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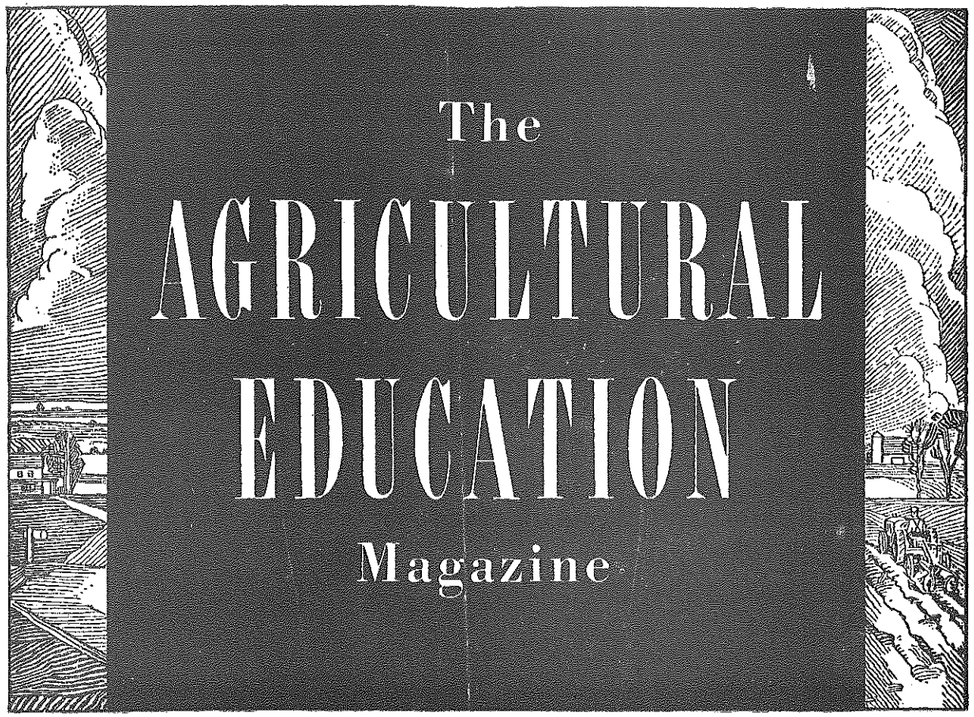

It's better to ask questions beforehand

than to have to apologize afterwards

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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Editorial Comment

Who Support Our Magazine?

THE report of your editor during the A. V. A. Convention in Philadelphia was made informally in three sections which are presented here with content approximately as reported.

To the Editing-Managing Board

The editor wishes to express his appreciation of the privilege of meeting his working associates of the Meredith Publishing Company in Des Moines, Iowa, last March. The instructions and suggestions received have been most beneficial and my associations with the staff most cordial. I express my highest appreciation of the services of the special editors who have given freely of their time and efforts in attempting to provide copy for their respective departments. These "spade workers" are the unsung and nonpaid heroes of the battle of production of the magazine.

I have suggested to the publishers that they give us a price scale on used cuts other than photographs used in the magazine so that we may offer them for sale to the contributors, usually teachers, who might well use them three or four times in local papers, F.F.A. annual reports, and school publications. This item of business remains unfinished at this time.

I propose to you that an additional section be authorized in the magazine under the heading "Supervision" with a special editor in charge. This important area of our national and state program has not been recognized appropriately to date.

I have not compiled a report on the pattern used by some of my predecessors giving the inches of contributions by states. I have, however, made a rough summary of the contributors to the magazine during my 11 months of service which I shall present at the business meeting tomorrow. The picture is not a cheerful one and accordingly my report will be rather pessimistic. In view of the extremely limited support of the magazine by its thousands of readers I shall raise the question seriously of the advisability of continuing the magazine.

May I express to you my appreciation of the services of all cooperating members, including both the special editors and the members of the Board.

To the Agricultural Education Section

Gentlemen, in making my report to you based upon my experiences as editor for a short year and following over 10 years as business manager of the magazine, I confess my report will have a decidedly sour note. I am prepared to move that the magazine be discontinued. I ask your careful attention.

The problems of the magazine are concerned with contributions and readers. My study of the situation shows that we are decidedly short on both counts. I speak first to the supervisors. I have already submitted copy for 11 numbers of the magazine. How many articles in these 11 numbers were submitted by you supervisors? The answer, gentlemen, is 10—about one article per issue—from something over one hundred supervisors supposed to be supporters of the magazine, examples to the thousands of their teachers, and leaders in our national and state programs. Speaking of this record in terms of a recent movie slogan, "Confidentially, it stinks." If your teachers notice, month after month, that you do not support the magazine, what interest in reading the magazine do you expect them to maintain? More than that, as one part of the report of the business manager featured in a recent number, some nine or more supervisors do not collect subscriptions for the magazine in connection with their annual dues. This lapse alone might cost the magazine over 1,000 subscribers a year. Do you not see that I am in earnest in proposing that the magazine be discontinued?

The teachers, thousands of them, constitute the body of our subscription list. I should like very much to render more service to the teachers thru articles in the magazine contributed by the teachers, but my experience is most disheartening. Early in my editorship I mailed out some 75 or 100 double postal cards to teachers who were believed to be interested in the magazine and competent to give me advice. How many replies were received? Less than 45, and yet these were our leading teachers! This record was made altho not a cent was involved in making replies. In the replies, several good suggestions were made and, most frequently, a request for more articles from the teachers. To these respondents I wrote a personal letter commenting upon their suggestions and in every case asking for an article helpful to other teachers which would illustrate the kind of an article that they would like to see in the magazine. How many replies from these 40 odd leading teachers? To my knowledge, just one. What a record! More than that, I selected four outstanding teachers and requested from them a one-column editorial for the magazine. How many replies? Just one. What a record from our leading teachers in supporting the magazine!

I was in a meeting the night before I left home attended, among others, by 11 teachers of vocational agriculture. I asked how many of them could give the title of my editorial ("Blueprints Wanted") in the last issue of the magazine. Three raised their hands. Is that a fair sample of the reading percentage of subscribers of the magazine? Gentlemen, I am in earnest in thinking that we do not care very much whether or not the magazine is continued.

It must be then that the magazine is supported largely by the teacher-trainers. An analysis of the contributions supports this assumption. However, it's not all the teacher-trainers. In the last 11 issues the articles have been contributed by teacher-trainers from less than one-half of the states. In other words, over one-half of our teacher-trainers also are apathetic and inactive in supporting the magazine. Possibly you have noted that many of our articles have been contributed by our special editors. Do you think that they have wanted to put themselves forward thru repeated contributions? Definitely not; I know them too well. They have submitted their own articles as a last resort when acceptable copy was not available from the supervisors and the teachers and other teacher-trainers. This certainly is a sad picture of support of the magazine. Again, on more than one occasion, your editor has had to resort to the "scissors and paste" technique of clipping articles from newsletters and other sources in order to fill the magazine. Isn't that a disparging if not a disgusting condition when you consider that every supervisor, every teacher of vocational agriculture, every teacher-trainer is a *graduate* of a *college* of *agriculture* or a *state university?*

May I also add that publishing the magazine, as you must well realize, is no privilege and pleasure to the Meredith Publishing Company who absorb all losses and receive no profit. Can you not well imagine that, in these months of labor shortage and paper shortage, it is a very definite trial and a source of perplexing problems to this generous company to give us the excellent service which they do? While I have never dared to ask them, I feel sure that they would, in these trying times, welcome release from their most generous offer in behalf of vocational education for rural youth. Isn't it really time to think about closing out the magazine so that we can all go to sleep right?

To the Special Editors

To you, a grand bunch of associates, I express my appreciation for a good job well done. I want each of you to remain on my staff as long as I am editor. And, as an appreciation of your effort, I invite you to a shore dinner at Bookbinders Friday evening. (They accepted in person with personally conducted appetites. Boy, how the Scotchman groaned! It is reported that the next morning the waters of Delaware Bay were down over a foot due to a combination of the appetites of the special editors for sea food and an ebbing tide.)

Since the Agricultural Section did not see fit to take action to discontinue the magazine and since the editor was reappointed, I enter upon the editorial services another year earnestly requesting every reader to take serious inventory of himself and his support of the magazine. With such a high quality list of subscribers it should be a high quality magazine ably supported,

S. S. SUTHERLAND

Professional

HENRY S. BRUNNER

Accomplishments and Trends in Agricultural Education

W. T. SPANTON, Chief, Agricultural Education Service,
U. S. Office of Education, Washington, D. C.

THREE years ago the American Vocational Association met in Boston, Mass. That was just after "Pearl Harbor," and it was while we were there in session that the Congress of the United States declared war on the Axis Nations. In the meantime most of our able-bodied young men of military age, both urban and rural, including over 138,000 active and associate members of the Future Farmers of America, as well as your sons and mine, have been inducted into the armed forces and are now scattered on battle-fronts thruout the world. Many of these young men have already paid the supreme sacrifice and many more will do so before this terrible conflict is successfully concluded.

In the meantime, here on the home front, those of us engaged in vocational education in agriculture have a legitimate reason to feel proud of the production records achieved by American farmers. Each year for the past three years, the total production of food and fiber crops so essential to our war effort have exceeded those of the preceding year. According to records of the United States Department of Agriculture our total production this year has established an all-time high in the history of American agriculture.

Accomplishments in Vocational Agriculture

These tremendous production records of American agriculture have been accomplished under perhaps more trying circumstances than those with which farmers have ever before been confronted. I refer to labor shortages, lack of needed commercial fertilizer and new farm machinery, inadequate marketing and distribution facilities, plus droughts and floods in certain areas.

No small part of the success of American farmers in achieving their production goals can be justly credited to the assistance they have received from our nation-wide program of vocational education in agriculture. On a dollar for dollar basis of expenditures of public funds, I am confident that no other Federal or state agency has contributed more in helping farmers to achieve their production goals.

In spite of a loss of approximately 5,700 fully-qualified teachers of vocational agriculture since July 1, 1941, and a net decline from 9,085 to approximately 7,100 all-day departments of vocational agriculture, enrollments of adult farmers in evening classes in our regular program increased from 167,939 in 1943 to 183,871 in 1944, an increase of 9.5 percent. In addition, over 1,500,000 persons were enrolled last year in approximately 50,000 Food Production War Training

Editor's Note: The three articles in the Professional Section are papers presented at the recent A.V.A. convention by the writers.

different centers. Courses in farm machinery repair and in the production and conservation of food for family use continued to be by far the most popular of all Food Production War Training courses offered.

Over 20,000 courses in farm machinery repair were conducted last year, in which over a million different pieces of farm machinery and equipment were overhauled and repaired by farmer enrollees. More than 22,000 courses in the "Production and Conservation of Food for Family Use" enrolling 305,000 persons were conducted in 1944, which resulted in the canning of over 50,000,000 cans of food and the conservation of more than 4,000,000 pounds of other food products thru dehydration and other conservation practices.

The Future Farmers of America have continued to serve students of vocational agriculture and rural America in an effective manner during the war. The national conventions have of necessity been streamlined, both as to attendance and length of sessions, but the quality of the programs and interest of members have been maintained. F.F.A. chapters and individual members have purchased over $8,000,000 worth of War Bonds and Stamps and an additional $8,000,000 worth of Bonds and Stamps have been sold by F.F.A. members during War Bond sales campaigns. Active memberships have, however, dropped from about 245,000 to 204,175. This loss could have been overcome easily and turned into a net increase, even with our lower total enrollments in vocational agriculture, if each and every one of the 259,687 farm boys enrolled in vocational agriculture in the United States last year had become an active member.

In the case of the New Farmers of America, the national organization for Negro students of vocational agriculture, total membership showed a substantial increase, and now stands at 26,218, the largest membership ever recorded. These boys have also contributed very materially to the war effort thru the purchase and sale of War Bonds and Stamps, repair of farm machinery, collection of scrap materials, growing Victory gardens, etc.

Shifts and Trends in the Program

1. *Changes in the Nature of Instructional Programs*

During the last three years instruction-

have been pointed to meet emergency needs resulting from World War II. Long term instructional objectives such as the establishment of farm youth and out-of-school young men in farming, and the improvement in economic and farming status of adult farmers under various types of tenancy and ownership programs, have given way in part, since the outbreak of the war, to a single purpose; namely, that of making the utmost contribution to the production of necessary food, feed, fiber, and oil producing crops sorely needed in the war effort. This change in purpose has been due in part to the demands of the time and to the heavy inroads made upon farm youth and out-of-school rural young men to enter the armed services and war industries. Thousands of farm youth, well on the road to establishment in farming thru accumulations built up during in-school years of supervised farming, have liquidated their holdings of livestock and equipment to enter the armed services on or before graduation from high school. Other thousands of out-of-school rural youth likewise have abandoned their farming programs for the armed services and for work in war industries.

In the early years of the war, emergency war training programs had as a specific object the training of farm youth for employment in war industries. The need for war workers was acute. As the war effort progressed, three marked conditions developed to influence the farm situation: (1) Surpluses of many farm commodities disappeared and with the disappearance came enormous demands for food, feed, fiber, and oil producing crops. (2) The great demand for workers in war industries followed by the heavy drain of farm manpower to the armed services created an acute farm labor shortage. This gave rise to the wartime need to train many persons as emergency farm workers. (3) The acute shortages of many strategic war materials led to a drastic curtailment in the manufacture of new farm machinery, placing inordinate demands upon the maintenance and repair of much farm machinery which under normal conditions would have been replaced.

Hence, instruction in vocational agriculture in the war period has been concerned with the realization of the food production goals set by the War Food Administrator; the training of farm workers; farm machinery operation, care, and repair; the production, conservation and processing of food for family use; commercial and Victory gardening; and the organization, supervision and teaching of agricultural production and certain mechanical courses approved by the Director of the Food Production War Training Program under the act providing for the education and training of defense workers (National Defense).

2. *The Teacher Situation*

Heavy loss of employed teachers is not entirely a war problem. The peacetime

great growth in vocational agriculture also are characterized *by heavy teacher losses*. In these six years, *8.1 teachers* were employed per year per 100 employed teachers due to *growth in the program* while an additional *10.3 teachers* per year were employed per 100 employed teachers *to replace those leaving the work. Replacements* have required more teachers *than has the growth of the program.*

The *trend in both peacetime and wartime* points to heavy losses of experienced teachers of vocational agriculture. This loss of employed teachers can be attributed primarily to the failure to take into account the *higher salaries paid by other agencies* and *commercial concerns* for agriculturally trained persons. In peacetimes, replacements for teachers leaving the work were plentiful, but in many instances of inferior quality. The policy of frequent replacements of experienced teachers of vocational agriculture by inexperienced lower salaried persons has resulted in far less effective programs, than a policy that would enable teachers to receive higher salaries and remain in the same community over a period of years.

3. *Possibilities for Further Expansion*

The development of vocational education in agriculture has followed a consistent pattern of growth thru the years. In the 10-year period previous to the war, the number of departments of vocational agriculture increased from 4,513 to 9,259 or 105 percent; all-day and day-unit enrollments from 154,269 to 340,540 or 121 percent; part-time enrollments from 10,792 to 49,977 or 363 percent; and evening or adult farmer class enrollments from 87,138 to 214,582 or an increase of 146 percent. Vocational agriculture instruction is sought by an increasing number of rural communities. Departments are rendering more comprehensive service to farm people as indicated by the much greater percentage increase in all types of enrollments than is the case for the percentage increase in the number of departments.

While enrollments have increased markedly thru the last 25 years, only a small proportion of the potential all-day, part-time and evening class groups have the advantages of vocational education in agriculture available to them. Departments should be increased from the approximately 9,000 as of 1942 to 12 or 14 thousand in order to be accessible to all farm people.

4. *A Need for Closer Co-operation Between Agriculture, Business and Industry*

The absolute interdependence of agriculture, business, industry, and labor has long been regarded as an economic necessity if each is to continue to prosper. During the postwar era, vocational education in agriculture must assume its share of responsibility in acquainting business and industry with the problems of American agriculture. Closer co-operative working relations on local, state, and federal levels, must be built up and maintained between vocational agriculture on the one hand and farm and business organizations, corporations, and associations on the other. A good start has already been made and we now have the goodwill and support of all of these organizations just mentioned. This support must be maintained, strengthened, and expanded during the postwar era.

5. *Increased Emphasis on Farm Mechanics*

Food Production War Training funds

utilized to provide: (a) space facilities and (b) farm shop equipment in many rural high schools. These programs have established an appreciation of the value of farm mechanics training and have built up a host of well-equipped shops and other facilities. Rural school patrons and school officials will demand the continued availability of these facilities after the war.

Farming is becoming increasingly mechanized. Intensification of the war effort in industrial production will make available a real and potential supply of mechanized equipment that will create abnormal conditions in the postwar period by being of such an improved character as to modify old, established farm practices. The extension of rural electrification and the use of electrical equipment on the farm will be greatly expedited following the war. The need for a vocational education to meet the unprecedented problems of the future in rehabilitating the farms of the nation and adjusting physical and mechanical aspects of farming operations to the changed conditions, offers a challenge to vocational education in agriculture and requires an expansion of training programs far in excess of those now available.

6. *Increased Emphasis on "Establishment in Farming"*

Farm operators are an overaged group. Many farm operators have remained on the job beyond the age of retirement. Others have returned from retirement to active farming. Land values, livestock, and farm machinery have risen in price to dangerously high levels following the pattern of World War I. Vocational agriculture has as a major peacetime objective the progressive establishment of young men in farming. Many young men returning from war service and from work in war industries will be needed to replace overaged farm operators. Finding placement opportunities and the providing of training and counseling services thru vocational agriculture is essential in order that these young persons may become re-established in farming and avoid the tragedies which grew out of the inflated values that accompanied World War I. The number of persons in need of this service will require an increase in the number of departments and more adequate training program for out-of-school groups.

7. *Training Farm Workers May Be Carried Over to the Postwar Era*

The training of the farm worker, compared with the training of the farm operator, is a war period development for vocational agriculture. It was not until 1943 that states reported separately the training of farm workers under provisions of the regular program in vocational agriculture. In that year there were 6,021 enrolled in courses for the training of farm workers. Again, it was not until 1943 that courses were provided in the Food Production War Training program for the training of farm workers. In 1943-44, 55,230 persons were enrolled for training as farm workers in this program. This is a neglected field in vocational agriculture. The training program for farm workers has proved of such value that the continuance of this type of program might well be looked upon as a "must" for the years ahead. Upwards of several million persons are engaged as year-round and seasonal farm workers.

education in agriculture for the farm operator. Postwar plans also should take into account the educational and training needs of the farm worker.

8. *Training for Part-Time Farming*

There is an innate desire on the part of almost all human beings to own a piece of the Good Earth. Peace, happiness, and security are closely associated with this desire. Industry tends to be decentralized and city dwellers are moving onto small suburban tracts of land. Surplus farm youth is also moving into these areas and villages for industrial employment. We already have here in the United States over 800,000 part-time farmers living around our urban centers. It now looks as tho this number would be multiplied many times over in the postwar era.

Good Use for Idle Hours

Seasonal and part-time employment makes it possible for persons living on small tracts of land to turn otherwise idle hours into productive use thru part-time farming. Experience indicates that successful patterns for part-time farm operations for the respective communities provide a training program covering economic information, adequate operational skills, production problems, and the development of managerial ability. This is a field toward which little, if any, constructive educational effort has been directed.

Instruction in vocational agriculture, if given proper facilities and adequate teaching personnel, will be able thru young farmer and adult classes to assist thousands of part-time farmers to maintain themselves thru periods of unemployment and to improve their standards of living.

Classes for Part-Time Farmers

Simultaneous with the movement to decentralize industry and to find profitable employment for part-time workers, grew the interest in training programs for part-time farmers which have developed in some sections. Undergoing slow development in the decade previous to World War II was the basic idea of developing the rural school as a community center where facilities for many educational activities related to the live-at-home program were provided. Out of this movement came provision for food processing plants, farm machinery repair shops, community sawmills, and a host of other community service activities. Many of these activities gained momentum as a part of the war effort under provisions of the Food Production War Training program. Another of the war period areas of service, has been the training of farm workers, a program in need of continuance. A few areas of service that are distinctly a postwar necessity are those that relate to the rehabilitation and repair of farm lands, structures, equipment, and machinery; the replacement of overage farm operators; and the re-establishment in farming of the many young persons whose plans for farming and careers in this field were interrupted by entry into the armed services and into war industries.

The many readjustments that must come to agriculture following the war necessitates an expansion of educational services at all levels to more adequately

Area Schools—Conversion or Reconversion in Vocational Education in Agriculture

ARTHUR K. GETMAN, Chief, Agricultural Education,
State Department of Education, Albany, New York

A. K. Getman

In recent years, notable strides have been taken in extending and expanding the opportunities for vocational education in our American public schools. In spite of this phenominal growth, thousands of school areas do not have adequate and appropriate facilities in vocational education at the present time. Our 25 years of tested experience in training youth and adults for useful employments, and the changes in our social and economic life that are currently in evidence, have made it clear that all phases of secondary education, including the vocational, are intimately interrelated. School officials thruout the country have become increasingly aware of the current need for the establishment and maintenance of a new type of school organization that would be closely correlated with present administrative and supervisory resources, and that would enable communities working independently or in groups to establish an area vocational school. Basically, this type of organization makes possible the pooling of the resources of taxable property on the one hand and the securing of adequate enrollments for specialized courses on the other.

Mortality Too High

The need for this type of school can be understood in relation to a few statistics. In New York State since the turn of the century, the high-school enrollment has increased by more than 1,100 percent, reaching a total of approximately 700,000 in 1940. This is clearly an enormous upward turn in increased interests in school services. However, it does not indicate the distance we must yet go or the services we must yet provide. For example, within the state there are 300,000 fewer pupils in school than children five to 18 years of age recorded by the census. Furthermore, scarcely 50 percent of the pupils who enter high school finish, and less than 42 percent of those who are graduated enter an institution of higher learning. Surely such mortality gives us a glimpse of the distance in school expectancy that ought to challenge school officials and teachers alike. That challenge is equally significant to the leaders and teachers in all types of vocational education. There is little doubt but that the enrollment of 11 pupils in high school today where there was but one 40 years ago has been made possible in substantial measure by the enrichment of the school offerings in the fields of agriculture, industry, commerce, and homemaking.

With particular reference to agricultural education, the area school, as recommended by the A.V.A. Committee on Research and Publications, should

schools are too small or where the economic resources are too low. The committee believes that the most useful function of an area school, with reference to training for agricultural employment, will be found as an educational service supplementing the work of high-school departments of agriculture. It may be expected that such departments of agriculture will be extended to larger numbers of communities thruout America until this type of service is available to a large proportion of our youth who desire vocational training in agriculture at the high-school level. It should be recognized, however, that even with such a complete coverage, there would still be a vital need for vocational training both at the secondary and at the post-high-school level, for a wide variety of specialized farming employments and for employments which service agricultural production and management. Up to now, at least, it has not been possible in high-school departments of agriculture to provide this type of training especially when unusual competence in operative skill, technical knowledge, and business and managerial ability are required. Specific vocational training in such specialized fields is greatly needed, first, to broaden the opportunities for employment for farm youth who can capitalize on their practical experience, and second, to improve the quality of leadership and service to farmers in such fields as the merchandising of agricultural supplies, farm credit, co-operative marketing, farm equipment sales and service, dairy industry, seed production, greenhouse management, and horticulture. In many parts of the United States, experience has shown that in normal times the demand, on the part of employers, for persons competently trained in these fields, is far in excess of the supply of persons. It should also be remembered that in most areas scarcely 50 percent of the boys born on farms will be able to find productive careers in farming. In considering the area vocational school as a possible means of extending the occupational training facilities of a given area, school officials and community leaders should keep in mind certain steps, policies, and safeguards that the committee has recommended.*

The following brief summary of these items may be helpful to the reader.

Must Plan Carefully

1. The area school should be regarded as a public school agency that is purely optional and voluntary on the part of local citizens, leaders, and school officials. If and when financial assistance is provided from Federal or state sources to encourage this type of school service, an organization adequate to meet local needs, student enrollments, interests and ambitions, school dropouts, together with occupational trends, outlets, and opportunities within the area.

2. An area vocational school, as at present conceived, may be established (a) as an extension of the offerings of an existing school system to reach wider geographical areas and larger numbers of pupils, (b) as a separate vocational school established and maintained cooperatively by two or more existing districts in which specialized courses could be maintained economically and efficiently (c) as a county school, or as a school supported jointly by two or more counties, and (d) as a state school designed to serve pupils for the entire state in one or more highly specialized fields of vocational technical service.

3. Plans for area schools of the various types should be made on the basis of a state-wide survey of vocational training needs and of current educational plans and policies for equalizing educational opportunity at the state level. In the resulting plans, expanding vocational education services as integral parts of existing schools or classes, together with opportunities for special vocational schools, arranged among contiguous schools on a co-operative basis, should be given attention.

4. A continuous and comprehensive plan of guidance is highly important, first, for the counseling of persons for whom the schools and classes may be provided, and, second, for the proper articulation of students thru the various types of high schools on the one hand the the special central vocational schools on the other.

5. It is of the utmost importance in contemplating, in establishing, and in maintaining any type of area vocational school that effective adjustments be made with community leaders, with school officials now in office, with state administrators of education, and with members of advisory committees so that (a) the schools may be organized to serve specific needs within the areas, (b) there will be no overlapping of function in existing general or vocational instruction, (c) there will be a clear and precise understanding on the part of lay boards of education and school officials in existing schools concerning the need for area support for the new enterprise, and (d) a wholesome reciprocal relationship may prevail between guidance counselors, vocational directors and teachers, employers, and personnel executives with reference to employment outlets, number of persons needed, and changing requirements for competence on the part of school graudates.

Similar to Technical Institute

Many professional associations in the United States and educational leaders in Canada and in the British Isles, in recent months, have given widespread endorsement to the "technical institute" type of educational organization. Indeed, this emphasis has reached a point in many states where specific plans for the establishment of such institutes have been given wide publicity. Attention is called to this trend in American education in connection with this address because the area school and the technical institute in many sections of the country will undoubtedly be merged into one type of school opportunity serving pupils in grades 10 to 12 at the secondary level and grades 13 and 14 at the post-high-school level. It is interesting to note that in such progressive countries as Sweden and Denmark the vocational-technical training

*A.V.A. Bulletin, December, 1943, "An Enlarged

ues for the subsequent four- or five-year period. It is too carly to say exactly what the relationship of the vocational training during these years should be. It seems clear, however, that in considering area vocational schools, it is important to take account of the technical institute development so that the two services may be coordinated as a means of providing a program of maximum efficiency.

One further point should be emphasized. An area vocational school must take full account of a wide scope of occupational training. Normally, special curriculums would include instruction in specialized agricultural fields, trade and industrial employment, wage earning and specialized training for girls, business administration, and public service employments. In such a combination of services there would be much advantage in certain interdepartmental relationships and services, especially in such fields as home and family living, American life and institutions, economic and social adjustments, personal and community health, and selected phases of applied arts.

In the period of conversion from wartime to peacetime activities, it is urgently recommended that persons responsible for the organization and administration of agricultural instruction give thoughtful study to the area vocational school as a means of extending present training services. In the legislation that is currently pending in Congress, area schools occupy a prominent place of emphasis. It seems clear that the trend of interest and the recognition of need for this type of service will increase in the postwar period. We should mobilize at once our 25 years of tested experience to make sure that this new educational enterprise is launched upon a sound foundation of research studies and an accurate evaluation of public opinion.

Publicity Needed

Vocational education in general and agricultural education in particular would benefit in many states from a better organized program of publicity or news reporting. To this end the employment of a "public relations" man is suggested. He may give full time to the promotion of vocational education, or to agricultural education alone, or a part-time assignment might well be considered. In these days of shortages of students in teacher-training, a teacher-trainer might be assigned these responsibilities to the betterment of the program both within and outside of the state.

Supplementing the duties incident to news reporting and journalism, the abilities of a photographer are highly important. Pictures carry the most appealing news story to the average reader and enliven the regular copy with a strong interest appeal. Don't overlook the photographer's art in making this assignment.

At the top of the list of news dispensers in agricultural education, the editor places George P. Couper of California, a full-time writer. Texas, Alabama, North Carolina, and Oklahoma apparently have assigned definite responsibilities in this area.

Special editors in particular would appreciate additional publicity appoint-

Training War Prisoners for Farm Work

JULIAN A. McPHEE, State Director of Vocational Education,
San Luis Obispo, California

Julian A. McPhee

In order for you to obtain a clear perspective of the possible use of 15,000 to 20,000 prisoners of war to do farm work in California next year, it is necessary that you have some concept of California agriculture and its basic difference from the diversified farm of the Midwest.

California produces more than 200 farm commodities of commercial value, which makes it the state of the greatest diversity, yet it also has a greater proportion of farms only producing *one single* commodity, or a small, specialized group of products.

We have whole counties planted almost exclusively to oranges, to peaches, to raisin grapes. We have more than 20,000 cows in the Los Angeles area kept on concrete lots and never grazing one single bite of growing grass. We have thousands of acres planted to nothing but barley, shipped to a huge central lot and fed to steers. We have whole valleys growing luxury vegetables which go into refrigerator cars and thence to a market 3,000 miles away. We have a poultry unit of 500,000 birds on a few acres, and hardly a single poultryman of the 40,000 in the state grows any of his own grain.

Factory System Agriculture

This factory system of agriculture calls for factory-sized crews, and that is at the bottom of California's farm labor problem. Conditions have never been as bad as the reformers have pictured, nor as good as the landowners have contended; but it is perhaps as true as it is trite to say that California crops have *always* been harvested by prisoners—economic prisoners. It is true that these foreign-born or nomadic native whites who made their way up and down the state often were not as well-fed, well-housed or well-paid as the present prisoners of war about whom I am to talk. They furnished their own transportation and their own training. They had no diplomatic representative to speak for them.

An important preliminary step was taken earlier in the use of government-sponsored farm workers. When, in 1942, it was evident that the usual army of Filipinos, naturalized Mexicans, dust-bowl families and California crop-followers, would not be adequate to harvest the war-swelled crops, growers sent strong representation to the State Department at Washington to permit the introduction of thousands of Mexican Nationals specifically for wartime emergency farm work. This was done, at first in somewhat limited numbers.

It soon became evident that these Mexican men could be better workers with more knowledge of California agricultural practices. Many of the first group came from the streets of the larger cities—later groups were primarily farm-reared. But their previous primitive corn was a far cry from the intensive tillage and harvesting operations of a California crop which call for as many as 20 annual machine and hand operations over every acre.

In 1942, only a few thousand Mexican Nationals were brought into the country for farm work. Of this number, a few groups were given special training thru the Food Production War Training program. At first, the growers were somewhat skeptical, altho it was evident that there was bound to be some English learned by the Mexicans which would make it easier to direct them in the field, even tho the instruction was thru an interpreter and the content agricultural rather than linguistic.

However, the actual results were that in the labor camps where classes were held, the Mexican Nationals were much more satisfied. There were almost no "strikes," fewer fights, less drinking, less social problems. At the end of the year when the workers returned to Mexico, the State Department of our sister republic affirmed in writing that the educational opportunities given the men while working in California were a decisive factor in their decision to continue the plan of permitting the recruiting of labor for 1943.

During 1943, the program was improved and increased to the end that some 15,000 Mexican Nationals out of about 33,000 in the program, received organized instruction. Some of the training was on-the-job instruction—expensive but effective. Other training was done in the camp bunkhouses and in rural school buildings at night. Much use was made of motion pictures, film strips and slides.

Early Experience Helpful

California, therefore, had developed a considerable experience and history in the training of foreign-speaking workers for emergency farm work, prior to any demands for training prisoners of war. While the philosophy behind the training is somewhat different and virtually all instruction is now of the on-the-job type, there was a general framework upon which to build.

If there is any question as to the need for using prisoners of war, may I say that in a normal year, California farmers employ more different persons in seasonal farm work than there are farm operators and farm tenants in the state. I do not mean that every farm has a hired hand or two—I mean that a man who has 40 acres of peaches must hire 10 pruners, 25 thinners, and 40 or 50 pickers during a season; in addition to perhaps help with spraying, tillage, hauling, brush burning, etc. That totals about 225,000 different seasonal workers employed on California farms each year.

Another factor in the need for using prisoners of war is the problem within Mexico as the Nationals return. These men are forced to save their money—some of it is put in trust for that purpose. Most of them live cheaply—they are hard workers, the piecework scale has been high, and they have returned to Mexico

son as they might hope to earn in their native province in a lifetime. You can imagine the possible political effect in peacetime America of 30,000 workmen coming back from Russia with fabulous amounts of money!

Thus, while the Mexican government was highly favorable to assisting the United States in its war effort, there was doubt as to the political expediency of continuing to send to California and a few other states, workers whose return might engender discontent among the working people of Mexico. Right now, for example, it is considered likely that the number of war prisoners used on California farms will be increased, while the number of Mexican Nationals will be much less or perhaps none at all. Thus, the use of war prisoners may soon be a decisive factor in closing the farm labor supply gap.

There is still another angle leading up to the use of war prisoners. The U. S. Government has them on its hands, and the numbers are certain to increase. It costs around $2 per day to feed, clothe, house, transport, and guard each prisoner. But when these men are working, they often return to the U. S. Government $3 to $4 per day above their expenses. Therefore, it is good national economy to make as much use of them as possible. If special training classes can make them more effective workers, it is obvious that both the farmers and the Government profit thereby—the farmers by getting better work done with smaller crews, the Government by getting more money from the farmers.

Therefore, the problem of the use of war prisoners for farm work, and its accompanying training, is likely to be a constantly increasing one thru the remaining months or years of the war.

Prisoners Volunteer Labor

It should be emphatically stated at this time that the work is done by volunteer prisoner crews. It is not forced labor. most of the prisoners of war—particularly the Germans—come from an industrious people. They do not like enforced idleness. They volunteer for work to break the monotony of camp imprisonment. In a like manner, some American prisoners of war are right now living in German farm homes and working for German farmers if they elect to do so. Germany is a land of small farms and our men work as individual "hired hands," rather than in crews as the Germans do in California.

It should also be emphasized that the men are paid for their labor in accordance with an international agreement and scale. A quota is fixed for each man or crew for each day of work. These quotas, however, are not a "cruel" maximum, but instead, much less than an ordinary worker with some skill might do in a rather short working day. When the quota is filled, the volunteer may stop work. Faster workers may help the slower ones, so that the whole crew meets their quota early. Then, if weather permits, the group may go swimming, play soccer or have other recreation.

However, a worker may not necessarily stop at the quota. If a man reaches this fixed production level, he receives 80 cents for that day of work. The money is paid in script, and cannot be actually cents. But if the prisoner wants to continue working, he may make up to a top limit of $1.20, on a piecework basis. If, for example, he received 80 cents for a quota of picking up 80 sacks of potatoes, the rate would be at a cent per sack, and he could earn additional 40 cents for picking up another 40 sacks of potatoes. But he cannot earn more than $1.20, no matter if he is willing.

This quota system (set up by the Army, not by agriculture) presented one of the puzzling problems. If a man did no more than his quota, or "quota and one-half," what was the value of a training program?

One of the answers was that if the worker is more efficient, 1,000 prisoners of war could be spread over a much greater agricultural area than if the worker is not efficient. Another answer is that he will produce a much better product with less damage to vines or trees. Picking tomatoes is a good example. A trained crew will only pick tomatoes of the right stage or ripeness, will not put green or rotten tomatoes into the box where they will have to be culled out later, will insure a higher price for the product, and will not injure the vines for later picking.

At this point, too, emphasis should be placed on the fact that the previous training of the Mexican Nationals had been partly to increase their farming ability when they return to Mexico; but that the present training of the prisoners of war has only one objective—to increase their effectiveness in harvesting and tending to American crops. We are not helping the Germans, we are helping the farmers. This is thoroly understood by the State Department, the Army, the farmers and the prisoners.

The Army Rules

With this background, then, let's see how this program works. At the key point is the Army, which is responsible for the prisoners. Rules are quite strict. There is no fraternizing between civilians and prisoners, no picture taking, no conversation between teacher and pupil about anything but the lesson—the job at hand. There are guards for approximately every 10 prisoners. These guards are with their men 24 hours a day, in the field as well as the barracks.

The next agency is the Agricultural Extension Service, nationally charged with the placement problem. This service determines the need for use of prisoners of war and makes contact with the Army. Numbers of men needed at particular points, numbers in each crew, location of the fields, orchards and vineyards, character of the work, and other factors must be worked out between the Army and the Extension Service.

In California, there is another agency not found in other states, known as the California Farm Production Council. It was set up prior to the time the Agricultural Extension Service was given the directive of farm labor placement, and was continued because it had powers the Federal agency did not have. One of these functions was housing—no small item in the handling of 250 to 1,000 prisoners of war in a crop or fruit area. The Council contracted for hundreds of portable barracks, used in 1943 and 1944 for Mexican Nationals, now in use for prisoners of war. These buildings are which must be organized before the Army and extension service will act. This farmer group must underwrite the expense of setting up the temporary work camp, agree to provide transportation from camp to field, and in other ways present an organized plan from a responsible group. For example, in one camp built for 250 men, the growers had to put up $8,000 before the negotiations were concluded. This paid for the camp physical setup, and the salary of a grower representative. The money is abated from the earnings of the prisoners on a "per-day per-head" basis.

The other agency is the State Bureau of Agricultural Education operating the farm-worker training courses under the Food Production War Training program. The Agricultural Extension Service generally contacts the Bureau representative in the area where training is necessary, some time in advance of the arrival of the prisoners. Or, the growers themselves may contact the local school system. Thru whatever source the original contact is made, the local school system sets out to secure qualified teachers makes up a budget and training plan and submits them to the Bureau office. Once everything is approved, the training may get under way.

Thus you have the background behind the program—thousands upon thousands of prisoners of war, most of them young, able-bodied, industrious; hundreds of big-scale farmers needing help to harvest perishable crops; the Army in physical charge of the prisoners; the California Farm Production Council with the available housing; the Extension Service with the placement responsibility; the grower organization to develop a planned system of using the men in the actual field work, and finally, the Bureau to supervise the training thru the local public school. It sounds quite complicated, and it is.

Farmers Pay Government

With this background in mind then, it is well to call attention to still another factor. While the most a prisoner of war may earn is $1.20 per day, it by no means follows that the farmers are getting cheap labor, for the farmer pays the government the going piecework rate for that labor. For example, a prisoner of war may earn for the government picking 80 field boxes of oranges at 10 cents per box, a total of $8.00. Of this amount, the prisoner will receive only 80 cents to $1.20—whatever the quota may be. But the government has to feed, clothe, provide protection and house the prisoners 365 days out of the year, and do all this for the hundreds of thousands who do not volunteer for work; so it may not be assumed that it is a paying operation in the long run.

It is interesting to note how teachers are found. In getting teachers for the Mexican Nationals, there was often some difficulty. Many Californians descended from Mexican parents were not always too willing to come forward with the statement that they could speak Mexican; besides, many who could were not able to meet the other teacher qualifications. On the other hand, there seems to have been an ample supply of persons of German parentage willing to offer their employment. Generally the school, the farmer group, or the Extension Service has purchased advertising space in a

sponse. One teacher I know of was a citizen of the Free City of Danzig, had sailed under 11 flags, and spoke seven languages as well as being proficient in the farming operation desired to be taught. No women teachers are permitted and no women are allowed anywhere near the prisoners.

It is the duty of the teacher only to instruct the prisoner in the specific operation which the farmer-employer directs. Usually there is some preliminary group instruction in the field. Army regulations require work groups of no less than 10 nor more than about 35. This operates against the small grower, who might need a crew of only four or five. He must find his help elsewhere. Obviously the Army cannot provide guards for one or two prisoners. Incidentally, the guards speak the language of the prisoners under their jurisdiction, and are specially trained for this responsibility.

Instruction—Group, Individual

Following the group instruction comes the individual instruction. The teacher goes along a row where the prisoners are cutting grapes, for example; he watches, illustrates, criticizes or compliments. It is not possible to pass from one row to another, so the teacher works with the men along the single row, then goes to the next. If the operation is knocking and picking up walnuts, where the teacher and the guard may see under the trees, the teacher may work with a more scattered group. In low-crop cultural practices such as thinning or cutting lettuce, picking tomatoes, cutting celery, picking cotton, the same process is true.

Since the teacher speaks German, there is a natural desire on the part of both parties to "gossip." Or the teacher may be prevailed upon to take some question of complaint to the guards. For example, one prisoner wanted a crucifix, another wanted a small bottle of glue with which he could make miniature boats, another group wanted a radio in their barracks. In each instance the teacher carried the request to the Army. This is likely to lead to complications and be construed as "meddling." Questions may not be asked by the prisoner relative to the war, the economic situation of the United States, national politics, etc. Teachers must be on their guard against such derelictions of their strict function.

This leads naturally to the desirability of a preteaching session for the teachers. In some of these sessions growers and their foremen have been invited in to participate. The latter is extremely important since there is a natural tendency on the part of the grower to permit the teacher to become a supervisor as well as an instructor. This practice, if permitted, would save the grower a lot of money, and it is only natural that he would even urge such a situation if it is not carefully guarded against.

In the pretraining session, given by the local adult education supervisor or Bureau of Agricultural Education representative, the teachers are given instruction not only in ethics but in the agricultural practices as well. The teacher must not only be able to speak the prisoners' tongue, but must be familiar with farm work, familiar with the particular crop operation, able to perform it with some skill, and finally, able to transmit that

Thus far I have dealt with the prisoner problem in general. Now I am going to talk about some particulars. As known, we are not taking many Japanese prisoners, and it is doubtful whether they will ever be brought to the United States. We do have many thousands of Italian prisoners, and more Germans—the exact numbers an Army secret in this country.

Of the Italian prisoners, an effort is being made to segregate the fanatic Fascist group from the others. The former are being kept in the same confinement as enemy prisoners, but the nonfanatic group who didn't want to fight in the first place, are being given more liberty and greater opportunity for rehabilitation and return. Many are enlisted in the U. S. Army noncombat units.

First use of prisoners of war was of these Italians. Our first contact was to instruct them in picking long-staple cotton in the Palo Verde Valley along the Arizona border. That was before Italy capitulated. The instructor could not speak Italian but spoke Spanish and made himself understood. There was no quota system. The results were only partly successful.

Since then, extensive use has been made of German prisoners with much more favorable results. Among the crops harvested have been potatoes, hops, prunes, wine grapes, sugar beets, peaches, celery, tomatoes, citrus, cotton, and walnuts. Hundreds now working in the Salinas Valley—the lettuce center of the world—will work with lettuce, cauliflower, carrots, dry beans, cabbage, and other truck and field crops, not only harvesting but planting, thinning, hoeing and similar labor.

Many of the Germans come from farming areas in their homeland—particularly those taken prisoner most recently. Those taken prisoner in Africa were more of the professional soldier type and from commercial and industrial pursuits. Evidently Hitler saved his farm boys to the last, as we have done. However, most have proved to be good farm workers. A number of them harvesting wine grapes came from such a section of Germany. Mass production methods were new to them but they did a good job. Unfortunately, many of the vineyard owners were Anglo-Italians who blamed Italy's collapse upon Germany and were ready to carry their grievance to the German prisoners of war.

Farmers Prefer Mexicans

California farmers on the whole seem to prefer the Mexican Nationals as workers for many reasons. There is no quota system and each worker doubtless performs far more than the war prisoners. There are no guards or elaborate armed camps. Moreover the farmers have been used to employing Americanized Mexicans. They also feel that, if they speak highly of the Mexicans and rather disparagingly of the prisoners, it will increase their opportunity to get Mexican Nationals again next year.

However, virtually all farmers have been very complimentary about the training program for the Mexican Nationals as well as the war prisoners. There have been opportunities for comparisons between crews working without training, and those who had been schooled in the work they were to perform. So far as I am aware, those who had training consist-

Were you to visit a group of these prisoners of war working in a field, I doubt whether you would know it except for the presence of the guards and the letters "P.W." painted on the backs of their jackets or seats of their trousers. They look like any other work crew. They laugh and joke among each other, play pranks, whistle, and for the most part seem to be glad they are out of the fight. Many would buy American War Bonds if they were permitted to do so.

Once in a great while there is an escape attempt from a farm camp, but this is very rare because it is so easy. There would be no particular glory in it. It is known that some prisoners have made a getaway and have come back voluntarily after proving it could be done. It is more of an honor to make a break from a regular army prisoner-of-war camp where every obstacle is placed in their way.

At one camp visited during the construction process, the prisoners, brought from a larger camp some 40 miles away, had constructed a little "city" for 250 persons in an incredibly short time. They came at 3:30 one morning and in a single day dug postholes and set steel posts in concrete for the high, wire fence. That line of poles was as straight as if each had been set by a graduate engineer. They were finishing the prefabricated barracks. A group were laying concrete tile for the sanitation system. The guards were not armed and the ocean beach was only a few hundred feet away, but there was no more tension than would be expected with a hired construction crew.

It is estimated that California will employ up to 5,000 German prisoners of war in the winter vegetable area and in picking cotton and citrus. Next year we may use as many as 16,000. That calls for quite an extensive training program. We are glad to have had an opportunity to start in a small way and capitalize on our experience.

Postwar Implications

This program has postwar implications. Altho the teachers are limited to instructing in a particular skill, the Germans particularly cannot help being impressed by the fact that this teaching has no political significance—that teaching can be separated from a political creed. It will be the first teaching the younger men have experienced other than the "Heil Hitler" variety. We may not plan it that way, but I do not believe the next reincarnation of Hitler can convince these particular people that the American way is "all bad."

There is another implication which has nothing to do with prisoners of war but with training adults in farming practices. Thousands of our own veterans will want to farm, if history repeats itself, thousands more than for whom opportunity exists. But men *without* farm training will get farms, perhaps by inheritance, perhaps by purchase, perhaps by a benevolent government. We will have to help them all we can.

All the experience we can get in giving adult instruction in farming will be valuable. I see vocational education as a whole, and vocational agriculture in particular, being called upon to do a tremendous job of training or retraining in the next 10 years. All that we have learned in our wartime adult classes, our young farmer groups, and our emergency farm

Methods of Teaching

G. P. DEYOE

Vocational Training to Meet the Crisis

PHILLIP ALAMPI, Teacher, Woodstown, N. J.

IN THESE critical times the F.F.A. motto is probably one of the best themes to guide our youth in their present and postwar development. Aptly and concisely, this creed sets forth for the boys a concrete and realistic ideal. It is something they can not only feel but live; it is a constant challenge, a way of life:

Learning to Do
Doing to Learn
Earning to Live
Living to Serve

Our educational system, as it has gathered momentum from its rigid and inelastic beginnings of the 3 R's, has reached out to include new branches of learning. There have been those who have championed vocational training or, as it has been called, "training for life" and have urged that it be included in our curriculum. However, at no other time in our history has it been so imperative that our young boys and girls have immediate vocational training as it is now, in order to alleviate the labor shortage. This shortage, caused by the selective service draft and the movement of unemployed youth to defense industries, has resulted in the quick absorption of our heretofore plentiful supply of high-school graduates. With a constantly increasing number of positions vacant and the possibility of more openings for trained youth than ever before, there is not only an opportunity but a crying need for high-school boys and girls who are qualified to step in and fill the depleting ranks.

Enrollments of our high schools have quadrupled since 1920 and almost doubled since 1930 with about 70 percent enrolled of the younger age span of 14 to 17 years. In view of this increased enrollment caused by the ever-changing and broadening program set forth by the schools and backed by a more educationally-minded public, the pressing problem is this: "What can we do NOW to train this group vocationally in order that they may meet the challenge of doing their part in the present crisis?" Never have the youth of the nation been more interested in their country's welfare or more willing to serve. With eager enthusiasm they want to contribute their share; it is up to us to show them the way. We must train them to fill specific jobs in order to help partly bridge the gap in labor shortage.

The following suggestions to meet this need are presented with one thought on the war effort and one on the increased teacher load caused by the various patriotic responsibilities, such as civilian defense work and rationing. The school day could be divided into halves. During the first half, a concentrated program of studies and directed, related activities would prepare students for the actual work of the second half day; in other words, theory followed by application. Necessity eliminate study periods, clubs, and some extra curricular activities. Some courses could be eliminated, others shortened.

This four-hour program would give four one-hour periods, or five 48-minute periods. This idea may be alarming to academic educators, but we are at war and changes have to be made in our "all-out" effort. Recently, progressive educators have set forth new and experimental curricula in an effort to meet the needs and challenges facing our youth in this turmoiled world. Individual communities would have to adapt these curricula to fit their own situations. This accelerated, concentrated program in a revised curriculum would have to be planned with co-operation between the businessmen in the community and the school administrators. The type of work would vary in different communities depending upon the existing industries or the demand for specifically trained workers.

In the afternoon the students could work in private plants, offices, and stores, in private and public service occupations and on farms. In addition to supplying much-needed labor, the work could also serve as a training period or an apprenticeship for the students in mastering a particular trade. Once they have mastered this skill or trade, isn't it reasonable to assume that the second line of the F.F.A. motto, "Doing to Learn," would be true? What greater satisfaction is there than the inner contentment which comes from the knowledge that, thru the ability to master a job by learning it and doing it well, one can earn money for the necessities of life and plan for a future. This brings to mind the third line of the motto, "Earning to Live." With the conditions caused by this war-torn world, such as increased taxes, higher prices, and patriotic savings, one needs a higher income. Living doesn't mean just the bare necessities; it should also provide for future educational training for our youth, for rehabilitation work after the war, for increased demands of charitable organizations, and for the continued high standard of living which we prize in contrast to that of some of our neighboring countries.

What of the teachers' afternoon work? This could be most interesting and challenging to the members of the teaching profession. They could serve in a supervisory or advisory capacity in overseeing or checking the work of the various groups in offices or plants or on farms. Certain groups would require special training. Having knowledge of this fact, the teachers could give instruction along these lines before the student would undertake the actual work. In a number of cases the teachers would also gain valuable practical experience along certain lines of endeavor ... contacts made by the representatives of the school in the community. The general public would come to a better understanding and realization of just what the schools were striving to do if the teachers, as ambassadors of vocational training with a broad-visioned program to meet present day needs, were able to do their part to help our boys and girls be more efficient in their training for life.

If any students were not adept at particular skills, these misfits would be discovered in a relatively short time and could be changed to jobs which they could master. This realization and subsequent placement would also save industry a lot of preliminary training to discover weaknesses or talent. The training period would also give school guidance or placement directors a better opportunity to evaluate their graduates or in-school students for positions in the business world. It would also give the students a view of later life realities and the resulting problems. Adjustments would thus be made early in the lives of our youth. The teachers would also benefit from the stark realization of the many practical skills as well as theoretical knowledges that are necessary to master a job completely. In some communities financial support and guidance is given to schools by industrial concerns. This tie-up between the practical world as represented by business and the background world as exemplified by the schools, would serve to bring about a balanced practical education.

In addition to mastering a skill, the partial fulfillment of the gap in labor shortage could be accomplished in this section by groups of boys and girls being taken out to farms in school buses to help plant and harvest the many crops which are certain to be left unplanted or unharvested this coming year. With the present food shortage and the resulting rationing, the farmer must produce yet he must have the labor and equipment to do his part. Group farm laborers could accomplish a great deal and, by alternating or rotating this labor between farms, much seasonal work could be performed. Compensating these young people would be another problem. It might be difficult to have these boys and girls see the value of their apprenticeship without financial returns, but a solution would be to give them some remuneration. In order to avoid changing jobs, the same rate of pay should govern nearly all the students' activities whenever possible; otherwise "pirating" might take place. This could be solved by the co-ordinator of the program who would make up all the schedules of training, employment, financial returns, and awarding of school credit for a certain number of creditable work hours performed. This latter suggestion is one to be carefully evaluated. Otherwise a boy or girl might do a lot of manual labor which might not require much thinking, initiative, interest, and mental ability, and receive more credit than one putting in less hours at a job of the intellectual

The Relation of the School Farm to the Instructional Program in Hawaii

FRANCIS C. AKO, Teacher, Kaimuki Intermediate School, Honolulu, Hawaii

MUCH has been written and said about the efficiency, profits, and productivity of the school farms in Hawaii. Not quite as much has been done in the way of pointing out the value and specific methods of tying up farm practice with theoretical knowledge learned in the classroom.

It seems to the writer that the basic reason for the existence of school farms in Hawaii is their educational values. The making of profits seems entirely unjustifiable. There are several arguments against this, chief among them being that if most school farms were actually taken on a strict cost-accounting basis, the financial summaries would show losses. That is, inefficiency of student labor and the instructor's salary would almost guarantee losses automatically.

Other reasons for school farms, such as producing food for the cafeteria, student body, faculty, or community, providing physical activities for the students, furnishing recreation for the students, or utilizing idle space on the campus, are all more or less secondary and superficial in nature.

With educational objectives as the guiding criterion, the Kaimuki Intermediate School F.F.A. chapter of 20-odd members operated group projects of vegetables and chickens. While these projects grossed well over a thousand dollars, accurate cost account records were kept to give the students experience in record keeping. Each boy learned the technique of taking inventories and keeping records of expenses and receipts. Entries were made daily as transactions occurred and finances were summarized at the end of the year.

The two-acre vegetable project gave ample opportunity to demonstrate and put into practice everything learned in the classroom. The study of vegetable culture is rendered largely impotent if it is not followed by concrete illustrations. What better opportunity and place than taking the boys out into the garden right after discussing the subject in the classroom! Tractor operation and care, preparing ground, making beds, planting, transplanting, fertilizing, irrigating, cultivating, controlling diseases and pests, and harvesting jobs, all gave ample opportunity to apply this technique.

Discussion often took place in the field itself, both prior to and during manual operations. The best illustration of this was the identification, in the field, of various pests and diseases of vegetables. This was followed by giving every boy thoro manual training in spraying with some of the chemicals studied in the classroom.

The poultry project, while embryonic in size since it was just being started, nevertheless supplied valuable tie-up with the classroom study. For example, after studying the characteristics of good laying houses, the boys went out and built two model laying houses for home-sized flocks. Suggestions and recommendations learned in classroom discussions for adapting poultry houses to Hawaiian conditions were carried out in actual construction. Knowledge of brooding gained ... to raising 300 chicks. Knowledge of the feeding schedule was also applied similarly. After studying fowl pox, the boys decided to and did vaccinate the chicks.

While certain jobs taken up could not be treated similarly because of a lack of facilities, every effort was made to compensate for it. For example, since the school farm did not include pigs or cows, the study of different breeds had to be supplemented with charts and illustrations, temporarily at least. Later, permission was obtained for the boys to leave the school campus for a day and the entire group boarded a bus for the dairy, piggery, and poultry plant at the University of Hawaii where a study of some of the different breeds was completed.

In conclusion, the writer would like to point out what he considers the most important functions of the school farm, looking at it from an educational point of view:

1. It teaches the boy how to use both his head and his hands in producing efficiently.
2. It teaches the boy certain fundamental knowledge essential to future success.
3. It instills in the boy a love for and an understanding of things agricultural.
4. It teaches the boy how to co-operate with his fellow workers.

This list is not complete in any sense nor is it necessarily in sequence of importance, but it should give an inkling of the fundamental aspects of a justifiable program using a school farm.

Vocational Training

(Continued from page 170)

type, requiring the attributes which come from the head rather than the hand.

One gathers from reports coming in from all parts of the country that the Victory Corps' program is stimulating students to serve full capacity to the best of their abilities. This national program is doing much to encourage many of our depressed, war-minded, young people of enlisting age to do their part at home. This work should be encouraged and strengthened by actual participation. In a goodly number of communities one reads of the splendid work the various subdivisions of the Victory Corps' program are doing. They are to be commended as they are fulfilling the fourth and last line of the F.F.A. motto, "Living to Serve." So many of these young people are turning to their elders and saying, "What can we do?" Yes, what can WE do? First, train them to fill specific jobs in industry by having them learn to do; second, allow them to do to learn; third, let them earn to live; and fourth, they can serve not only business, industry, labor, agriculture, and the home, but the school, the community, the state, and the nation as well. Better vocationally-trained young men and women to meet the present crisis and later to take their place in the occupational pursuits of peace, will be able to fulfill the tasks demanded of them in the biggest job of all time—world rehabilitation after

Seed Testing in Vocational Agriculture

J. MORRIS CHRISTY, Teacher, Tipton, Iowa

OUR seed testing program has been developed as a result of a definite need for such a service in this community. It supplements the state seed testing services.

The testing we do for farmers falls into the following classifications: (1) Germination tests of home-grown crops to be used for seed, (2) Germination tests for farmers wishing to sell seed to neighbors or at a public sale, (3) Tests for seed dealers, and (4) Tests for farmers in qualifying for AAA payments.

Our seed testing service was started in February, 1943, and has always been financed and conducted by our F.F.A. chapter. After considerable discussion early in 1943, our chapter decided to purchase a small Mangelsdorf germinator for $40. The chapter decided to test for F.F.A. members free and to charge others 25c per sample for a purity and germination test.

After the germinator arrived we received about 30 samples of seed within a few days. Farmers have welcomed the service and have given it their support ever since. From February 1943 to June 1944 we conducted 491 germination and purity tests for about 312 different farmers. We received about $100 for this work.

The actual seed testing is carried on as a part of the class work in Farm Crops and Soils. The class does the work with the germinator and conducts the purity tests as a part of a unit of study on the use of good, clean seed. During January and February and early March the boys spend an average of one hour per week per student working at seed testing. The rest of the seed testing season makes it necessary for each boy to work about one-half hour per week during class. This training also develops the ability to judge samples of seed. After such training, the student can look at samples of seed and estimate reasonably well the amounts of noxious weeds and inert material as well as the probable germination.

Due to the increased demands for service, the chapter decided last summer to purchase another germinator. We purchased a new 8-tray Mangelsdorf germinator for $75. We also purchased a four-in-one seed scale for $36. This seed scale will make our purity tests more nearly accurate. It will also provide us with an official weight-per-bushel test.

After each test is made we make a permanent record to keep in our files. We give the farmer a slip showing the following information: (1) Name and address, (2) Name and variety of seed, (3) Percentage of germination, (4) Percent of hard seed, (5) Purity, (6) Noxious weed seed, (7) Other weed seed, (8) Inert material, (9) Other crop seed, (10) Date test is completed. Every seed sample is given a number and we can go to our files and check on any sample about which there might be a question. We keep samples for a few weeks after the tests are completed. If there is any question about the test, it is often desirable to have the original sample at hand.

Our test enables the owner of the seed to sell it and comply with the state law. Any person selling seed without a germination and purity test is breaking the

WATSON ARMSTRONG

Farmer Classes

W. HOWARD MARTIN

Conducting Adult Farmer Classes in Food Production War Training

PAUL C. DUNKELBERGER, Teacher, Kutztown, Pennsylvania

P. C. Dunkelberger

A SURVEY of community interests and needs was completed and on the basis of its results a program for adults was planned. The program included the following courses: (1) Increasing Milk Production, (2) Increasing Egg Production, (3) Production, Conservation, and Processing of Food for Family Use, and (4) Farm Machinery Repair and Operation. The total enrollment in all courses was 229. The problems and procedures involved in conducting the program may well be illustrated by the course on increasing milk production. The enrollment in this course was 79 and the average attendance was 72.

Organizing the Class

Each person who desired to enroll as indicated by a survey sheet was informed definitely as to the exact date, time, and place the meetings were to be held. This was done thru the F.F.A. chapter members, local newspapers, farm organizations, and postal cards at least two or three weeks in advance of the first meeting.

At the first meeting farmers formed their opinions as to the worthwhileness of the course. There were many present who apparently had come for a "look-see." Necessary business was finished as quickly as possible. All enrollees were registered so as to secure needed information. This was easily done by having prepared forms for enrollees to fill in as they arrived. The course content was explained at this time and a course calendar given to every enrollee.

Election of officers and appointment of committees was also finished at this meeting. The following officers and committee were found to be helpful in conducting the course: chairman, vice-chairman, secretary, and an advisory committee.

Course Content and Calendar

The following is a copy of the course calendar which we followed. A copy of this calendar was given to all members.

KUTZTOWN HIGH SCHOOL
DEPARTMENT OF VOCATIONAL AGRICULTURE

Adult Farmer Course in "Increasing Milk

Meet In: Vo.-Ag. Room 108, Kutztown High School, every Monday evening beginning November 1, 1943 for a period of 10 weeks.
Time: 7:30 p.m. to 9:30 p.m.

I. Class organization, plus Dairy Farming and the War
II. Determining the food requirements of dairy cattle
III. Preparing and balancing a desirable ration for dairy cows
IV. Feeding dairy cows
V. Providing and maintaining satisfactory pastures
VI. Improving the future dairy herd thru breeding
VII. Raising dairy calves
VIII. Preventing and controlling diseases and parasites of dairy cattle
IX. Producing clean milk
X. Care of and managing the dairy herd

Procedure of Meetings

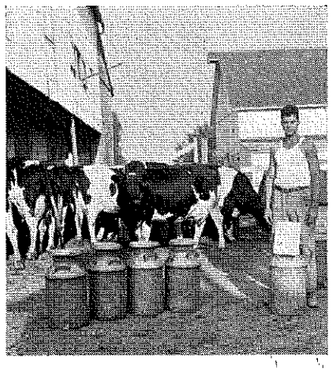
Farmers began to arrive at the school one-half to three-fourths of an hour before the scheduled time. Their reasons for this were: (1) To discuss agricultural problems of a private nature with the teacher of agriculture; (2) To examine agricultural bulletins, magazines and books that were provided for this purpose. These materials were different every week depending upon the lesson under discussion. (3) To have discussions with their fellow farmers before the meeting began, and (4) To attend a final meeting of the advisory committee.

The meetings started promptly. This led to promptness on the part of the enrollees and I am happy to report that this habit carried over to other farm meetings in the community.

It is common knowledge that the more any group is made to feel that the program is their responsibility and not that of the leaders, the more probable will be its success. For this reason the meetings were always called to order by the elected chairman. The following is the order in which the business of each meeting was conducted and it proved very satisfactory.

1. 7:30 Call to order by chairman
2. 7:30 Roll call by secretary
3. 7:35 Announcements of local interest
4. 7:40 Reports of advisory and other committees on problems referred to them from last meeting
5. 7:45 Review sheet of last meeting distributed and discussed
6. 7:55 Discussion of topic, led by teacher of agriculture
7. 9:15 Review led by teacher of agriculture
8. 9:25 Topic for next meeting announced and bulletins, etc., distributed

The review sheet referred to in (5) above was a summary of the discussion and the conclusions of the previous meeting prepared jointly by the secretary and the teacher of agriculture. It was typed and mimeographed by the commercial department of the high school. The summary sheets were fairly inclusive and detailed because they were used for further reference by farmers after the completion of the course. They have proved their value many times, I know that they were carefully filed by the majority of the class members and used frequently. They have saved many a trip for the teacher of agriculture because, when a problem developed, the farmer could solve it by referring to these sheets. Few phases of the course were more highly thought of by the members than the review sheet. The class members came to feel that it was the result of their own work and, therefore, cherished it highly. It has been my observation that it was rated equal or superior to bulletins and pamphlets distributed.

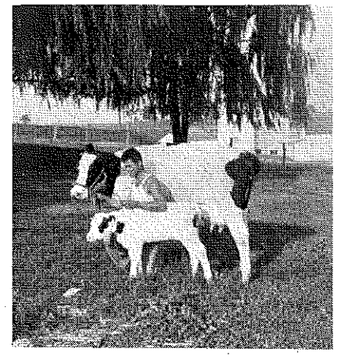


One can of milk daily was the increased production of this herd resulting from an evening class in Increasing Milk Production. Feeding based upon size and production of each cow, record keeping, testing, and pasture improvement were the practices used

Bulletins and pamphlets from experiment stations and the U. S. Department of Agriculture were obtained well in advance of each class meeting and distributed during the meeting. These bulletins and pamphlets dealt mostly with the topic for the next discussion and were distributed at the end of the session. This stimulated interest and brought forth a better discussion and understanding at each class. Those parts of greatest interest and around which the next discussion would center were pointed out to the members so as to save time in their reading. Under no condition were these given as an assignment but as something they could keep and read if they cared to. It was easy to observe that the majority read most of the parts pointed out to them. By our distributing these and the review sheet the members departed with a feeling of having received something to read and give thought to before the next meeting.

Informing the Public

The secretary prepared an article along with the review sheet to be printed in the local paper each week. It covered the main topics of discussion at the previous meeting. It helped to increase our enrollment as other farmers read the articles and felt they were missing too much by not attending. It also aided farmers who were not members of the class to improve their dairy business. It has had a strong tendency to educate the public concerning the worthwhileness of the department of vocational agriculture.



The first calf born on this farm as a result of artificial breeding. The breeding co-op followed the short course. Thirty percent of the course members are members of the co-op

Approved Practices

At the last meeting of the class, forms were distributed for the members to fill in and return within one week. On these forms were to be checked and written the outcomes and benefits they received from the course. The following is a list of the 10 approved practices which were listed most frequently by the enrollees:

1. Improve the herd thru better breeding
   This was influenced to some degree by the starting of an artificial breeding project in the community.
2. Increase milk production more efficiently
3. Feed balanced rations according to production
4. Practice better herd management
5. Practice good pasture management
6. Raise only calves of good breeding
7. Produce and market high quality milk
8. Purchase feeds in accordance with the quality and the quantity of home-grown feeds
9. Home mix and prepare rations
10. Keep herd records

Follow-Up of Instruction

Visits to the home farms by the teacher of agriculture were looked upon with much favor and were a great aid in putting the practices discussed into operation. It proved to be a good idea to consult the survey sheet before visiting a farmer in order to become acquainted thoroly with his background, thus being better prepared to serve him. Visits whenever convenient. Unless such visits are made frequently, I do not believe a keen interest in the adult program of vocational agriculture can be long upheld.

Conclusion

I am thoroly convinced that the adult classes are needed to aid in food production. The contribution of our courses is great, and the total contribution of all such courses in the United States, even tho hard to measure, must be enormous. Undoubtedly it is helping to bring victory closer and closer.

What is just as illuminating is the fact that the improved practices, brought about thru the teaching of these courses, will be retained and be of continued value to the farmers in the postwar era.

Also a great deal more interest in the all-day program was noticeable shortly after the adult program started. The boys and their dads discussed while at home on the farm the practices advocated in their classes. It gave the son a greater respect for school since his father thought so well of vocational agriculture. Our own all-day enrollment jumped from 35 to 47 due, in a great measure, to the adult program. It most certainly has made the recruiting of all-day boys much more simple than before. The adult class members have a strong tendency and desire to further vocational agriculture, since they know the value of the department from firsthand information and, therefore, wish it to grow. Many farmers who were members of the adult classes, with young sons at home, expressed a desire to have their sons study vocational agriculture.

Saline County, Missouri, Leadership Camp

MONTSERRAT PARK at Knob Noster, Missouri, was the setting for a very successful Future Farmer Leadership Training Camp on August 24–26.

Forty-four boys from Slater, Marshall, and Sweet Springs, together with their advisers, spent a very pleasant and profitable three days. Altho rain hampered some of the planned activities of the group, the ingenious Future Farmers and their advisers altered their plans and made the camp a real success.

The camp facilities at Montserrat are all that could be asked for in any training and recreational program. The camp includes a large meeting and recreational hall large enough to accommodate 150 persons in recreation or at mealtime. A large, well-equipped kitchen joins the mess hall. Cabins, washrooms and unit meeting halls are sufficient to house at least 150 boys. The camp has a strictly modern swimming pool, large lake, and baseball diamond.

Recreation consisting of swimming, hiking, ball playing, and boxing was provided for the boys and was under the direct supervision of trained personnel. A planned schedule was followed which provided for training in leadership, citizenship, and rural responsibilities. Responsibilities and duties of all F.F.A. officers, F.F.A. degree work, chapter programs, and instructions in the Manual were the topics for group meetings and discussions by the boys. Finally, a stunt night in which each camp unit gave a self-

Vocational Education in Agriculture for Returning Veterans

Abstract of an address by James H. Pearson, U. S. Office of Education, Washington, D. C., before the Agricultural Education Section of the American Vocational Association, Philadelphia, December 7, 1944

IT IS estimated that 1,650,000 individuals in the armed forces came from farms and that about 50 percent of them will want to go back to farms after the war. Workers in vocational education in agriculture are planning to provide training for the veterans who desire to farm. It is expected that many veterans will take advantage of such training.

At the outbreak of the war more than 9,000 public secondary schools thruout the country were offering courses in vocational agriculture. In 1943, 491,967 farm boys and adult farmers were enrolled in the courses. This vocational education program has been developed under provisions of the Smith-Hughes Act passed by Congress in 1917. Since that time schools have become equipped to provide vocational training in agriculture and it is now proposed to use that equipment to make courses available to veterans.

The training program will be flexible enough to provide instruction for farm operators and renters, tenant farmers, share croppers and farm laborers. It will be broad enough to include information and training on: the impact of the war on agriculture; occupational opportunities in farming; buying and renting farms; repair and maintenance of farm equipment; production and marketing of farm commodities; and ways of supplementing the farm income from jobs other than farming.

Plans for the training program are being developed now in order that it will be available to veterans who desire refresher or retaining courses in vocational agriculture when they leave the armed forces. It is expected that many industrial workers who return to farms and persons who have remained on farms will also take advantage of these helpful vocational courses.

A. V. A. Officers, 1945

Officers elected at the recent convention in Philadelphia follow: President, M. D. Mobley, State Director of Vocational Education, Atlanta, Georgia; Secretary, L. H. Dennis, Washington, D. C.; Treasurer, Charles W. Sylvester, Baltimore, Maryland; Vice-President representing Home Economics Education, Miss Anna K. Banks, Supervisor of Home Economics, Oklahoma City, Oklahoma; Vice-President, representing Industrial Arts, Frank C. Moore, Cleveland, Ohio; and Vice-President representing Business Education, R. L. Kibbey, San Francisco, California. Other vice-presidents continue their respective terms. The place of the next convention will not be announced until a committee visits the cities inviting the convention to ascertain rather definite information relative to hotel accommodations and

Studies and Investigations

E. B. KNIGHT

Farms and Farming Opportunities for Returning Servicemen and War Workers

F. W. LATHROP, Research, U. S. Office of Education

F. W. Lathrop

KNOWLEDGE of farms and opportunities in farming is basic to any program for establishing people in farming. Partnerships are one type of opportunity. A partnership may be between an older farm operator who wishes to shift some of his responsibilities and a younger man who would like to assume them. A father-son type of partnership is especially desirable.

Farming as a tenant presents another type of opportunity. A knowledge of farms now for rent or likely to be for rent is essential.

Knowledge of farms for sale or to be for sale affords an opportunity to assist prospective farm buyers.

Some young men who wish to become established are short on farm experience or farm experience of the right kind. A knowledge of farms which offer opportunities for desirable experience as a farm laborer is needed.

The purpose of this statement is to present a simple plan for discovering opportunities in farming, using Forms A, B, and C.

FORM C

I. FARMS FOR SALE

1. What person or agency owns this farm?
2. Why is this farm for sale?
3. How often has it changed hands?
4. What is its renting history, if any?
5. Is it a "going concern"?
6. What investment is required to make it a going concern?
7. Is its productivity trend up or down?
8. What kind of roads to this farm?
9. How big a debt can this farm safely carry?
10. What are the market facilities—kind and distance?
11. What is the long-time outlook of the community?

II. FARMS FOR RENT

1. What person or agency owns this farm?
2. Why is this farm for rent?
3. What is the history of this farm as to ownership and rental?
4. What kind of a lease would be made?
5. Is the farm a "going concern"?
6. What will the tenant have to furnish?
7. Is the productivity trend up or down?
8. What is the long-time outlook of the community?

III. FARMS NEEDING PARTNERS, MANAGERS OR HIRED HANDS

A. Is there an immediate opportunity for a partner on this farm?

B. Is there an immediate opportunity for a manager on this farm?

C. Is there an opportunity as hired hand for a young man still in school?

D. Is there an opportunity as hired man for a young man out of school?

1. Will the owner co-operate with the teacher of agriculture to afford valuable training and experience for the young man?
2. What is this owner's record in dealing with young men?
3. Will the young man form desirable associations in this situation?
4. Will the young man have desirable living conditions?
5. What opportunities as partner or manager may open up for young men who are now hired hands on this farm?
6. What is the long-time outlook of the community?

IV. HOME FARMS

1. How many full-time men are now working on this farm?
2. How many brothers plan to stay on this farm?
3. How many heirs will the young man have to buy out?
4. In what ways could this farm business be enlarged?
5. What kind of an opportunity will the parent or other relative give the young man?
6. Does the young man need experience away from home?
7. Does the young man wish to leave home?
8. Considering the above answers, is there a suitable opportunity at home for this young man?

FORM A
INFORMATION ABOUT OPPORTUNITIES IN FARMING

NAME OF FARM..... MAP LOCATION.....

Year	Operator		Owner		Opportunity*	Date Open	Placement (Name of Person)
	Name	Age	Name	Age			
19							
19							
19							
19							
19							
19							
19							
19							
19							

*Indicate the kind of opportunity by number as follows:

1. This farm can be purchased.
2. This farm can be rented.
3. Hired man (good job for experience)
5. Partnership.
6. Home farm.

Under 1, there should be some definite evidence of intention to sell beyond mere

Suggestions on the Use of the Forms

It is assumed that these forms will be used by the teacher of agriculture assisted by a committee of farmers who have a thoro knowledge of the farms and farmers of the community and who are well distributed thruout the patronage area of the school. The rechecking of these forms each year can be done almost entirely thru conferences of the teacher with individual members of the committee.

The forms are devised so that a minimum of time is required for its filling out and rechecking. Form A should be filled out each year for every farm in the patronage area which can possibly afford an opportunity now or in the future. This rules out many small farms and part-time farms. Form A has space for 10 years.

If there is no opportunity on a given farm, write in the name of the farm and the map location at the top and fill in the year on the top line and also the name and age of operator and the name and

FORM B
GENERAL INFORMATION ABOUT THE FARM

Year.....

LAND USE: Acres in cropland....., in woods pastured....., in woods not pastured....., in farmsteads, lanes, etc....., in other.....

Total acres in farm.....

CROPS					PRODUCTIVITY (Use indices that are available)
Kind	Acres	Productive work units	Average yield*	Total yield*	Index of productivity .....
					Land classification .....
					Crop index .....
					Soil type .....
					Other (specify) .....
LIVESTOCK					FARMSTEAD
Kind	Head	Productive work units	Production*		Main house:
					Construction .....
					Number of rooms .....
					Water supply .....
					Bathrooms .....
					Electricity .....
					Heating .....
					Other dwellings .....
					Barns:
					Number .....
					Size .....
					Capacity livestock .....
					Storage capacity
					Hay .....
					Grain .....
					Silage .....
					Other .....
					MISCELLANEOUS
					Assessed valuation $.....

Total P.W.U.....

*Optional if measures of productivity other than crop index are available. Get either total yield or average yield but do not ask for both.

until the next year. In other words, do not gather further information about this farm until there is some kind of an opportunity on the farm. This saves gathering unnecessary information. The right-hand column is for the name of the young man who is placed on the farm.

When a recheck of some later year shows an opportunity on a given farm, fill out the line opposite the appropriate year in Form A. Then turn to Form B and fill it out. Use the productive man-work-unit table recommended by the farm management department at your college of agriculture.

Fill out also the appropriate section in Form C. For example, if this farm shows a renting opportunity, fill out Section II, "Farms for Rent."

Many teachers will wish to make a more thoro study of home farms of students than is provided under Section IV.

Where the section on home farms is filled out, one of the other sections will need to be filled out also, for example, if there is a partnership opportunity on the home farm, Sections III and IV should be filled out.

I would like to emphasize three points about these forms. In the first place they are simple. The information called for has been kept to a minimum. Second, it is possible to gather the data on these forms with a minimum expenditure of it thru the use of a few key men in the community. Many of the smaller farms would not be considered. Third, it is important that these opportunities be checked every year or so, using the key men. Thus a teacher would always have an up-to-date list of farming opportunities in the community.

SPECIAL: J. A. Guitteau, State Supervisor in Washington and Vice-President of the A. V. A. representing Agriculture, died from asphyxiation January 29. More later.

Teacher Losses Not All to Military Service

WEIR FETTERS,
San Luis Obispo, California

A RECENT survey of losses of teachers of vocational agriculture in California discloses the interesting fact that during the past three years less than 40 percent of the men leaving vocational agriculture positions have gone into the military services and these largely by enlistment or recall from reserve status rather than by draft.

The highly lucrative position of farming is reflected by 22 percent or a total of 34 teachers resigning their positions to enter farming, but contrary to popular opinion war industries attracted only five of a total of 155 men leaving this work.

Teaching vocational agriculture is definitely a training ground for other professional agricultural services. Fifteen percent of those leaving resigned for positions in other services including Soil Conservation, Agricultural Extension, Farm Security, and War Relocation Authority.

Another study now in progress indicates that inadequate pay is not necessarily the major factor causing these changes. Another reason given by many was unsatisfactory relationships with school administrators. This matter, however, is being studied further for more specific information.

One encouraging sign has become evident in recent months. Of the 115 persons leaving vocational agriculture positions in the last three years, seven have recently returned to either their former position or those left vacant in other schools. Three of these are returning servicemen.

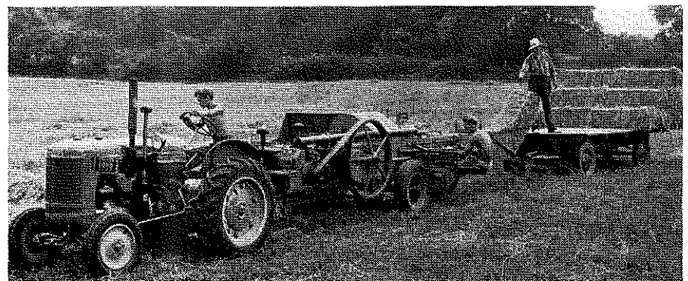
This summary would seem to indicate a definite need for an expanded teacher-training program in the postwar period in order to provide personnel to fill vacancies, and for the establishment of new departments.

A Research "Quickie"

Ask these questions of your former teachers not in military service: (1) What did you like best about the job? (2) What did you like least? (3) What are your severest criticisms of the job? (4) Why did you leave teaching? (5) What suggestions would you make for the improvement of the job?

—Suggested by S.S.S.

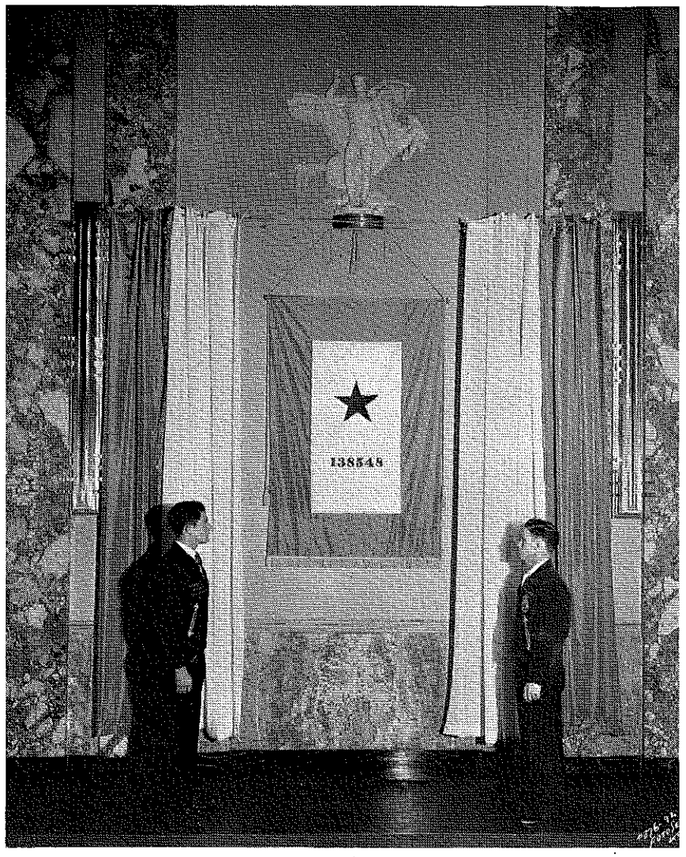
Members of the Winola F.F.A. Chapter, Mill City, Pennsylvania, operating their chapter-owned tractor and pickup baler. (See page 177, col. 3)



Future Farmers of America

A. W. TENNEY

17th National F.F.A. Convention



The F.F.A. Service Flag which was unveiled at the 17th National Convention. Standing l. to r. 1943-44 National 1st Vice-President O. Beverley Roller, Weyers Cave, Virginia and 1943-44 National President Robert Bowman, Buttonwillow, California

THE Future Farmers of America, the national organization of farm boys studying vocational agriculture, concluded a very successful three-day wartime convention which met October 9, 10, and 11 in Kansas City, Missouri. Attendance was limited to 400 in contrast to the 8,000 members who have attended previous conventions.

The members of the organization were highly honored by the presence of the Honorable Claude R. Wickard, Secretary of Agriculture. Mr. Wickard addressed the convention on Tuesday, October 10. This day was designated National F.F.A. Day and chapters thruout the United States listened to the broadcast of his address over the Blue Network. Robert Bowman, National President, conferred the Honorary American Farmer Degree upon Mr. Wickard.

The major purpose of the convention have been made during the past year and to make plans for the important year ahead.

A service flag was unveiled in an impressive ceremony in honor of the 138,548 members of the Future Farmers of America who are serving in the armed forces of our country.

The National Public Speaking Contest was one of the feature events of the convention. The following boys won honors in that contest:

First Place—Vincent Orr, Alto, Georgia—"The Victory Farmer"; Second Place—Von Packard, Meridan, Idaho—"From Soil to War"; Third Place—Harold K. Keller, Middletown, Maryland—"Bang's Disease and the War"; Fourth Place—Paul S. Anderson, Grand Rapids, Minnesota—"Agriculture Our Basic Industry."

The following individuals were named Farm Mechanics Award:

National Winner—George Fogle, Okemos, Michigan; Western Regional Winner—Dean A. Elliott, Fort Benton, Montana; North Atlantic Regional Winner—Owen E. Heiss, Mifflinburg, Pennsylvania; Southern Regional Winner—Roy Richard Henke, Kerrville, Texas.

Appropriate plaques were given to the six chapters in the Gold Emblem classification, which is the highest rating given to the local chapters of the Future Farmers of America. Chapters receiving this rating were:

Pauls Valley, Oklahoma; Albany, Oregon; Alpine, Texas; Buhler, Kansas; Flathead, Montana; Hurricane, West Virginia.

Elton Ellison of Ralls, Texas was honored by being named the Star Farmer of America. He was inducted into the military forces a short time before the convention. His wife attended the convention and received the award of $500.00 for Elton. The Regional Star Farmers were:

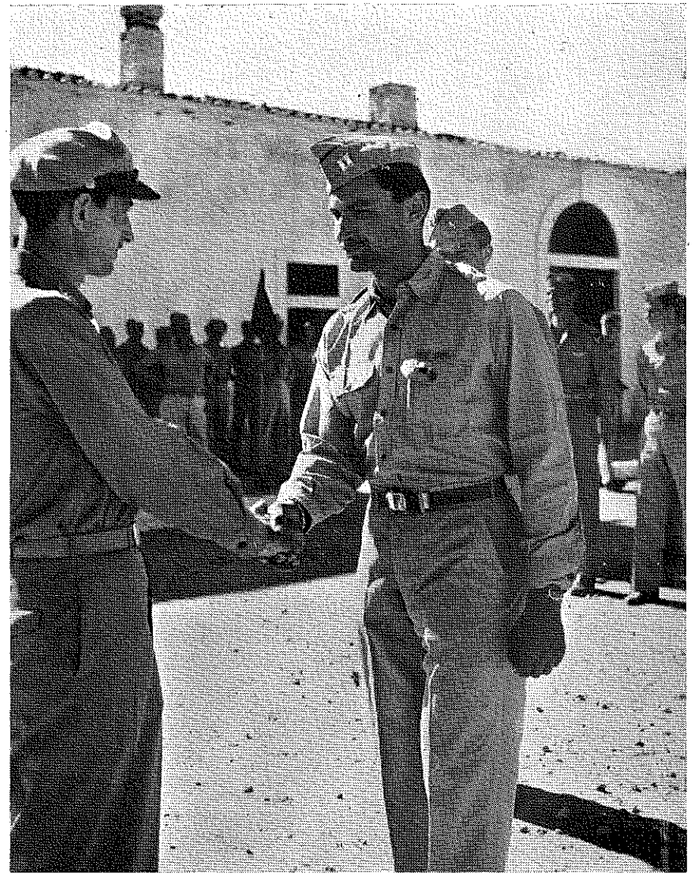
Star Farmer, North Atlantic Region—Robert Linn Lawyer, Mt. Gilead, Ohio; Star Farmer, North Central Region—Erwin E. Thalmann, Haven, Kansas; Star Farmer, Pacific Region—Amelio Bell, Fallon, Nevada.

One hundred and seventy-five members were raised to the American Farmer Degree, the highest degree conferred by the organization.

The following officers were elected to serve for the year 1944-45:

President—Oliver H. Kinzie, Cushing, Oklahoma; 1st Vice President—Sigvald J. Sandberg, Ortonville, Minnesota; 2nd Vice President—David B. Jameson, New Castle, Pennsylvania; 3rd Vice President—Merrill J. Hallam, Spanish Fork, Utah; 4th Vice President—Tom Vaughan, Yorkville, Tennessee; Student Secretary—George C. Fry, Gaithersburg, Maryland; Treasurer—Dowell J. Howard, Winchester, Virginia; Executive Secretary—A. Webster Tenney, Washington, D. C.; Adviser—W. T. Spanton, Washington, D. C.

Boys of the Rock Ridge, North Carolina, Department are looking forward with interest to visiting the school forest. They grew 14,000 pine seedlings in 1943 which, together with several hundred locust seedlings, were transplanted on a 10-acre tract in 1944. They also set 2,500 pines on their home farms. Mortality was less than 2 percent. The state forester says the department project has a better growth of seedlings than he has seen elsewhere. "We plan on a trip to the forest soon to study the growth of pine seedlings and percent of livability and to do some cutting out of undesirable growth of native trees and less valuable trees," says Mr. Sheffield, the instructor. Improvement of farm wood lots, planting seedlings to reduce soil erosion and forestry culling are good projects for the long



Captain Alpha Fowler receives his much deserved award

"Distinguished Flying Cross"

CAPTAIN A. A. Fowler, 23, of Douglasville, Ga., former president of the Georgia F.F.A. Association, now pilot of a B-17 Flying Fortress operating from a base in Italy, has been awarded the Distinguished Flying Cross for "extra-ordinary achievement in serial flight." The award was made by order of Major General Nathan F. Twining, a commanding general of the 15th A.A.F. He also has the Air Medal and Oak Leaf Cluster and is a veteran of 16 combat missions.

Captain Fowler was over enemy territory on a bombing mission when enemy flak scored a direct hit on his plane, puncturing the fuel tanks and putting two engines out of operation. The plane rapidly lost altitude and Captain Fowler ordered his crew to throw everything possible overboard. Guns, radio equipment, and even the ball turret of the plane were dropped before he got his craft under control. He brought his plane and crew back safely "by outstanding courage, professional skill, and devotion to duty at a time of great stress."

Captain Fowler, son of Mr. and Mrs. A. A. Fowler, of Douglasville, Ga., an American Farmer, attended the University of Georgia where he took the leading male part in the movie "Green Hand,"

Calif. Young Farmers

At a joint meeting with wives and girl friends, Caruthers, California, young farmers discussed possible service functions of the chapter and learned how they could assist in making surveys and locating possible farms for returning veterans. Means of financing returning veterans in farming were outlined. Refreshments were served as usual.

Chapter-Owned Hay Baler

MEMBERS of the Winola Chapter of Future Farmers at Mill City, Pennsylvania, are rendering outstanding wartime service to the farmers of their community thru a practical, "learning by doing" activity program.

Last summer, with their chapter-owned tractor and pickup baler, these Future Farmers, under the guidance of their adviser, R. L. Thompson, baled 1,174 tons of hay on 53 farms. F.F.A. members were paid 30 cents an hour during the winter season and 40 cents an hour during the summer. As a result of their first year's operation the chapter earned over $2,400 net for baling 33,545 bales of hay. During the winter they baled 300 tons of hay out of the mow. Last summer they averaged 800 bales for each nine-hour day in their pickup operation. The best production achieved was 70 tons of mixed timothy and alfalfa baled in 20 hours.

The chapter purchased the tractor and baler with proceeds derived from the sale of chicks hatched in their chapter-owned incubator of 2,700-egg capacity and from other group projects including a co-operative fruit project. In this latter project, fruit was purchased on the trees and later picked and marketed at a profit.

The hay-baling project, in addition to training boys in co-operative effort, has been of unestimable value in relieving the wartime farm labor shortage in this community.

Dairy herds, not just single cows, were exhibited by several vocational students at the recently held Ozark Empire Fair at Springfield, Missouri. The herds ranged in size from five to 20 head and for the most part were owned by the boys. The total vocational dairy exhibit of 137 head included 101 Jerseys, 28 Guernseys and eight Holsteins. In quality, also, the exhibit had merit as the boys won in competition with some of the best breeders in southwestern Missouri which is famous for its Jerseys. The Jersey Breed Association offered a Jersey bull as a prize to the chapter with the best exhibit of Jerseys and the Guernsey Association awarded a Guernsey bull for the best exhibit of Guernseys.

The cream of the milkweed crop drying for shipment. Michigan F.F.A. members are good dairymen when it comes to milkweed pod collection (See page 178, col. 3)

Keeping Livestock Healthy

B. F. CURRY, Teacher,
Banquete, Texas

THIS is a problem which touches a very large percent of teachers of vocational agriculture, due to several things such as its fascinating nature, the challenge it offers, the seeming rewards in goodwill it promises, and, I think, its need. Yes, there is a definite need for community work in the direction of keeping livestock healthy. Teachers of vocational agriculture, realizing this need, want to dispatch their duty to that need in the most efficient way and at the same time keep the proper impression regarding it and stay within their field of duty. To reach that end they are confronted with several obstacles. I believe I can throw some light on their removal.

First, how shall we administer real help to farmers without running our cars too much and using up time that could be spent profitably otherwise? I developed a system which I used last year that worked very well. I stocked my "health" cabinet with supplies which would meet all ordinary cases. When a farmer calls on me with a case, I question him about it and, if I think I know what the trouble is, I give him the proper materials and tools to use and explain how to use them. If I don't know what the trouble is, which has been seldom, I go and see the animals. If I can't explain to a farmer how to use the curative or preventive materials, I will go with him in his car and show him *one time*.

The school bought all my supplies and I charge for them at their replaceable prices. When a certain supply has been used I buy more from that fund. The following is a partial list of supplies in my "health" cabinet: two castrating clamps, two hog worming sets, one chicken worming set, two caponizing sets, two 10 c.c. and two 40 c.c. vaccinating syringes, two bottles each of hemorrhagic septicemi bacterin, blackleg bacterin, cholera serum, cholera virus, pox vaccine, cholera typhoid vaccine (which is kept in an icebox), one bottle of formalin, one bottle of prescription for long-gone cases of retained afterbirth, one dozen uturic capsules, one bottle of potassium iodide, one gallon of coccidiosis mixture, one gallon of pheno sheep drench, 50 worm pills for hens, one can of sodium fluoride, one ear notcher, two large and two small dehorners, one bottle of turpentine, one bottle of essence of peppermint, one bottle of sodium thiosulfate, one can of roost paint, one bottle of screw worm medicine, one can of astringent pills for chicks, one sheep drench gun, one milk fever outfit, one gravity injector, one pair of emasculators, one stick of caustic potash, one can of healing powder, one pound of sulfur, one pound each of bonemeal, limestone, and salt, one docking chisel, one horn burner, one pound of soda, one pound of epsom salts, one box of teat dilators. Others may be added.

Clinic Suggested

One person suggested having a community clinic once a month, inviting a specialist to demonstrate. This is a wonderful suggestion for the teacher who can put it over, but I can't seem to get the pocketbooks but they will not attend my meetings. Perhaps I do not "put the feed in the trough." All I want is somebody to show me what feed to put in and how to put it there.

Another obstacle is how to keep the veterinarian, and farmers for that matter, from thinking we are practicing veterinary medicine. My plan is to keep in contact with the local veterinarian and discuss livestock problems with him. Most of them will co-operate and give lots of help. Very serious diseases such as charbon, respiratory troubles (except in poultry), and diseases which the teacher cannot readily diagnose or treat, should be left to a veterinarian. I try to avoid cases requiring a veterinary background and treat only the more common ailments. I have the farmers understand that I am not a veterinarian.

The farmer needs help in keeping his livestock healthy, especially in wartime, for it saves millions of dollars, and the teacher of vocational agriculture should not mind helping him prevent or cure diseases. My opinion, however, is that he could *spend more time in teaching the farmer to prevent diseases* and have more lasting results.

Another obstacle is how to acquaint one's self with a proper knowledge of health management of livestock. The following is my suggestion. Make a chart of all livestock diseases common to the community showing the cause, symptoms (including post mortem), prevention, and treatment of each. Read magazines, books, catalogs, and bulletins for information on each item. Also consult farmers and veterinarians. Add to the chart each time something new is learned. Consult this chart when a case presents itself. Several good sources of information are Doctor Hess' "Barnyard Doctor," Doctor Legear's "Livestock Health Manual," USDA's "Keeping Livestock Healthy," Conn's "The Practical Veterinarian," Hoard's Dairyman, Pratt's "Poultry Health Book," Salsbury's "Poultry Health Manual," USDA's "Diseases of Cattle," Franklin's "Catalog of Livestock Supplies," and many farmers' bulletins.

And last, but not least, always use extreme sanitary precautions. "It is better to be safe than sorry." Never guarantee results of any treatment or indicate a guarantee.

A "Corking" Ceremony

A project looking to the planting of one hundred thousand cork oak acorns by Georgia's Future Farmers of America was launched in Atlanta with a colorful Arbor Day ceremony on the Capitol grounds December 1. The program featured the planting and dedication of a cork oak tree on the Capitol grounds.

Robert Dees, of Moultrie, president of the State Association, presided. The speakers and their subjects were: Governor Ellis Arnall, "Georgia's Forest Resources"; W. E. Pafford, State Department of Education, "The School's Part in Forestry"; Vinson Orr, of Jonesboro, National F.F.A. public speaking champion, "F.F.A. Work in Forestry."

Motion pictures were made of the scenes on the speaker's platform and the actual planting of the tree by President Dees, under the watchful eye of Gover-

Chapter Supplies Floss to Keep Sailors Afloat

J. A. MORTON, Teacher,
Remus, Michigan

INTERPRETING literally their Future Farmer's motto, "Living to Serve," the Remus, Michigan, Future Farmers collected enough milkweed pods to fill 450 Navy life jackets.

Thru careful planning and group co-operation the members were able to answer the War Hemp Industries appeal to schools for aid in the floss harvest with 900 bags of milkweed pods.

The boys set a minimum of six bags per member; a committee of eight was appointed to locate densely growing milkweed areas; the members were divided into four squads to stimulate competition —the two squads picking the fewest pods were hosts at a party for the winning squads; classes in agriculture used three afternoons to collect the pods; the instructor and students provided cars.

The group collected 170 bags the first day, 302 bags the second, and 140 bags the third afternoon. Individual collections on their home farms increased the total to 900 bags. The largest individual collection was 68 bags.

The pods, when delivered to the War Hemp Industries, netted the chapter $180 to be used in building a better functioning organization.

Banquet Banter

Toastmaster: Ladies and gentlemen, that you all may know what members of this department are doing in farming programs, summary of accomplishments of past year will be presented by Charles Holmes, secretary of chapter, president of Junior Class and, at home, "Mother's Little Helper,"—he just about clears the table every time he sits down to a meal. I remember incident in his freshman year when he went on livestock judging trip to Mr. Gray's farm. Was first trip for all the Frosh including verdant Chuck. Mr. Gray was at home and watched us work. Then, and I'm sure you're not surprised, he decided to have a little fun. He began to talk down livestock judging—it's no good; can't tell anything about it till you get cow over the pail. "Why son," he said, "do you mean to tell me you can go into my calf pen and pick out calves that will be giving most milk in three or four years?" and he looked straight at little Chuck. Charles, bit timid, was ready with reply. He said, "Yes, Mr. Gray, I think I can." They walked toward the calf pen. "All right, then. Which ones would you pick?" Charles paused a moment and then said, "I'd pick the heifers every time." O.K. Chuck.

Speaker: Ladies and gentlemen, I'm pleased to give you this summary of all activities of farming programs past year, but first must tell you little incident about Fred. He got into argument with one of boys one day going home from school. It waxed hot and furious for time. Finally, Fred couldn't stand it any longer and blurted out, "Fellow, if you ever get into a race where you will have to become deaf, dumb and blind, you will win because all you will have to do is to become

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t—G. T. Sargent, Auburn
rt—R. W. Montgomery, Auburn
ct—E. A. Grant, Tuskegee Institute
ct—Arthur Floyd, Tuskegee Institute

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
as—S. D. Mitchell, Little Rock
ds—T. A. White, Monticello
ds—O. J. Seymour, Arkadelphia
ds—J. A. Niven, Russellville
ds—Earl G. Landers, Batesville
t—Roy W. Roberts, Fayetteville
ct—J. C. McAdams, Pine Bluff

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

COLORADO
d—H. A. Tiemann, Denver
s—A. R. Bunger, Acting, Denver
t—G. A. Schmidt, Fort Collins

CONNECTICUT
d—A. S. Boynton, Hartford
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
it—W. T. Lofton, Gainesville
it—J. D. Smith, Gainesville
ct—L. A. Marshall, Tallahassee
ct—G. W. Conoly, Tallahassee

GEORGIA
d—M. D. Mobley, Atlanta
s—T. G. Walters, Atlanta
ds—George I. Martin, Tifton
ds—C. M. Reed, Carrollton
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
sms—A. O. Duncan, Athens
t—R. H. Tolbert, Athens
ct—Benj. Anderson, Industrial College

HAWAII
d-s—W. W. Beers, Honolulu, T. H.
s—Warren Gibson, Honolulu, T. H.
t—F. E. Armstrong, Honolulu, T. H.

IDAHO
d-s—William Kerr, Boise
s—Stanley S. Richardson, Boise
s—Elmer D. Belnap, Idaho Falls
s—John A. Bauer, Boise
t—H. E. Lattin, Moscow

ILLINOIS
d—Ernest J. Simon, Springfield
s—J. E. Hill, Springfield
s—J. B. Adams, Springfield
s—A. J. Andrews, Springfield
t—H. M. Hamlin, Urbana
t—Melvin Henderson, Urbana
t—J. N. Weiss, Urbana
t—H. J. Rucker, Urbana

INDIANA
d—Clement T. Malan, Indianapolis
s—Harry F. Ainsworth, Indianapolis
t—B. C. Lawson, Lafayette
rs—S. S. Cromer, Lafayette
it—K. W. Kiltz, Lafayette
it—H. W. Leonard, Lafayette
it—H. B. Taylor, Lafayette

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

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

KENTUCKY
d-s—R. H. Woods, Frankfort
s—E. P. Hilton, Frankfort
t—Carsie Hammonds, Lexington
it—Watson Armstrong, Lexington
it—W. R. Tabb, Lexington
ct—P. J. Manly, Frankfort

LOUISIANA
d—John E. Coxe, Baton Rouge
s—S. M. Jackson, Baton Rouge
ds—A. Larriviere, Baton Rouge
ds—T. E. Kirklin, Baton Rouge
t—C. L. Mondart, University
t—J. C. Floyd
ct—M. J. Clark, Scotlandville
ct—Dallas Matthews, Scotlandville
ct—E. C. Wright, Scotlandville

MAINE
d—Austin Alden, Augusta
s-t—Herbert S. Hill, Orono
s-t—Wallace H. Elliott, Orono

MARYLAND
d—John J. Seidel, Baltimore
s-t—H. F. Cotterman, College Park
ct—J. A. Oliver, Princess Anne

MASSACHUSETTS
d—M. Norcross Stratton, Boston
s—John G. Glavin, Boston
t—F. E. Heald, Amherst
t—W. S. Welles, Amherst

MICHIGAN
d—George H. Fern, Lansing
s—Harry E. Nesman, Lansing
s—Luke H. Kelley, Lansing
s—Raymond M. Clark, Lansing
t—H. M. Byram, East Lansing
t—G. P. Deyoe, East Lansing
t—Paul Sweany, East Lansing

MINNESOTA
d—Harry C. Schmid
s—C. O. Ayers, St. Paul
t—A. M. Field, St. Paul
t—G. F. Ekstrom, St. Paul

MISSISSIPPI
d—H. E. Mauldin, Jr., Jackson
s—A. P. Fatherree, Jackson
ds—R. H. Fisackerly, Jackson
ds—E. E. Gross, Hattiesburg
ds—V. P. Winstead, State College
t—V. G. Martin, State College
t—O. L. Snowden, State College
t—E. P. Rawson, State College
t—D. W. Skelton, State College
sms—A. E. Strain, State College
it—V. P. Winstead, State College
ct—A. D. Fobbs, Alcorn
ct—Robert Ross, Alcorn

MISSOURI
d—Roy Scantlin, Jefferson City
s—J. H. Ford, Jefferson City
ds—Joe Duck, Springfield
ds—C. V. Roderick, Jefferson City
t—Sherman Dickinson, Columbia
t—G. J. Dippold, Columbia

MONTANA
d—Ralph Kenck, Bozeman
s—A. W. Johnson, Bozeman
s—H. E. Rodeberg, Bozeman

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

NEVADA
s—Kirby E. Brumfield, Carson City

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

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

NEW MEXICO
ds—Frank E. Wimberly, State College
t—Carl G. Howard, State College
t—H. M. Gardner, State College

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

NORTH CAROLINA
d—T. E. Browne, Raleigh
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ds—R. J. Peeler, Raleigh
ds—E. N. Meekins, Raleigh
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ct—W. T. Johnson, Greensboro
t—Leon E. Cook, Raleigh
t—L. O. Armstrong, Raleigh
t—J. K. Coggin, Raleigh

NORTH DAKOTA
d—Edward Erickson, Grand Forks
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OHIO
d—Kenneth C. Ray, Columbus
s—Ralph A. Howard, Columbus
ds—W. G. Weiler, Columbus
ds—E. O. Bolender, Columbus
ds—H. G. Kenestrick, Columbus
ds—F. J. Ruble, Columbus
t—W. F. Stewart, Columbus
it-ds—C. E. Rhoad, Columbus
t—A. C. Kennedy, 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—Byrl Killian, Stillwater
ds—Roy Craig, Stillwater
t—C. L. Angerer, Stillwater
t—Don M. Orr, Stillwater
t—Chris White, Stillwater
ct—D. C. Jones, Langston

OREGON
d—O. I. Paulson, Salem
s—Earl R. Cooley, Salem
s—Ralph L. Morgan, Salem
ds—M. C. Buchanan,
as—Glen L. Weaver,
t—H. H. Gibson, Corvallis

PENNSYLVANIA
d—Paul L. Cressman, Harrisburg
s—H. C. Fetterolf, Harrisburg
s—V. A. Martin, Harrisburg
t—Henry S. Brunner, State College
t—William A. Broyles, State College
t—William E. Hall, State College

PUERTO RICO
d—Lloyd A. LeZotte, San Juan
s—Nicholas Mendez, San Juan
as—Samuel Molinary, San Juan
as—Ernesto Vasquez Torres, Mayaguez
ds—Fredericko A. Rodriquez, San Juan
ds—Juan Acosta Henriquez, Arecibo
ds—Juan Robles, Cayey
ds—Andres Ramirez, Mayaguez
t—Lorenzo G. Hernandez, Mayaguez

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

SOUTH CAROLINA
d—J. H. Hope, Columbia
s—Verd Peterson, Columbia
ds—W. C. James, Columbia
ds—W. M. Mahoney, Honea Path
ds—R. D. Anderson, Walterboro
ds—J. H. Yon, Loris
t—W. G. Crandall, Clemson
t—B. H. Stribling, Clemson
t—J. B. Monroe, Clemson
ct—Gabe Buckman, Orangeburg
t—T. E. Duncan, Clemson
t—F. E. Kirkley, Clemson

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

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

TEXAS
d—Jas. R. D. Eddy, Austin
s—Robert A. Manire, Austin
s—J. B. Rutland, Austin
s—R. Lano Barron, Austin
t—E. R. Alexander, College Station
t—Henry Ross, College Station
t—R. L. Moses, Huntsville
t—S. V. Burks, Kingsville
t—Ray L. Chappelle, Lubbock
sms—W. R. Sherrill, College Station
it—G. H. Morrison, Huntsville
it—Malcolm Orchard, College Station
it—Joe C. Brown, Kingsville
ct—E. M. Norris, Prairie View
ct—W. M. Collins, Prairie View
ct—W. D. Thompson, Prairie View

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

VERMONT
d—John E. Nelson, Montpelier
s-t—W. Howard Martin, Burlington

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d—Dabney S. Lancaster, Richmond
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
t—Harry W. Sanders, Blacksburg
t—Henry C. Groscclose, Blacksburg
t—E. Y. Noblin, Blacksburg
t—C. E. Richards, Blacksburg
ct—A. J. Miller, Ettrick
ct—G. W. Owens, Ettrick
ct—J. R. Thomas, Ettrick

WASHINGTON
d—H. G. Halstead, Olympia
s—J. A. Guitteau, Olympia
t-s—E. M. Webb, Pullman
t-s—Bert L. Brown, Pullman

WEST VIRGINIA
d—W. W. Trent, Charleston
s—John M. Lowe, Charleston
s—H. N. Hanaucker, Charleston
t—D. W. Parsons, Morgantown
t—M. C. Gaar, Morgantown
it—A. D. Longhouse, Morgantown

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

WYOMING
d—Sam Hitchcock, Cheyenne