successfully against their less able, but probably more honest brethren, in the accumulation of wealth and influence. These have all been guilty of fostering in our brightest youth, thru their high powered appeals to the competitive and acquisitive "instincts," materialistic motives and ideals that will totally unfit them for leadership in a future which must be largely co-operative if civilization is to survive.

It is my humble and very earnest opinion that this emphasis upon competition, self-advancement, and material acquisition to the neglect of the opposite virtues of co-operation, social sensitivity, and altruism, which are the basic principles of both democracy and the Christian religion, assumes the proportions of a major sin. The hour is late, but perhaps not too late for educators to repent and begin to lay the sound foundations for a better world. Either a better or a worse one is right now in the making. An agricultural leader of whom we might well be proud, Henry A. Wallace, has said that the barest quarter turn of the human heart would put us on the road toward an unimagined plentitude for all. Personally, I would rejoice to see agricultural education accept this challenge and lead the way toward a saner and happier day for all.

J. A. S.

cussed. Many adjustments have been made as a result of this instruction and the instructor will be in demand to follow and supervise these practices thru the summer.

An OSYA course in farm carpentry is being conducted by the local vocational shop instructor. This course has proved more popular during the war year than it has been in any previous year. Farm boys in the vocational shop have supplemented shop-made equipment for vital materials which they have been unable to purchase. Among the farm equipment which has been constructed are trailers, hayracks, reconstructed running gears, poultry feeders, brooder houses and brooders, hog houses, hog feeders, etc. Much equipment has been repaired to serve for the duration.

Vocational agricultural curricula changes are placing emphasis on increased production of milk, pork, poultry, and eggs. The situation is being used as an incentive to increase crop yields thru a sound non-depleting cropping system. Conformation to the provisions and recommendations of AAA are encouraged. In farm management the changes in marketing situations brought about by war conditions are watched closely. The planning for present and future home farm operations is based upon government recommendations and efficiency of management and operation.

It is the personal opinion of the writer that the full flow of collective energy from vocational agriculture teachers in their comprehensive wartime agricultural education programs will not go unheeded when the war has been won. When the contributions are weighed in the balance, the reward will be a more wholesome public respect for a program which shall continue to prosper.

Farmer Classes

E. R. ALEXANDER

W. H. MARTIN

Getting Farmers to Adopt Improved Practices

J. BRYANT KIRKLAND, Associate Professor of Education, University of Tennessee

TEACHERS of agriculture have been called upon during the year to serve in numerous capacities of leadership. The demands which have been made upon their time and service have necessitated many adjustments in their usual program of work. Perhaps the most noteworthy of these changes has been the greater emphasis placed upon them in meeting the instructional needs of farm boys and adult farmers for increasing the production of food and feed. Even tho teachers have been instrumental in leading thousands of all-day boys to gear their supervised farming programs to meet the war needs, it appears that they have directed a much greater proportion of their time to the needs of the adult farmers in their attempt to meet production goals.

Reports from various states indicate that the teachers have gone all out in organizing and conducting Rural War Production Training Courses. In several states the number of courses and the enrollment to date has already exceeded the annual goals set up. When one considers the number of farmers being reached, the qualifications of the instructors selected, and the wealth of teaching material that has been prepared primarily for these courses, it seems that teachers of agriculture are in a favorable position to meet the instructional needs of the farmers of their respective communities.

Practices Are Important

The real worth of this or any program of vocational agriculture can best be measured in terms of its outcomes—the practices which result from each course. No doubt some courses have been conducted without the instructor's making any attempt to get the members to adopt but few if any of the new practices which grew out of the lessons taught. This is certainly no time to encourage farmers to follow "business as usual" attitudes toward new practices which will affect the production of needed foods and feeds. Teachers of agriculture should make a much stronger attempt now to get farmers to adopt approved practices than at any other era in the history of vocational agriculture. We cannot say that the farmer has learned until the information acquired in the several lessons has been reflected in the adoption of approved practices on his farm. Since the teacher of agriculture will do the follow-up work in connection with each course, it is necessary that he determine as early as possible what approved practices each farmer proposes to adopt. Without this information he will be unable to plan his supervisory visits in a manner which will make them most effective.

There are several methods by which the teacher may determine what new practices the farmers propose to adopt. No attempt is made here to enumerate all the available methods or to evaluate the ones listed.

1. *Leading farmers to state what practices they propose to adopt during the teaching period.* Many teachers have been successful in getting farmers to commit themselves with reference to adopting new practices immediately after they have reached conclusions regarding the practice under discussion. The writer recently observed a lesson on feeding hogs during which the teacher used the following procedure to get the farmers to adopt the practice of feeding minerals to hogs:

a. Drew out farmer experiences and led the group to evaluate them.

b. Supplemented these experiences with experimental data.

c. By use of the conference method led the farmers to reach conclusions regarding feeding minerals.

d. Asked the farmers how many could improve upon this phase of feeding hogs on their farms.

e. Asked how many farmers who are not feeding minerals at this time plan to feed minerals.

f. Requested the secretary to make a list of farmers proposing to adopt the practice.

This procedure was repeated as farmers were led to reach conclusions regarding each additional new practice that was dealt with during the lesson. This procedure of getting the farmers to state the practices they propose to adopt seems to have the psychological advantage of getting them to make the application of the teaching material to their local situation at a time when they are interested in solving the problem. In many instances commitments made publicly by key farmers may be instrumental in encouraging other farmers to adopt new practices.

2. *Leading farmers to state what practices they propose to adopt at the end of each lesson.* Some teachers follow a procedure similar to the above in which at the end of each lesson they summarize the practices which the farmers have concluded they should follow and which they feel are practical for them to adopt.

3. *Leading farmers to state what practices they propose to adopt during and at the end of each lesson.* This is a combination of the above procedures in which the teacher upon completing the discussion on each practice asks how many members plan to improve the practice; and during the summary at the end of the lesson refers to the list of farmers proposing to improve certain practices and asks if there are other farmers who, after further deliberation, plan to adopt these practices. When this method is used the secretary makes a record of the practices each farmer proposes to adopt.

4. *Making a chart of improved practices.* The teacher, together with his advisory committee, usually determines in advance of the first meeting the practices which should be adopted by the farmers as an outgrowth of the series of lessons. A chart placed in the classroom with a space for each member's name and a simple method of checking each practice proposed and actually carried out may be valuable in getting farmers to adopt new practices.

The secretary or teacher should record each farmer's name and the approved practices on the chart and see that the chart is placed in a prominent position in the classroom at each meeting. At the close of each lesson and just before each lesson begins, farmers should be encouraged to check the practices they propose to adopt and those they have in actual operation. This type of chart may be used also to show practices proposed by farmers when the teacher uses the other procedure suggested herein for securing improved practices.

5. *Using a check list of improved practices.* Instead of making a list of improved practices and placing them on a chart, some teachers prepare a mimeographed list of such practices and at the last meeting of the course ask each farmer to indicate those practices he proposes to adopt, and those that have already been adopted as a result of the evening school. Even tho this procedure offers possibilities of providing the teacher with a complete list of practices to be adopted by each member, it has many limitations if used as the only means of procuring such information.

6. *Making visits to determine what practices each farmer proposes to adopt.* This method provides a sound basis for the farmer, with the assistance of the teacher, to determine what practices are improvable on the farm and to consider carefully the possibilities of improving these practices. The teacher who relies primarily upon this method will find it necessary to make visits to the farms of the members during the early stages of the course, and to continue making such visits after the close of the course until each farmer has completed his selection of the practices he proposed to adopt. Teachers of agriculture who have several courses in operation during a given period will find it rather difficult with their regular duties to make as many follow-up visits as are necessary to aid the farmers in selecting the practices they propose to adopt. In view of this time shortage it would perhaps be advisable for the teacher to use some of the procedures listed earlier in this article to supplement the list procured thru visits to the members' farms.

Planning the Follow-Up Work

The primary purpose of any method used by the teacher is likely to be that of determining as early as possible what new practices the farmers propose to adopt. The teacher should use that method or

(Continued on page 12)

Co-ordinating the Rural War Production Training Program to Secure the Greatest Wartime Service

ALBERT G. RINN, Regional Supervisor, California

THE test of an effective evening school program in a rural high school is the use farmers make of it. A discussion group is fine, but unless something happens as a result of it, no constructive good will have been accomplished. It is the follow-thru that counts.

The program at the Madera Union High School in California will serve as an example.

Results Excellent

There was Robert Albonica who, because of the burlap bag shortage, wanted a 20,000 sack grain bin. The OSYA class welded all the metal braces and made and installed the elevators.

On the Pete Andrew ranch a bean harvester needed complete overhauling. The straightening and welding was done largely by the metal work class.

The Frank Del Cerro ranch received help in getting its tractor cylinder block welded and a large scraper straightened and welded.

A diesel engine on the Joe Ramires ranch was completely overhauled. This included replacement of rings, bearing, pins, oil system, and inspectors.

On the Arnst Lunstrom ranch the clutch and final drive on the tractor was replaced.

At the present time two old automobiles are undergoing conversion into power mowers for Sherwin Green and Paul Ocheltree.

Other jobs undertaken jointly by OSYA and farm mechanics evening school include: construction of farm trailers; shortening drafts on power plows; welding points on plows; turning down pins for tractor hook-up, and shaft hook-ups to ridger; building up tracks and pins on track layer tractors; and many others.

The success of this co-operative program apparently depended on the following factors:

1. The willingness on the part of the school administration to serve the adult community by providing shops, tools, and finances.

2. The ability of agriculture instructors, E. A. Griswold and Allen Hatch, to inform farmers of the facilities available, and to organize the classes.

3. The recognition on the part of the agriculture teachers of the kind of jobs which could be done in their shops.

4. The technical skill of instructor Claude Smith in the OSYA courses to handle some of the more difficult mechanical jobs.

F.F.A. State Farmer of 1936 takes active part in repair, operation, and construction of farm machinery

Co-operative Program

During the last school year three types of evening school courses were organized. There was the regular farm mechanics evening school organized for farmers, in which all manner of farm implements were repaired and constructed in the farm mechanics shop. In addition, there were two OSY courses in automotive mechanics and general metal work. All three courses operated almost continuously during the school term. The OSY courses were designed to give experience to out-of-school farm youth, 17–25, to increase their farming effectiveness as well as cause them to become employable as defense workers where their work on the farm was not required.

Almost at the outset, it became apparent that interchange of activity between the three groups was desirable. Farmers who had large jobs to do on machines needed those jobs done quickly so they could get their machines back into production. Often these farmers lacked the skill to do certain jobs on these machines without considerable practice work which they did not have time to engage in. The OSYA boys, on the other hand, needed actual jobs to work on instead of practice jobs. Result—the farmers got their machines in shape quickly and the students capitalized on the practice.

This co-operative exchange is still going on this year with both courses in the War Production Training Program and is even more effective since the upper age restrictions have been removed. The types of work undertaken and carried thru to completion are many.

Farmers learn to repair farm machinery

Farm Mechanics

L. B. POLLOM

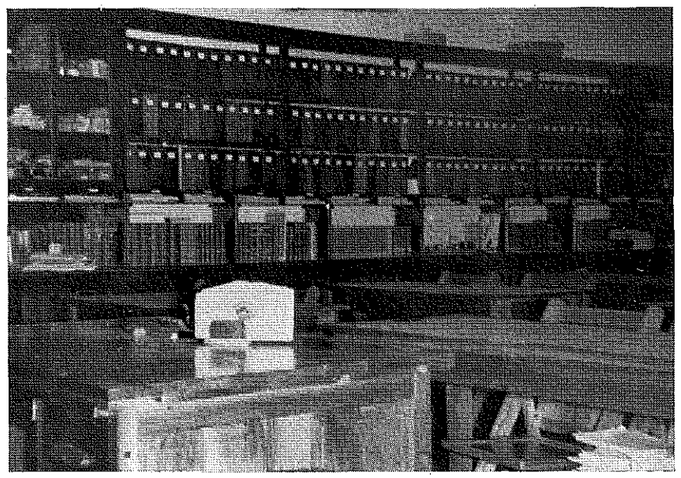
Furniture for the Agriculture Room

D. J. HAYES, Teacher, Alvaton, Kentucky

WHEN the Alvaton Chapter of Future Farmers of America was organized in the summer of 1938, the first goal in the program of activities was to furnish the agriculture room with suitable tables, teacher's desk, trophy case, and magazine rack. It was necessary for the chapter to earn some money before this could be accomplished, so during the school term several activities for raising money were initiated. One was the sale of vanilla extract. As it was found that many farmers in the community were using an inferior grade of tobacco seed, the chapter decided to sell certified tobacco seed. A farmer near the school gave the boys permission to seine his pond stocked with goldfish, and the boys secured and sold 100 fish. One of the boys donated to the chapter 100 pounds of popcorn grown on his farm.

Earnings from these activities were:

Vanilla extract	$16.00
Tobacco seed	10.00
Goldfish	2.40
Popcorn	6.60
Total	$35.00



Vocational Agriculture Classroom

At the last chapter meeting of the school term, the Future Farmers decided to buy walnut lumber and to build tables, magazine rack, trophy case, and teacher's desk; and a committee was appointed to locate suitable lumber.

After many weeks of effort, the committee reported that the nearest lumber obtainable was about 75 miles from Alvaton. One of the boys borrowed his father's dairy truck to haul the lumber. It was necessary to haul the lumber 10 miles over mud roads, with four mules hitched it up. One thousand board feet of walnut lumber was bought for $27.00.

After securing the lumber, the boys realized that they did not have the proper tools for building the equipment. Another organization in the community offered to build the furniture without cost, an offer which the boys accepted. Several months later, the furniture was completed and turned over to the boys. This equipment was built to specifications set up by the State Department of Education.

The Future Farmers finished the equipment themselves by sanding, applying three coats of clear shellac, and waxing it. Each boy finishes one bulletin box at the beginning of his freshman year. This gives him an appreciation of the amount of work required in finishing the equipment and makes him less likely to scratch or mar it in any way.

The last piece of room equipment was finished during the fall of 1941. The agriculture room is now equipped with black walnut student tables, magazine rack, trophy case, and teacher's desk at no cost to the local board of education. After dedication ceremonies, the equipment was presented to the Warren County Board of Education.

Cost and value of equipment is as follows:

Cost	
1,000 board feet of walnut lumber	$ 27.00
4 dozen sheets of sandpaper	.80
2 gallons of clear shellac	4.02
2 cans of Johnson's wax	1.18
Total cost	$ 33.00
Value of Equipment	
15 walnut tables at $20	$300.00
Walnut teacher's desk	40.00
Walnut trophy case	15.00
Total value	$375.00

The next goal to be achieved by the chapter is the construction of a chapter house which will be used for club meetings, recreation, and as a home for boys who do not live on a bus line. To finance the building, the boys have started a "Purebred Pig Club." A Future Farmer is presented with a purebred female pig. He signs an agreement to carry out improved practices and agrees to turn back to the chapter two female pigs from the first litter. The chapter now owns 32 pigs. The boys feel that the pig club is fulfilling a two-fold purpose: they have an opportunity to own better swine, and when a large reserve of pigs is built up, an auction will be held and the proceeds will be used to construct a chapter house.

Improved Practices

(Continued from page 10)

combination of methods which will best enable him to have a thoro knowledge of the practices each farmer proposes to improve. It would be well for the teacher to keep a record of such practices in a pocket-size notebook as an aid to him in planning his visits and in checking the progress made by farmers in carrying out the proposed practices. The teacher who has a cumulative record of the practices farmers propose to adopt and those actually in operation can more efficiently utilize the time available for visitation.

In many instances the teacher of agriculture will have so many farmers enrolled in adult classes that it will be practically impossible for him to make sufficient visits to the farmers to aid them effectively in putting each new practice into operation. In such cases it might be well for the teacher to plan and conduct timely demonstrations and farm tours on the farms of members who live in close proximity to several members. It is possible that further classroom instruction on problems which may have been discussed out of season would conserve teacher time for supervisory visits of a more crucial nature.

It is hoped that each teacher will plan his follow-up work in such a way that he can be of greatest service to the farmers in increasing their proficiency. Let us remember that the practices which grow out of each adult course are the criteria of its worth and that the adoption and satisfactory performance of such practices by the members is a responsibility the teacher must assume.

The September issue of *Occupations, the Vocational Guidance Magazine*, is a special wartime manual for counselors giving complete and authentic information on the opportunities in the armed services. Copies may be secured for 50 cents from the National Vocational Guidance Association, 525 West 120th St., New York

Some Essential Characteristics of an F.F.A. Chapter Program

K. W. KILTZ, Teacher Education, Purdue University

K. W. Kiltz

THE four-year-old lad raised his foot and placed it on the baby chick. He pushed ever harder. The chick became a helpless mass and after a brief struggle was quite inanimate. With proper nurturing the chick might have contributed its bit to "food for victory" and to the family income. What could it do tho without a sound skeleton and organs with which to function?

A certain F.F.A. chapter was caught under the weight of the indifference of the local teacher of vocational agriculture and the unborn interest of many of his agriculture boys. After some spasmodic activity this chapter became inanimate with its skeleton, the annual program of work; and its organs, the various officers and committees, undeveloped and insufficient.

Now the four-year-old lad was innocently curious. His chick had moved about and shown other signs of life. The boy probably thought to help this moving fluff, the chick, by stepping on it. No doubt, he wanted it to move more rapidly.

Perhaps this certain teacher of vocational agriculture was curiously innocent with an immature philosophy about the complete development of the personalities that he was training and about the correct vehicles for training them. At any rate his indifference, or his lack of matured philosophy, crushed the F.F.A. chapter that had been organized at the insistence of a few of his boys just as surely as the four-year-old lad's foot had crushed the chick.

A bit of sympathetic reasoning with the boy of four years might prevent the repetition of his mistake. Let us leave him to his proper counsellors and, instead, think with this certain teacher of vocational agriculture about his mistake in crushing his F.F.A. chapter with his indifference.

What is the Purpose of the F.F.A.?

Let us consider two questions, *viz.*, (1) How may the F.F.A. contribute to the more complete training of individual personalities and, (2) what are some of the more important characteristics of a well-developed F.F.A. chapter program of work?

1. *How may the F.F.A. contribute to the more complete training of individual personalities?*

In the classroom, in the laboratory, and on the farm the instruction of the individual in vocational agriculture aims at the development of information, skills, and attitudes that are essential to the successful operation of the farm. This is excellent but it is not the total service that can be rendered by the vocational agriculture teacher in training the individual boy. Happiness within the home, wholesome relationships in the community, and rurality between nations require more than the development of informed and skilled individuals, more than vocational self-sufficiency. Each person must be socially conscious and able, and must be trained to have consideration for others and to believe in orderly procedures in society and government. The F.F.A. has a definite contribution to make in this development. Thru the F.F.A. the boys can develop social abilities, be trained to consider problems from the viewpoint of others as well as from their own perspective, function in group activities, and learn to be intelligent individuals in a democratic group both in the capacity of leaders and as followers. Thus, thru the F.F.A. the boy can proceed beyond the development of technical job abilities to the more complete development of his entire personality.

2. *What are some of the most important characteristics of a well-developed F.F.A. Chapter program of work?*

It is probably correct to say that the program of work is the skeletal framework of the chapter. The following nine points are discussed with the thought that they are important characteristics of an effective program of work.

a. *The activities in the program of work should be related to the normal life of boys.*

As adult advisers we may become too mature in helping boys select and plan activities for the F.F.A. chapter. One way to prevent this is to place upon various boy committees the responsibility for selecting and detailing activities. The committees will be guided by their interests and their present stage of development. The adult adviser can guard against friction and futility in their planning.

b. *The activities should add to but not duplicate the routine instruction of the school.*

As implied earlier in this article, the purposes of F.F.A. are to complement the training given thru routine school procedures. They are to complete the development of the individual personality. In too many chapters this principle is violated when the program of work is organized. F.F.A. must add something to vocational agriculture, not merely claim that which was already accruing from vocational agriculture prior to the inception of F.F.A.

c. *Some part of the program should be of interest to each member of the chapter and he should become active in it.*

One of the basic laws of learning is that the individual learns thru self-activity. To be successful the F.F.A. chapter must quicken the interest of each member. This will be done if the program is carefully selected by committees of boys that are representative of the chapter. The interests and needs of the entire chapter membership must be considered. When the interest of a boy in the chapter program is discovered, he should be given some responsibility in that activity in which he is most interested.

d. *The activities should be possible of achievement by boys of this age.*

A worth-while job well done usually is stimulating to the one who does it. Be are selected for the chapter program. It is better to develop small plans that culminate rather than large plans that stifle interest because they cannot be carried out by the boys.

e. *The activity should be basic to future activities.*

One weakness of many people is the fragmentary way in which they think and act. There is a lack of organized continuity in their lives. As a consequence, they are usually less effective than they would be otherwise. Boys trained in F.F.A. chapters should be taught to plan in an organized way for extended periods of time. The annual program of work should be developed with due consideration being given to achievements during the last year and to the needs for the next year. There should be organized growth in the program from year to year even as the builder lays one block upon the other until the edifice is erected.

f. *The activity should be acceptable to the community and worthy of advertising.*

Naturally, the end-point of any activity in the chapter program of work is not the advertising of it. However, the activity should be so well selected for its training values for the youth in a particular community, that the people of the community may be informed about it with confidence on the part of the teacher that it will be well received and approved by them. Furthermore, each activity should be evaluated with the social, economic, and vocational structure of the community in mind. We must begin with the boy where we find him and adjust his training accordingly. He may live in a community that is socially undeveloped, economically depressed, or vocationally backward or vice versa. His training thru the F.F.A. chapter will be affected by these community conditions.

g. *The activity should be educational in nature.*

The F.F.A. chapter is not a stunt. It should not be like a Roman candle that sputters and sparkles in a brief celebration, then dies away to a night that is blacker than before it was lighted. Rather, the chapter is the medium for a prolonged training effort that will result in cultivation of the personality of the boy. Each activity in the chapter program should be scanned for the possible contribution that it may make in the intellectual, moral, spiritual, or physical development of the boy.

h. *The activity should be socially sound.*

The opportunity for the boy to develop social abilities should accrue from the F.F.A. program of work. The social activities and the abilities that may be developed thru them should be of a high order. Our F.F.A. members should develop to the point that they have poise under all normal circumstances.

i. *The activity shou'd be economically sound.*

Sound business procedures are supposedly a part of the training of the boy in vocational agriculture. The F.F.A. chapter should not sponsor activities that do not conform to good management.

No attempt has been made in this brief article to illustrate concretely the more or less abstract statements that have been made. It is suggested that the reader have his own chapter program in mind as he reflects on these statements. If he considers them sound he may wish to consider whether his chapter program con-

Studies and Investigations

C. S. ANDERSON

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

A Critical Review of Research in One Phase of Agricultural Education

Part I

CARLTON E. WRIGHT

Introduction

C. E. Wright

INSTRUCTION in vocational agriculture has been offered in the public secondary schools of the United States with the encouragement of federal funds since the passage of the National Vocational Education Act of 1917. As early as 1920 interest developed in what former students who receive instruction in vocational agriculture do after leaving school. In all parts of the country and in most of the states, studies have been conducted dealing with this problem, as well as with the factors which determine the future occupational distribution of former students.

Since a great many studies have been made and reported independently, it seems logical to assume that certain truths have evolved concerning the subsequent activities of former students and the factors affecting these activities. In order to report the facts which have been discovered, a study was made of some 106 separate investigations. In addition to an analysis of the facts concerning former students, a general overview of the progress and accomplishment of research in this phase of agricultural education was formulated by studying, analyzing, and correlating the results of the separate investigations.

Purpose of the Study

The main purpose of this study is to compare and evaluate studies made, with reference to former students of vocational agriculture; and to discover the factors affecting subsequent occupational activities and employment.

Contributory purposes involved in the study are as follows:

1. Locating and analyzing the studies which have dealt with the problem of occupational distribution of former students of vocational agriculture, as well as those dealing with effectiveness of the program and the opportunities for placement and establishment of young men in farming.
2. Presenting evidence and conclusions concerning problems which have been investigated and which appear at least partially and temporarily to be solved.
3. Discovering differential factors and new problems by combining, correlating, evaluating, and reporting the results of research dealing with occupational distribution of former students of vocational agriculture.
4. Ascertaining evident strengths and weaknesses in previous research in an effort to improve future research.
5. Determining any trends in agricultural education in secondary schools that may appear.
6. Evaluating results of research concerning former students of vocational agriculture and their establishment in farming.

This is the first part of a study, "Occupational Distribution, Entrance into Farming, and Opportunities for Farming, of Former Students of Vocational Agriculture" made by Mr. Carlton E. Wright. Dr. Wright has done an excellent piece of investigation. He points out some implications for those of us who are directing or making studies that should have our careful consideration. They are: (1) take into account more meticulously minimum standards for the conduct of study and (2) make a review of what has been done already in a given field. This study deserves careful reading by all who are interested in research in agricultural education.

Dr. Wright is a graduate of the University of Vermont and received his Master's and Doctor's Degrees at Cornell University. He taught agriculture in Vermont, was instructor in farm mechanics at the University of Vermont and assistant professor of agriculture at the University of New Hampshire.—Editor.

Conclusions and Implications

Classification of studies and parts of studies is made on the basis of comparable data and conclusions are drawn from the

Interpretations are made from the data available on the various topics. Implications are presented for guidance in the secondary schools. Finally, implications for the improvement of research in agricultural education are presented. The major conclusions and implications of the study are presented herewith.

Conclusions

I. *Results differ according to sections of the country and states studied; to character, size, and value of farms; to conditions peculiar to the studies themselves; and to the methods used and interpretations made in them.*

A. Great differences exist in the occupational distribution of former students of vocational agriculture in various sections of the country; likewise between specific areas within states. The largest proportions of former students entering farming and all other phases of agriculture are found in the agricultural states of the Central West. The proportion of former students entering farming in the southeastern and the northeastern sections of the country and the entire Atlantic seaboard is relatively small.

B. Many factors affect the differences in the proportions of former students entering farming in various sections of the country. Where the proportion of all land in farms is great, where farm tenancy is high or above the state average, where farms are of medium size or larger, and where the value per farm is high, more former students tend to enter farming than where these conditions do not obtain. On the other hand, present evidence indicates that in some sections where the value of land and buildings per acre is lower, more former students appear to enter farming; but further study, however, is needed to provide conclusive evidence since other factors, for example, tradition in the South, affect the proportion of former students that farm.

C. Differences in results of studies may be partially explained by differences inherent in the studies themselves. Studies covering large areas or large groups of students usually locate smaller proportions of all former students than studies covering small areas or small numbers of students. In such cases the sample obtained is seldom adequate, often misleading, and the significance of the results is reduced. Since such studies usually have shown larger percentages in farming than other studies, it becomes apparent that the individuals not located would have had a damaging effect on the results, for it is likely that they were not in their local area and were in other than farming occupations.

D. A great lack of uniformity exists as to the meaning, terminology, and classification of occupations related to farming and to agriculture. Results of studies are less comparable in the cases of related occupations.

II. *The proportion of former students entering farming varies according to economic conditions and to the amount and kind of school experiences; not all who enter farming continue in that occupation.*

A. The proportion of former students of vocational agriculture entering farming does not appear to be larger than in former years; no tendency toward increase is apparent. The data indicate that in times of depression, when the price level is low or falling, the proportion of former students found in farming is larger, the proportion entering related occupations is smaller, and the proportion attending college is smaller. The reverse is true when the price level is high or rising. Thus the time of making a study affects the results expressed as percentages in dealing with the occupational distribution of former students. Studies made during the depression show larger proportions in farming than those made at other times.

B. Larger proportions of former students enter farming: who leave school before graduation, who study vocational agriculture, who receive lower grades, who attend fewer years of high school, whose fathers are farmers, who attend small schools, who attend special schools of agriculture, who study more years of vocational agriculture, who have larger and more successful supervised farming programs, and who participate in extra curricular activities of an agricultural nature, than those who do not meet these conditions.

C. Not all boys who intend to farm do so; many who do not intend to farm or who are undecided as to future vocation later enter farming. Many boys enter farming who would prefer other occupations. After entrance into farming there is a shift into non-farming occupations, as there is a shift from non-farming occupations into farming, but the movement out of farming exceeds the movement into farming occupations.

III. *Competition from brothers and sisters limits opportunities for becoming established in farming; marriage is associated with satisfactory establishment and financial arrangements can be made for entrance into farming.*

A. The greater the number of brothers and sisters the boys have, the smaller is the proportion entering farming and the greater the proportion entering related or non-agricultural occupations. The number of brothers appears to be a more important factor than the number of sisters in determining whether boys enter farming. The older brothers tend to farm in greater numbers than the younger ones.

B. Marriage on the part of young farmers is associated with becoming permanently established in farming. Farm boys are likely to marry girls from rural areas; boys who enter non-farming occupations are less likely to marry farm girls. Opportunities in farming appear to be open to both married and single young men but most farmers are married.

C. Data indicate that it is possible for former students to secure share agreements with parents or others with almost no capital, that only relatively small amounts of capital are required to rent farms, and that in most cases the amount needed for buying farms is not great.

IV. *Entrance into farming in greater proportions is found among boys who come from farms; from medium-sized or larger farms; from owned farms; and from farms of good quality where opportunities for establishment and success are greater.*

A. The proportion of village boys in vocational agriculture classes has been decreasing but most studies show nearly one-fourth of the former students to have come from non-farm homes. Even tho they study vocational agriculture, an insignificant percentage of village or non-farm boys enter farming.

B. Former students from large farms are more likely to enter farming than those from small farms. Certain data show that boys from exceptionally large farms are no more likely to enter farming than boys from medium-sized or large farms. If boys are to return to farming on the home farm, then that farm must be of sufficient size to permit profitable farming operations for the boys as well as for the parents.

C. Other things being equal boys from owned farms are more likely to enter farming than boys from unowned farms.

D. Boys from better farms, where farming opportunities are greater, are more likely to enter farming than boys from farms of poorer grade. This seems also to be true in regard to farms located in more progressive communities.

V. *Former students who attend smaller schools in rural areas, who drop out before finishing high school, and who receive lower grades regardless of the course taken in high school enter farming in greater proportions than those not meeting these conditions.*

A. The greater the number of years of school attended, the smaller is the percentage of former students entering farming, and the greater the percentage entering related occupations; but the percentage entering all agricultural occupations combined is smaller. The boys who complete a greater number of years of school achieve a higher status in farming and are likely to be more successful farmers than those who complete less schooling. Since boys who are graduated are less likely to enter farming than those who leave before graduation, agricultural instruction in the early years of high school is desirable and the present program of instruction for out-of-school farm youth should be continued and expanded. Rural boys who enter farming complete less high school than all rural boys as a group.

B. Rural boys who attend rural high schools and stay in rural areas are likely to enter farming or other agricultural occupations. Since rural boys are likely to follow the occupations of their fathers, farm boys are likely to farm and village boys are not.

C. Rural boys, particularly farm boys, are likely to enter farming regardless of the courses they take in high school. Many boys who take courses other than agriculture (such as college preparatory or commercial) in high school, eventually enter farming. Since many boys who later enter farming do not study vocational agriculture, the importance of vocational guidance in rural schools is evident.

D. Boys who attend small schools and study vocational agriculture are more likely to enter farming than boys who study that subject in large schools. This is probably due to the fact that a larger percentage of the boys in vocational agriculture classes in small schools are farm boys.

E. Boys who attend special schools of agriculture tend to enter farming in greater proportions than boys who study vocational agriculture in public high schools. This is probably due to the fact that boys who want to farm attend schools of agriculture; not necessarily that they want to farm because they attend such schools.

F. In general, boys who receive high grades in school, or stand higher in class rank, enter farming in a smaller proportion than those who have a poorer scholastic record. The scholastic record of former students entering farming tends to be lower than that of those not entering that occupation. Of those who enter farm-

(Continued on page 17)

Future Farmers of America

A. W. TENNEY

Fremont F.F.A. Co-operative Orchard Project

W. P. SCHROEDER, Teacher, Fremont, Michigan

PROPER use of facilities in the community can result in an enlarged and more functional educational program. Students like to be a part of an organization that is doing something worth-while. Co-operative projects provide a means for experience in an enterprise of a nature that many students could not include in their supervised practice at home. The students at Fremont decided to undertake an orchard project because that type of co-operative activity approached farming conditions with all the risks and problems involved.

What Was Available?

Several orchards of medium age and good varieties are located near Fremont. In making the selection, the boys had to have a knowledge of varieties, fruiting habits of apple trees, history of the orchard, and storage facilities. These problems were studied in class and in the orchards visited. Considering location and all other factors, the group decided to lease for three years an orchard of 300 trees located one half mile from the school.

The F.F.A. owned no equipment to operate an orchard but with the farm boys' ingenuity and a farm shop things began to happen. The organization borrowed money to purchase a discarded truck, spray tank, pump and a Model A Ford motor for $62.00. The overhauling, repairing, and assembling of all the units provided good experience for the students. The sprayer was mounted on the truck and later a four row potato boom was constructed in the front of the truck. Pruning equipment was brought in by each member as these activities were undertaken by the group.

Pruning and Spraying Were Carried Out

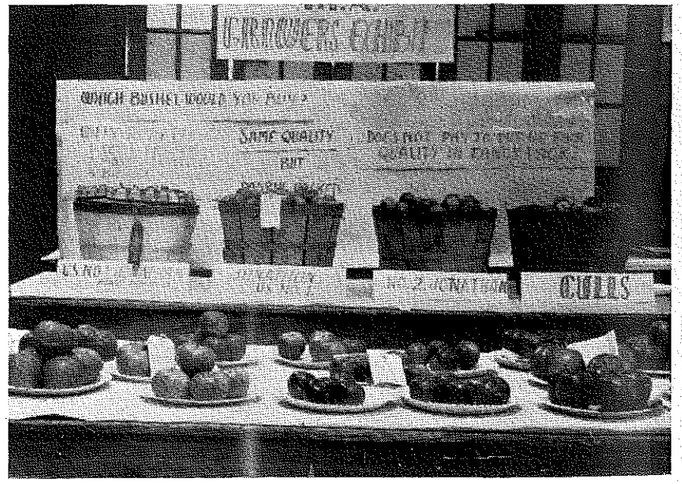
Added interest was shown in pruning because harvest time would reveal the results of a good or poor job. Enough trees were available to give each member ample experience in the latest methods. Many students pruned their home orchards when enough experience had been gained.

The "memorizing" of the spray calendar is often a difficult task. However, studying the recommendations and the needs for different spray materials, purchasing the material and mixing and applying the spray, provided an entirely different and more interesting learning situation. Once a student had mixed two or three tanks of material, he had an understanding of the spray calendar and could with little study make the seasonal adjustments.

During the summer, enough boys were available to apply sprays and thin the fruit. Also during the summer, as a part of the project tour, a stop was made at the orchard to inspect spray results and note insects and diseases that needed control at that time.

Harvesting Activities Were Performed

Proper methods of picking and handling the apples were studied in school and at the orchard. The major part of the 900-bushel crop was harvested in September and October. Proper picking and handling were compared with poor practices. A committee of boys constructed an attractive educational display of good and poor packing at the community fair, which was sponsored by the F.F.A. The students used every opportunity to make the whole project an educational enterprise for the community.



Educational Exhibit at Community Fair

Much harvesting was done on Saturday and after school because too much repetition occurred if only class-time were used. All class-time labor was credited to the F.F.A. treasury at 20 cents an hour, while earnings in other than school-time labor were paid to the individual at 40 cents an hour.

A Marketing Program Was Developed

Many apples, altho sound, were not of superior quality. Something had to be done if all the apples were to be sold. Making cider seemed to be an answer. Very little filtered cider had been sold in Fremont up to that time. A study was made of a small, gravity filter recommended by Michigan State College. The chapter agreed that here was an opportunity to put a quality, healthful product on the market without a large investment in equipment. Eighty-four cents for muslin and a rubber hose, a spigot, some scrap lumber, and barrels at $2.00 each were the needed supplies.

A committee designed an apple-shaped label six inches in diameter, made of gold gummed paper. On the label was a short description of the product and the producer's name "Fremont F.F.A."—all in blue, thus carrying out the F.F.A. color scheme of blue and gold. Coca-Cola jugs from soda fountains were cleaned and used for containers. In all, 1,080 gallons were filtered from 310 bushels of apples. The price of 25c per gallon was 10c higher than the unfiltered juice of the previous year. The F.F.A. learned that quality and attractiveness pay. In fact, the public probably would have paid 35c to 40c per gallon for the filtered juice.

The early apples were marketed to stores in Fremont. A problem arose in disposing of the bulk of the crop, as the market was oversupplied at picking time. A study proved that by holding apples, the boys could realize a higher price. A basement storage in the center of town was rented which proved to be excellent for convenience and for temperature regulations. Members learned how to regulate the air to provide the optimum temperature for keeping the fruit. By holding the apples until January 1st a very satisfactory price was received.

Complete Accounts Were Kept

The treasurer kept an accurate record of hours of labor, expenses, and income. This was necessary, of course, to make the settlement with the landlord as he received half of the net profits. This brought out the necessity of account keeping in any business.

The gross income from the project was $776.10. Expenses were: spray materials $74.28; labor (other than class time) $149.11; and repairs, truck expense, and miscellaneous $169.91. After all expenses were paid, the F.F.A. had $357.17 which included class labor. With the money earned, the truck, spray rig, baskets, crates, and other small articles were purchased, which left a sizeable amount to start another year without borrowing.

Outcomes of Value Noted

One boy has purchased a spray outfit and is caring for his home orchard. Two boys have large orchard projects, each using his father's equipment. Forty-five other boys received practical experience in orcharding and in varying degrees will carry out practices learned on the home orchard. All boys received valuable mechanical experience, especially the committees from each class, whose responsibility it was to keep the truck and other equipment in good operating condition.

The seasonal nature of the orchard project spreads the work over considerable time, making it easy to carry on most of the work during school. A valuable lesson in co-operation is gained from such a project; members learn to co-operate, the project improves in educational values and financial returns. Learning to work together may be as important as learning the skills involved in operating an orchard.

Occupational Distribution

(Continued from page 15)

ing, however, there is evidence to indicate that those who receive high grades achieve a higher status in farming. Students who receive higher grades in school migrate from their home communities in greater proportions than those who receive lower grades.

VI. *The extension of instruction in vocational agriculture affects favorably entrance into and success in farming.*

A. A larger percentage of boys enter farming who have studied vocational agriculture than of those who have not, indicating that boys who intend to enter farming or other agricultural occupations choose vocational agriculture if they have the opportunity. More of the boys who have studied vocational agriculture enter farming than any other single occupation, nearly as many enter farming as enter all other occupations combined, and more enter farming and other agricultural occupations than enter all other occupations combined.

B. The tendency is for over one-half of the students who study vocational agriculture to complete their high school courses. The evidence indicates that approximately one-fourth of the students who study vocational agriculture leave school during or after the first year of high school. The percentage of former students, graduated from high school, has been increasing. This is probably not peculiar to this group of high school graduates; this tendency has developed in secondary schools in general for all students. No data are presented to show that the study of vocational agriculture is responsible in and of itself for a higher percentage of students being graduated from high school.

C. High-school graduates who have studied vocational agriculture enter related occupations in a greater proportion than all other former students and in a much greater proportion than all others who drop out before being graduated.

D. The number of years of vocational agriculture studied has been increasing. Altho the largest group studies the subject one year, the greatest reduction in numbers occurs between the second and third years.

E. Most evidence indicates that the more years of vocational agriculture studied, the greater is the proportion of former students entering farming, but the data do not show that this is necessarily due to the study of more years of agriculture. For each successive year of high school attended, the greater the number of years of agriculture studied the greater is the percentage of former students entering farming; that is, boys attending three years of high school and studying three years of agriculture are more likely to farm than similar boys studying only one or two years of agriculture.

F. Former students who enter farming usually have received more financial returns from their supervised farming programs, have had more money invested in farming when they leave school, have had larger programs while in school, and have had greater success in their supervised farming programs than boys not entering farming. Data are not available to show that boys enter farming because of these facts.

G. Former students who enter farming tend to have been in extra curricular activities of an agricultural nature while in school; data are not available to show that because of participation in such activities boys enter farming.

VII. *State Farmers are more likely to attend college and to enter related occupations, and less likely to enter farming, than all other former students of vocational agriculture.*

A. Former students of vocational agriculture who have received the State Farmer degree enter farming in smaller proportions and related occupations in larger proportions than boys who were not awarded the degree. A larger proportion of State Farmers attends college, and of those who attend college a larger proportion attends agricultural colleges, than of all former students. As in the case of all former students who attend college, State Farmers tend to enter related occupations; relatively few return to the farm.

VIII. *Altho attendance at college is constant, entrance into agricultural colleges has been increasing and graduates tend to enter related occupations; those who drop out of college are more likely to farm than those who are graduated.*

A. Altho there seems to be no tendency for the proportion of former students attending college to increase, in recent years an increasing percentage have been entering colleges of agriculture and a decreasing percentage have been in attendance at non-agricultural colleges.

A relatively small percentage of those former students who enter college are graduated, but the percentage who attend agricultural colleges and are graduated is higher than the percentage of those who attend other colleges and are graduated. This may be due to lack of guidance in choice of type of college.

B. The data show that a larger percentage of those who enter college and leave before graduation enter farming than of those who are graduated from college. Also a larger percentage of former students who are graduated from agricultural colleges enter related occupations than of those not graduated; a very small percentage of former students who complete college return to the farm.

IX. *Entrance into related occupations is affected by the amount of education of students and by the nature of the competition between farming and related occupations.*

A. A relatively small proportion of former students enters related occupations, indicating that opportunities are limited for students who have studied vocational agriculture but have not continued their education further. Continued education with adequate guidance may so develop the individual that he will recognize opportunities, and make opportunities for himself.

The proportion of former students of vocational agriculture entering related occupations does not appear larger than in earlier years; no trend is apparent. In sections where a larger percentage of former students enter farming, however, there is a tendency for a smaller percentage to enter related occupations; where fewer enter farming more enter related occupations. This indicates that there is competition between farming and related occupations. If opportunities in related occupations exist, it appears that former students accept them, thus there is a corresponding decrease in the proportion entering farming.

X. *The proportion of former students found in farming decreases, but the status of those in farming increases, the longer they have been out of school.*

(Continued on next page)

A. The longer a group of former students has been out of school the smaller is the proportion in farming, the greater the proportion in related occupations; the proportion in all agricultural occupations combined decreases with the passage of time. The longer out of school, the larger is the proportion of former students farming in the owner and renter statuses, and the proportion farming with the parents decreases. As boys are out of school longer and become older they rise higher in farming status, and the more fully they become established in farming. However, age at time of leaving school seems to have little influence as to whether a young man continues to farm.

XI. *Migration is less in numbers and distance for boys working in agriculture and greater for students who receive higher grades in school.*

A. Boys working in agriculture tend to migrate less than boys who enter non-agricultural occupations; boys in farming migrate the least of any group. The migration distance is not far from the home community in most cases, but those in farming migrate fewer miles than those in non-farming occupations.

Students who receive higher grades in school migrate from their home communities in greater proportions than those who receive lower grades.

B. Since former students of vocational agriculture tend to stay in the community in which they were raised, or in nearby communities, the present policy of formulating the instructional program largely in terms of local conditions can be supported.

XII. *There is a varied type of agricultural ladder in becoming established in farming as expressed in the statuses of former students of vocational agriculture.*

A. Soon after leaving or finishing high school former students of vocational agriculture, if they enter farming, tend to farm with their parents. As the boys are out of school longer, the proportion farming with their parents decreases, and after a few years a relatively small proportion of those farming with their parents is still receiving an allowance or has income from owned farm enterprises. As these groups decrease in numbers, the group in partnership with their parents increases for a period of time, then decreases as the boys take over farms for themselves.

B. Of those former students in farming, the data indicate that from 10 to 20 percent are farming at home with a definite or indefinite allowance; a comparable percentage farm at home with income from one or more farm enterprises.

C. The proportion of former students farming as laborers for specific wages away from home exceeds considerably those working for wages on the home farm. Those working as partners in a farm business at home exceed greatly in numbers those working as partners away from home.

D. The percentage of former students employed as hired farm managers is very small, indicating a lack of opportunity for employment in that status. This is also true of the status of farm partner away from home.

E. Former students who receive higher grades or stand higher in class rank in school, complete more years of high school, or study more years of vocational agriculture, tend to achieve a higher status in farming than those who do not meet these conditions. The longer boys are out of school and the older they become the higher they rise in farming status.

F. The agricultural ladder varies in different sections of the country and with different types of farming in the same locality. The rate of advancement in becoming established varies greatly and is affected by many factors, including the young man's ability and training as well as the opportunities open to him.

A Report on Labor Training Courses

B. C. DAVIS, District Supervisor, Texas

VOCATIONAL agriculture teachers have supervised farm and ranch labor training courses in 16 centers in the Hill Country during February. This particular course was conducted in order to train people to shear goats and sheep. (There are three and one-half million goats and 11 million sheep in Texas to be sheared). These 16 classes have operated over a two-weeks period and have trained 318 individuals to shear.

I have talked with some of the class members in different sections and believe that we have aided the labor problem by these training courses. Melton Jones, a member of the class in Blanco County, said he had never sheared a goat before the class started but has sheared 440 during the training period and the weeks which followed.

Training Functions

A young man in Burnet County said he has sheared over 300 goats since the class closed and has repaired an old three-drop shearing machine which he plans to use in shearing for his neighbors during the coming season. He says he can "make good money" as well as get the mohair and wool for the government.

A number of superintendents of schools over the territory have written to me about this work. Mr. Smyre of Fredricksburg, says: "I think this course as set up shows the best example of forward thinking that I have known in many years. I believe you have a sane and practical way of overcoming the difficulty caused by labor shortage."

Mr. M. A. Hatfield of Medina, Bandera County, says: "Our goat shearing course was very successful."

Mr. Curtis Bozarth of Lampasas, says: "I feel that this problem of labor shortage in shearing is important enough that our boys should be permitted to miss school at the peak of the shearing season in order to provide needed labor. I, personally, endorse this type of training 100 percent."

Mr. S. DeBord of Blanco, says: "I consider this one of the best things the Vocational Division could do for our section. . . . experienced shearers profited by this course in methods, care and use of machinery, and in using newly trained men."

In the black land section of this area, we have in operation at this time nine tractor-driving courses. The vocational agriculture teachers are supervising these courses and assisting the farmer who is employed as teacher, in training all the people that it is possible to get in each community to drive tractors. Reports so far indicate that there is much interest in this work. It is possible that we will conduct 25 tractor driving courses during the month.

Future Farmers and Future Homemakers Co-operate

(Continued from page 7)

quite a number of brother and sister projects. Often the home improvement desired by the sister will make a splendid farm shop job for the brother to do at home. The boy can also co-operate with his sister in the production of fruits, vegetables, and meats that she wants to can in her practice program.

The co-operation has extended to include many types of social activities. A joint committee plans the social activities, each agreeing to share in the cost, if any. Last year the following types of social acitivites were sponsored by the two teachers:

1. A Christmas party. Toys were made or renovated and brought to the party to be given to underprivileged children.
2. A beach party
3. A wiener roast
4. A barn dance

Both the boys and girls have worked diligently in the collection of scrap iron and rubber. The effort was a co-operative undertaking on the part of both the Future Farmers and the Future Home Makers.

The various co-operative activities have furnished educational experiences to the students which have resulted in their learning many facts and skills. The experiences have also taught them the principles of citizenship and have been the means of demonstrating to the community a few of the many services rendered by the school.

Were You Complaining?

Our forefathers did without sugar till the 13th century; coal fires till the 14th; buttered bread till the 15th; potatoes or tobacco till the 16th; coffee, tea, or soap till the 17th; pudding till the 18th; gas, matches, or electricity till the 19th; canned goods till the 20th; and we have only had automobiles for a few years.

Now what was it you were complaining about?—*Swift Arrow*

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cs—colored supervisors; ct—colored teacher-trainers

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rs—J. C. Cannon, Auburn
rs—H. F. Gibson, Auburn
rs—L. L. Sellers, Auburn
rs—C. C. Scarborough, Auburn
rs—T. L. Faulkner, Auburn
t—S. L. Chesnutt, Auburn
t—George T. Sargent, Auburn
t—W. R. Montgomery, Auburn
rt—A. L. Morrison, Auburn

ARIZONA
d—E. D. Ring, Phoenix
s—L. D. Klemmedson, Phoenix
t—R. W. Cline, Tucson
t—J. R. Cullison, Tucson

ARKANSAS
d-s—Fred A. Smith, Little Rock
s—C. R. Wilkey, Little Rock
rs—T. A. White, Monticello
rs—O. J. Seymour, Arkadelphia
rs—J. A. Niven, Russellville
rs—Earl G. Landers, Batesville
t—Keith L. Holloway, Fayetteville
t—Roy W. Roberts, Fayetteville
rt—Henry L. Cochran, Fayetteville
ct—J. C. McAdams, Pine Bluff

CALIFORNIA
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d—Julian A. McPhee, San Luis Obispo
s—B. W. Everett, San Luis Obispo
rs—B. R. Denbigh, Los Angeles
rs—Howard F. Chappell, Sacramento
rs—B. J. McMahon, San Luis Obispo
rs—A. G. Rinn, San Luis Obispo
rs—Weir Fetters, San Luis Obispo
rs—Harold O. Wilson, San Luis Obispo
t—S. S. Sutherland, Sacramento
it—George P. Couper, San Luis Obispo
it—J. I. Thompson, San Luis Obispo
rt—C. O. McCorkle, San Luis Obispo

COLORADO
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s—L. R. Davies, Denver
s—Alfred R. Bunger, Denver
t—G. A. Schmidt, Fort Collins
rt—Gilbert Betts, Fort Collins

CONNECTICUT
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s—R. L. Hahn, Hartford
t—C. B. Gentry, Storrs

DELAWARE
d-t—R. W. Heim, Newark
s—P. M. Hodgson, Dover

FLORIDA
d—Colin English, Tallahassee
s—J. F. Williams, Jr., Tallahassee
t—E. W. Garris, Gainesville
t—A. W. Tenney, Gainesville
it—H. E. Wood, Gainesville
it—W. T. Lofton, Gainesville
ct—L. A. Marshall, Tallahassee
ct—C. W. Conoly, Tallahassee

GEORGIA
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s—T. G. Walters, Atlanta
ds—George I. Martin, Tifton
ds—C. M. Reed, Carrolton
ds—J. N. Baker, Swainsboro
ds—J. H. Mitchell, Athens
cs—Alva Tabor, Fort Valley
t—John T. Wheeler, Athens
t—O. C. Aderhold, Athens
t—A. O. Duncan, Athens
t—R. H. Tolbert, Athens

HAWAII
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s—W. H. Coulter, Honolulu, T. H.
s—Warren Gibson, Honolulu, T. H.
t—F. E. Armstrong, Honolulu, T. H.

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d-s—William Kerr, Boise
s—Stanley S. Richardson, Boise
s—Elmer N. Belnap, Idaho Falls
t—H. E. Lattig, Moscow
t—H. A. Winner, Moscow
s—Carl O. Hennings, Boise

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d—J. E. Hill, Springfield
s—L. C. Cannon, Springfield
s—B. A. Tomlin, Springfield
s—D. G. Daniels, Springfield
t—H. M. Hamlin, Urbana
t—Melvin Henderson, Urbana

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d—Clement T. Malan, Indianapolis
s—Harry F. Ainsworth, Indianapolis
s—B. C. Lawson, Lafayette
rt—S. S. Cromer, Lafayette
it—K. W. Kiltz, Lafayette
it—H. W. Leonard, Lafayette
it—I. G. Morrison, Lafayette
it—H. B. Taylor, Lafayette
it—W. A. Williams, Lafayette

IOWA
d—F. E. Moore, Des Moines
s—H. T. Hall, Des Moines
s—R. A. Towne, Des Moines
t—Barton Morgan, Ames
t—John B. McClelland, Ames
t—J. A. Starrak, Ames
t—T. E. Sexauer, Ames
t—A. H. Hausrath, Ames

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

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s—E. P. Hilton, Frankfort
t—Carsie Hammonds, Lexington
it—Watson Armstrong, Lexington
it—W. R. Tabb, Lexington
ct—J. J. Mark, Frankfort

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s—S. M. Jackson, Baton Rouge
ds—A. Larriviere, Baton Rouge
ds—T. E. Kirklin, Baton Rouge
ds—A. E. Robinson, New Orleans
ds—W. J. Parent, Hammond
ds—M. M. Parry, Monroe
ds—Harold Montgomery, Shreveport
t—C. L. Mondart, University
ct—M. J. Clark, Scotlandville
ct—Dallas Matthews, Scotlandville

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

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ct—J. A. Oliver, Princess Anne

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s—John G. Galvin, Boston
t—F. E. Heald, Amherst
t—W. S. Wells, Amherst

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d—George H. Fern, Lansing
s—Harry E. Nesman, Lansing
s—Luice H. Kelley, Lansing
s—Raymond M. Clark, Lansing
t—H. M. Byram, East Lansing
t—G. P. Deyoe, East Lansing
t—G. C. Cook, East Lansing

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s—Leo L. Knuti, St. Paul
s—Harry J. Peterson, St. Paul
rs—Felix Nylund, Virginia
t—A. M. Field, St. Paul
t—G. F. Ekstrom, St. Paul

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s—A. P. Fatherree, Jackson
ds—R. H. Fisackerly, Jackson
ds—E. E. Gross, Hattiesburg
t—V. G. Martin, State College
t—N. E. Wilson, State College
t—D. W. Skelton, State College
t—A. E. Strain, State College
rt—H. O. West, State College
it—V. P. Winstead, State College
ct—W. A. Flowers, Alcorn
ct—A. D. Fobbs, Alcorn
ct—Robert Ross, Alcorn

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s—G. A. Woodruff, Jefferson City
s—M. D. Thomas, Jefferson City
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s—A. W. Johnson, Bozeman
s—H. R. Rodeberg, Bozeman
t—R. H. Palmer, Bozeman

NEBRASKA
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s—L. D. Clements, Lincoln
s—H. W. Deems, Lincoln
t—H. E. Bradford, Lincoln
t—C. C. Minteer, Lincoln

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s-t—Earl H. Little, Concord

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s-t—E. V. Bearer, New Brunswick
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ds—R. J. Peeler, Raleigh
ds—E. N. Meekins, Raleigh
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s-t—Ernest L. DeAlton, Fargo
s-t—Shubel D. Owen, Fargo

OHIO
s—Ralph A. Howard, Columbus
s—W. G. Weiler, Columbus
s—E. O. Bolender, Columbus
t—W. F. Stewart, Columbus
t—H. G. Kenestrick, Columbus
t—C. E. Rhoad, Columbus
rt—Ray Fife, Columbus

OKLAHOMA
d—J. B. Perky, Stillwater
s—Bonnie Nicholson, Stillwater
ds—W. R. Felton, Stillwater
ds—S. M. Crosnoe, Stillwater
ds—Roy Craig, Stillwater
ds—Edd Lemons, Stillwater
t—Don M. Orr, Stillwater
t—Chris White, Stillwater
ct—D. C. Jones, Langston

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s—Earl R. Cooley, Salem
s—Ralph L. Morgan, Salem
s—Kirby E. Brumfield, Salem
t—H. H. Gibson

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s—V. A. Martin, Harrisburg
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rs—G. L. Reisner, McConnellsburg
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rs—D. R. McClay, Washington
t—William F. Hall, State College
it—Russell B. Dickerson, State College
it—D. C. Sprague, State College

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s—Nicholas Mendez, San Juan
t—Lorenzo Garcia Hernandez, San Juan
t—Ernesto Vazquez Torres, Mayaguez
ds—Juan Acosta Henriquez, Arecibo
ds—Juan Robles, Cayey
ds—Andres Ramirez, Mayaguez
ds—Samuel Molinary, San Juan

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s—Verd Peterson, Columbia
ds—W. C. James, Columbia
ds—W. M. Mahony, Anderson
ds—R. D. Anderson, Walterboro
ds—R. E. Naugher, Loris
t—W. G. Crandall, Clemson
t—W. C. Bowen, Clemson
t—J. B. Monroe, Clemson
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ct—Gabe Buckman, Orangeburg

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s—H. E. Urton, Pierre
t—R. R. Bentley, Brookings

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ds—G. B. Thackston, Murfreesboro
ds—J. W. Brimm, Jackson
ds—L. A. Carpenter, Knoxville
t—N. E. Fitzgerald, Knoxville
t—J. B. Kirkland, Knoxville
rt—A. J. Paulus, Knoxville
rt—E. B. Knight, Knoxville

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s—J. B. Rutland, Austin
s—R. Lano Barron, Austin
s—O. T. Ryan, Lubbock
ds—C. D. Parker, Kingsville
ds—C. B. Barclay, Commerce
ds—B. C. Davis, Austin
t—E. R. Alexander, College Station
t—Henry Ross, College Station
t—Malcolm Orchard, College Station
rt—W. R. Sherrill, College Station
t—J. L. Moses, Huntsville
t—W. E. Driskill, Huntsville
t—S. V. Burks, Kingsville
t—Ray L. Chappelle, Lubbock
it—T. L. Leach, Lubbock
it—F. D. Shackelford, Kingsville
it—H. W. Gist, Kingsville
cs—J. C. McAdams, Crockett
ct—E. M. Norris, Prairie View

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d—Charles H. Skidmore, Salt Lake City
s—Mark Nichols, Salt Lake City
t—L. R. Humpherys, Logan

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s-t—W. Howard Martin, Burlington
s-t—Charles L. Park, Jr., Burlington

VIRGINIA
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s—D. J. Howard, Richmond
ds—F. B. Cale, Appomattox
ds—T. V. Downing, Ivor
ds—J. O. Hoge, Blacksburg
ds—W. R. Legge, Winchester
ds—J. C. Green, Powhatan
rt—Olive A. Salem, Blacksburg
t—Harry W. Sanders, Blacksburg
t—Henry C. Groseclose, Blacksburg
t—E. Y. Noblin, Blacksburg
t—C. E. Richard, Blacksburg
ct—G. W. Owens, Petersburg
ct—J. R. Thomas, Petersburg
ct—A. J. Miller, Petersburg

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t-s—E. M. Webb, Pullman
t-s—Bert L. Brown, Pullman

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s—John M. Lowe, Charleston
s—H. N. Hansucker, Charleston
t—M. C. Gaar, Morgantown
it—D. W. Parsons, Morgantown
it—A. D. Longhouse, Morgantown

WISCONSIN
d—George P. Hambrecht, Madison
s—Louis M. Sasman, Madison
t—J. A. James, Madison
t—V. E. Kivlin, Madison
t—V. E. Nylin, Platteville
t—J. M. May, River Falls
it—Ivan Fay, Madison
it—Clarence Bonsack, Madison

WYOMING