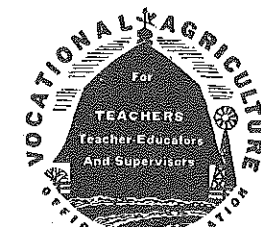


WE cannot abandon our education at the schoolhouse door. We have to keep it up thru life.

—Calvin Coolidge



The Agricultural Education Magazine

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Editorial Comment

Our Program—Past and Present

AFTER reading J. H. Starrak's editorial in the July issue of *Agricultural Education* on "Our Program," I have wondered why the editor requests further comment on this subject. Mr. Starrak has evaluated our program and criticized it most thoroly and convincingly. I agree most heartily with his favorable criticisms, but I might question some of his unfavorable criticisms. Of these I shall write further on in this article.



A. W. Nolan

Somewhere in the Good Book it says, "Not by might, not by power, but by my spirit, saith the Lord." So, if I may paraphrase, and not be sacrilegious, I would say, "Not by equipment, not by programs, but by the spirit of the teacher is our work advanced."

The Teacher

What is this spirit that is so significant in the success of our program? Perhaps I should say "spirits", because it requires a wide repertoire of activities, motivated by the spirit of the teacher to carry on the progressive demands of a program of agricultural education in a community. I have tried, thru the years, as I have worked with teachers of agriculture and seen them come and go, to fix my definition of the spirit of a successful teacher upon a single idea, and as nearly as I can express it, it is a *dynamic good will toward others*. There are many words which may be used to express this spirit. Perhaps "love" with all its shades of meaning is the invisible cause of the outward phenomenon of the life of a successful teacher.

I would not minimize the importance of first-class equipment, a high scholastic training of the teacher, or a well-organized program of agricultural education for the community, but all of these work best when motivated and led by a teacher who has this spirit of power and good will among men.

My most favorable comment on our work during the past 25 years is that teachers of agriculture have been, for the most part, men of good will and have served their students and their communities with unselfish interests, seeking to build a better agricultural and rural life. These teachers of agriculture work long and many hours; they take their students on long trips to purchase good seed or livestock; they sit up nights with their boys, trying to save farm animals; they loan money to boys who could otherwise have no farm project; and they counsel them on all their life interests and problems. This intimate and personal contact with students, both youths and adults, in the midst of the real issues of life, is the ideal teaching situation, where the spirit of the true teacher functions at its best.

Another most favorable "sign of the times" with reference to our program is the growing esteem and confidence with which vocational agriculture is held by the leaders of agriculture, businessmen, statesmen, and educators. Progressive farmers encourage and promote our program; legislative leaders support it liberally; and school administrators open the doors and welcome enthusiastically our contribution to the educational improvement of the community. All this would not be true, if the philosophy of vocational education in agriculture were not sound, and its work thruout the country had not brought profitable and satisfying results.

Supervised Practice Programs

Two outstanding activities in our program have saved vocational agriculture from academic "dry rot." I refer to the home projects, with their supervised farming, and to the Future Farmers of America organization among students of vocational agriculture. While agreeing with Mr. Starrak that our supervised farm practice work is inadequate, measured by the standards we seek, yet when we see what splendid achievements thousands of boys have made, the practical knowledge

ported, we should be gratified and encouraged as we push forward with enlarged plans and programs. Thru the Future Farmer organization, educational benefits accrue which are not possible under the present set-up of the school system without such an agency. Co-operation in real life affairs, economic, social, and educational, is a common feature of the F.F.A. Ideals and practices in good citizenship grow out of the activities of the Future Farmers of America. These two features of vocational agriculture, supervised farm practice and the F.F.A., contribute most effectively to the ideals of American education, long upheld by educational leaders.

I cannot fully agree with Mr. Starrak that vocational agriculture "shares with other school subjects, tho perhaps not to the same extent, the stultifying effects of institutionalism." While it may be true that our program has been handicapped somewhat because it had to be fitted into the public school course of study, and do some "lock stepping," yet to what stronger and more loyally supported institution could we be secured than the public schools? We surely would not wish to be a "free lance" and set up a dual system of education, nor would we fare so well under any of the great farm organizations. It is fortunate for our program that we are anchored to educational institutions. Even tho our work is supervised to a limited extent by the Federal Office of Education, I think we need never fear Federal domination. The states and communities will guard zealously their educational autonomy. And whether the leaders are local, state, or Federal men, they are still Americans, and the ideals and purposes are common altho methods of realization may differ.

F.F.A.

I agree with Mr. Starrak that there is a danger of too much competitive effort in the activities of the F.F.A., and that co-operative work is more in line with the tenets of good citizen-

(Continued on page 92)

Untouched or Lightly Touched

FARM YOUTH I mean! By systematic instruction in farming and agriculture! In spite of the tremendous growth and development of agricultural education of less than college grade in this country since the passage of the Smith-Hughes Act, great need still exists for extensions and expansions in vocational agriculture. Altho enrollments have increased from 15,000 in 1918 to over 600,000 in 1942, there are thousands of school areas in the United States that either do not have any vocational agriculture in public schools or do not have adequate school systems to provide the basis of a satisfactory program of vocational education in agriculture. Do we recognize that *all* farm boys are entitled to opportunities of agricultural education comparable to those now enjoyed by a *part* of the boys. Not enough that 600,000 have such opportunities when our national stake is in terms of the conservation of all farming resources, of the establishment and maintenance of the best production and marketing facilities for all groups and areas, of the ability to manage and equip farm business efficiently, of the procurement of the best potential farm youth for training and establishment in farming, and of the maintenance of an environment favorable to farm life, both social and economic.



R. M. Stewart

Vocational Training Effective

It has been shown in our national development, and certainly emphasized during our defense and war periods, that vocational education has become an effective instrument of democratic education; "the facts, however, in spite of the successes, reveal that we have not fully safeguarded our demo-

Professional

S. S. SUTHERLAND

The Community Service Center

L. D. KLEMMEDSON, State Director of Vocational Education, Arizona

A NEW kind of service institution is needed by the industry of agriculture if it is to hold its own with other industries.

Family Owned Farm

The family owned farms have often been called the backbone of American agriculture. On them live a large portion of our 10 to 12 million persons engaged in farming as an occupation. Upon these people the United Nations are now looking for great quantities of food for ourselves and for our allies. The immediate objective of the Food for Victory program for farm families is to produce more vital war foods as well as other raw materials for the war effort.

Politicians and sociologists proclaim that the family-sized farm must be maintained and its efficiency increased so that the social and political relationships of American democracy will not be disturbed too much. Almost anyone familiar with the industry of agriculture would readily agree that it is most desirable that the family farm continue in existence and that it grow more efficient, provide a better place to live, a better living income and more opportunity for both its adults and young people to become self-reliant and self-sustaining citizens. However, if the last census figures are correct, and we assume they are, the big farms are getting bigger and more numerous and the small family farms are getting smaller and fewer. This trend is not healthy for a democratic America.

Industrial Farms

Many people insist that it would be better for the industry if farms were consolidated and run efficiently as large farms are supposed to be run. They maintain that we have too many farmers, that we can produce our needed agricultural products on fewer farms with modern, heavy-duty machinery and with fewer men and at less cost. They call it industrialized agriculture. Others insist that we ought to break up the large farms and particularly the big corporate owned farms and make them family sized, giving every one who wishes to own a farm the opportunity to do so. We must do this to maintain an efficient society and democracy.

Having had some opportunity to observe and work on both kinds of farms, I believe that the proponents of one system versus the other are both wrong. All big farms are not efficient and desirable but many are. Most small farms are not inefficient and undesirable, but many of them are.

Comparison of Two Kinds of Farms

A little thought and analysis will soon

both kinds and indicate some of the things that must be done to improve the status and worthwhileness of both kinds. All agricultural operations today are rapidly becoming industrialized, altho it is a fact which many refuse to accept. Size of operation has very little to do with it. It is just as feasible to industrialize a small operation as a large one. There will be some differences in method and procedure used, of course. Industrialization merely means the division of functions. Instead of one man's trying to perform all the tasks of financing, tooling up, producing, selling, and maintaining public inter-relations, several persons do it. We have had the division of function in agriculture for a long time. Most farmers thought they were rugged individualists and independent and that they owned a complete farm business, but all the time nearly half of their business, or perhaps more, was conducted for them in town by another group of people who thought they were not in the farm business, but in some other business, and yet they were as truly in the farm business as the people in possession of the land. Farm financing was done largely in town by people called bankers, or credit managers, mortgage brokers, production credit secretaries, etc. I recently talked to a banker in a fair-sized city who said all but two of the loans made by his bank were to farmers and yet he thinks he is a banker. Nearly all agricultural machinery sales and repairs are made in town. Much of the agricultural machinery is located in town, in mills, gins, and other farm produce processing establishments. Have you been thru a modern milk plant, grain processing plant, or packing plant recently? Maybe there is more machinery in town vital to agriculture than there is out in the country. Practically all marketing operations vital to agriculture are located in town and even the veterinarians and school teachers live there—I know the former are necessary to agriculture even if we think the teachers are not, altho many of these think they are connected rather closely with farming. Often the functions carried on outside of the fence are as important to farming as those which are conducted inside the fence.

Let us recognize that we have most of our agricultural plant and its people in an industrialized operation, and suit our procedures and institutions dealing with agriculture to that kind of an operation. The industry of agriculture has much ground to gain to get on an even footing with many other kinds of American industries. Its financing system is inadequate, its mechanical system is 20 years behind the time, its production methods can be improved—altho they are better than its other means—its marketing system is chaotic, its public relations bungl-

R. W. GREGORY

leaves much to be desired, and its educational institutions are in the dark ages (well, maybe this is a little strong). But God help the farmers if they don't get an education much better suited to their needs. Without educational assistance and guidance, suited to their needs, the great mass of farmers, high or low income groups, cannot contribute fully to the food production needs under war conditions.

New Kind of Institution Needed

Industrialized, or modern agriculture, needs educational institutions and service institutions, as well suited to its needs as other industries or ways of life need theirs. Many of the institutions now established to serve agriculture are performing remarkable services for agriculture in their own good way and they are to be commended whether commercial, private, or public institutions or establishments. However, many of them do not reach down to the grass roots or get inside the farm fence in a manner to give real grass root assistance to farmers, and particularly family farmers. A grass root institution is needed if farmers, their families, and many businesses dependent upon them are to be served well. As Cecil Miller, President of the Arizona Farm Bureau has said, "Many firms and institutions serve the farmers but they do not serve them well."

Community Service Center

Many farmers need an institution close to their farms that can perform needed services. Hence the conception of a service center capable under trained leadership to serve in some of the manifold needs of country living. The service center can get for the family farm many of the advantages now enjoyed by his large scale farming neighbor and yet not have to suffer some of the disadvantages of the larger operator.

To serve farming adequately a service center should provide for several large fields of activity. It should provide for (1) educational service suited for farm family needs, not just the youngsters, (2) social and recreational service for all members of the community and, (3) facilities for conducting many of the community production, processing and marketing services.

The largest asset of the farm family is time. The farm family makes its largest gains thru cashing in on the time of parents and children in the family. If this time can be put to good use on productive enterprises or activities which make or save money the family gets along the road to farm ownership much more rapidly.

Often their time and efforts are wasted because they lack the capital, tools, and facilities to cash in on their time. There is a total of 4,794,727 bona fide farm operators in the United States (this does not include farm laborers). The census shows

ported a gross earned farm income below \$1,000 per farm in 1939. Of this number there are classified as employed low income farmers about 2,700,000 or 56 percent of the bona fide farmers.

The Land Policy Review states, "With present inefficient time-consuming methods used on most low income farms it can be demonstrated that a production of only \$1,000 worth of farm products sold, traded, or used at home means that the available family labor is idle a great part of the year. If some of the more efficient methods of production were used, then by no stretch of the imagination could a production of \$1,000 worth of farm products furnish full employment for a farm family."

To produce \$1,000 of farm income takes from 1,500 to 2,400 man-hours a year, depending on the kind of operation. Most average farm families have from 3,000 to 5,000 man-hours actually available. Farm families can utilize profitably more of their available time in actual cash farm operations and in doing things for themselves that saves money or that produces usable goods or services useful to the family. Also, the community can do likewise. The most urgent needs are things to do with and a place to work—a place to get service cheap and commensurate with ability to pay. The community service center can provide many of these. It can help tremendously in assisting farmers and their families to cash in on their time.

Start With the School

Most communities have a good start on a service center. It is their local school, grade or high school. On the school grounds is usually a good place for a service center. The facilities of both are then available. The school is already a community co-operative activity supported by the community. Its facilities can be expanded at low cost to meet other vital needs of the community.

Features and services rendered by a good service center are:

1. Rooms and facilities for teaching production to both youth and adults.
2. A good farm shop equipped to teach farm mechanics, open a large part of the time for community use.
3. A storage and operating space for community or F.F.A. machine-operating co-operative. This co-operative would own compliments of machines for operating small places, special equipment to make up shortages on community farms, balers, harvesters, graders, land levelers, etc., on a co-operative basis or take care of machinery pools formed by neighborhood groups.
4. A utility office, equipped with typewriter, telephone, and adding machines. There should be a community stenographer, forms and blanks needed in business transactions and government programs. A place where a farmer could balance his books, add cotton picking tickets, check weights, make budgets, arrange finances under the direction of a farm management and financial consultant, etc.
5. A cafeteria library where any farmer in the community could come for information at any time he needs it on a self-serving, self-educating basis.
6. Class rooms for educating both youths and adults, equipped with laboratory devices, visual aids, etc.

day or night for farmers meetings.

8. Community kitchen for social functions combined with utility kitchen for community canning and processing.

9. Community refrigerators and locker plant, for food locker, food banks, food processing and preservation.

10. Community merchandising set-up, for use as a trading post. This would assist farmers in purchasing at wholesale prices commodities used in production and enable the community to dispose of many farm raised and processed products direct to consumer—a glorified roadside market. Many products could be prepared for better marketing; assembling, grading and processing. It enables small producers to cash in on small quantities of eggs, fryers, berries, garden truck, extra meat, canned goods, etc.

11. Utility shed—to be used for a number of things, such as a battery fattening of fryers, brood chicks, butcher animals, treat seed, distribute pest control materials, etc.—warehouse, grain, fertilizer, hardware, lumber, cement, etc.

12. Livestock shed, for holding animals for laboratory work in instruction and judging practice, a compound for community sales held bi-weekly or monthly and for all kinds of demonstration work and extra machinery storage, community dairy barn, milk house.

13. Animal working and holding pens—a place to service animals, branding, dehorning, cutting pens, vaccinating, etc. Pens for community bull circles, (community can own best of sires and improve production), small animal pens for sheep, hogs, etc., and their sires or for group livestock projects of F.F.A. or clubs. Holding pastures for bringing in large numbers of animals to be serviced, bought, and divided on community pooling purchases, etc. Community scales for weighing produce.

The above list is not complete nor would every community want all of them or need them. Each center would be designed to meet the particular needs of the community. It need not all be built at once, but it should be planned in such a way that additional services may be added.

It need not cost too much and can be built by community labor working co-operatively. After the shop with its equipment is installed the rest can come easily as needed and funds are available. The center should be self-liquidating as it will operate on a charge basis or fees for services rendered. Much of the profit will be in annual savings on food, machinery repair, lower cost of things bought, etc.

Any community can afford a good service center. If they do not have one they will pay for several in the next 20 years and the other fellow will own them. It pays the farmer to own co-operatively some of his service institutions. This is one that pays big in enabling farm families to make or save a living income.

Untouched or Lightly Touched

(Continued from page 83)

cratic life against ignorance and incompetency, against many instabilities and gross inequalities." Certainly, as long as thousands of secondary school districts are not able to provide adequate second-

tional education—we must support the extension and expansion of agricultural education (and all education) so that none of our people, young or old, shall be compelled to leave school without competence in some occupation. As we face the postwar period, how can we be prepared to prevent involuntary idleness and unemployment? Should it ever be said again, as reported in *Youth Tell Their Story* that "millions of youth out of school never had a real job and . . . were not prepared to hold one"?

The Research Committee of the American Vocational Association has just prepared a bulletin for publication, entitled, *An Enlarged Program of Vocational Education with Special Reference to Larger Administrative Units*. The Committee is committed to the extension and expansion of all types of vocational education, even to the organization of new units of administration wherever no schools or inadequate schools are found, due to inability to provide satisfactory schools. In such cases, it is proposed that there shall be new schools and classes of varying types according to needs, new features of existing schools added, also short term and special classes and co-operating schools and classes where distance permits transportation, and where exchange of pupils is possible and desirable for increasing the range of pupil choices. In addition to these types of schools, others should be established where pupils from larger areas may attend, even if boarding is necessary when commuting facilities are not adequate, and technical institutes should be established to meet the more technical requirements of more highly specializing students.

Who is responsible for this extension and expansion of agricultural education? From an inquiry made by Professor Arthur B. Mays for the Committee on Research, designed to check the opinions of leading educators, it was found that there was unanimity among them as to certainty of the public schools' responsibility in providing universal opportunities for vocational education. The public is alive to the importance of opportunities for competence for earning a living on the part of every youth, and these educators have endorsed the public school as the place of responsibility.

These are questions worth discussing now!

R. M. S.

Summaries of Studies in Agricultural Education

The Interstate Publishing Company, Danville, Illinois, has published Supplement No. 1 to Bulletin 180 on *Summaries of Studies in Agricultural Education*. The finished bulletin was ready for distribution around September 1. Those who made a "order promise" arrangement with Dr. Stewart, Chairman of the Committee, will have advantage of a \$1.00 list price subject to 20 percent discount in quantities. Those not availing themselves of the pre-publication price may purchase the bulletin at the regular list price of \$1.25 to which a 20 percent discount will apply for quantities. It is hoped that all states will avail themselves of the opportunity of procuring copies of this important pub-

Supervised Practice

C. L. ANGERER

Two Essential Teacher Activities in Directing the Planning of Pupils' Supervised Farming Programs

ROY A. OLNEY, Teacher Education, Cornell University, Ithaca, New York

"HOW do you do? I believe you are Carl's mother."
"Yes, I am."
"It's a pleasure to meet you."

These and similar remarks by teachers of agriculture have been witnessed by the writer on several occasions while visiting programs of supervised farming during the summer time in more than one state. Such a belated teacher introduction is not confined exclusively to mothers, but it has been experienced in the case of fathers and other members of the family. You might well raise the question, what bearing does such an instance have on planning programs of supervised farming? Let us think together about this problem, evaluate ourselves, and decide upon a plan of action to overcome any weaknesses that appear.

Better teachers of agriculture who have as their main goal positive and accurate results and accomplishments in the pupils' programs of supervised farming place much emphasis and work on directing the planning of such programs. There are at least two closely related activities that influence greatly the successful planning of pupil programs and the results to be achieved:

1. Home Contacts
2. Classroom Planning

Home Contacts

Making contacts with the home situation of each boy is a primary and basic essential activity to all individual planning for a supervised farming program. The teacher must not only know the type of farming on each farm, but even more important, he should know as intimately as possible all the members of the family. Much of the future success of any boy's supervised farming program will depend on the plans of the teacher for obtaining these data. The procuring of this information is an individual problem for each farm situation. The whole process is time consuming and often requires much tact and careful handling by the teacher. This is not an argument against such contacts if they produce proper growth and development of the boy. Once the initial relationship to the home situation has been well established by the teacher, then it becomes a continuous endeavor for the teacher to maintain such contacts and to build stronger



Roy A. Olney

ics to each home.

The teacher of agriculture should have some definite plan for the things to be accomplished in a series of visits to the homes of new pupils when they enter the agricultural program. No definite number of visits can be allotted to each home because of the variations that exist. No one plan will work in all home situations, but the teacher who has a general plan worked out will find it easier and more helpful to pick out the items of the plan which apply than to approach the home entirely unprepared. The important thing is that each trip to a farm home should be made to contribute to a better mutual understanding between members of the family and the teacher.

The First Visit

The first visits to the homes of new class members may often be of shorter duration than later trips when the teacher becomes better acquainted and has more things to accomplish. Primarily, he should be interested in meeting every member of the family and in studying and learning their varying characteristics, interests, and place in the home. Perhaps mother or grandfather may have a dominating influence. Even an older sister of the boy has been known to have been one of the better allies in obtaining cooperation of the parents that might have been impossible otherwise. It is all very pertinent that the teacher of agriculture study and make use of the personal characteristics of each member of the family to their fullest extent in planning for and promoting a program of supervised farming for the boy. As a word of caution, the teacher must always keep in mind while making home visits, that it is the boy who is the most important individual and should be given the most attention and help as far as the teacher's services are concerned. Many visits may be necessary to accomplish this goal. Often a boy is tentatively enrolled for the agricultural course at the close of the school year. Many visits to this prospective pupil must be made during the summer, previous to the opening of the next school year, not only to make family acquaintances, but also to "size-up" the home conditions as to what the pupil might be able to include in a supervised farming program and to discuss these possibilities informally with the boy and the parents, so that both have some forewarning of what will be expected when the boy enters the class. Some parts of the program might even be started at once. On the other hand, such visits may help a boy to decide that the agricultural pro-

Get the Facts

It would be a poor policy for the teacher to have formed any preconceived notions or opinions of any home situation based on hearsay, former reputation of the family, appearance of the home situation and the like. Get your own facts, and by so doing, you may render a real service in improving the home situation that may be waiting for just the interest and help that you, as a teacher, can give. It will be impossible to render the services that you should until you have been accepted by the family and they have confidence in you. The success and accomplishments of the boy in his program of supervised farming will be greatly influenced by this one factor: *know well the members of the family.*

On the same visits when the teacher is becoming acquainted with and is establishing himself with the family, he can, by careful planning, easily acquire and obtain facts about the type of farm business on each farm. After several visits he will have collected enough farm facts that collectively will make a good survey of the farm business without having to inflict the formal type of survey blank upon the farmer. The use of the formal survey may often serve as a barrier in attaining the desired intimate personal relationships desired.

While getting acquainted with the family and gathering farm data, the teacher must not overlook the fact that he should educate the home about the program of agriculture in the local school, and what it was established to do for the boys and people of the area. Such information will be basic to the second activity in planning supervised farm programs with the members in the classroom.

Classroom Planning

The second activity, classroom planning and obtaining parental approval of the program of supervised farming to be undertaken by the pupil, will not be left to mere chance if the first activity is carried out and used by the teacher.

Most teachers of vocational agriculture accept the fundamental principle that the supervised farming programs of the pupils are the foundation in which the greater part of our teaching should be centered in order to be of the most practical value to the individual pupil in progressing towards becoming established in farming. This does not mean that we can exclude other values inherent in the programs that will contribute to the education of the pupil as a member of society.

The classroom planning will be the stage at which the individual pupil will be given an opportunity under the guidance of the teacher to select the farm enterprises and other activities which he desires to include in his program. This may be for one year or for the total number of years that he is enrolled in agriculture. Long-time or range program planning is the more desirable. Suitable

Law West of the Pecos

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

IN THE days of Billy the Kid everyone said that there was "no law west of the Pecos." It may likewise be said that in the days when vocational education was in its swaddling clothes there was no supervised farming law enforcement anywhere, even "west of the Pecos."



Carl G. Howard

But Sheriff Pat Garrett shot Billy the Kid and now for a long time there has been law and order west of the Pecos. Not only has there been law and order, but precedent and example have brought about a new sort of "law west of the Pecos" to the vocational agriculture students in the irrigated valley of the Pecos River.

Self-Imposed Law

This new law is a self-imposed law. It is now a requirement set up by all-day students in vocational agriculture classes thru Future Farmers of America chapter action. Future Farmers have ruled that all beginning students in vocational agriculture must, in some manner, purchase some purebred livestock. This one or more animals must be cared for and managed by each individual boy in such a way that it forms the nucleus around which he may build his long-time program of supervised farming. This program should eventually lead into establishment in farming in a rapid and comparatively easy manner. This law further states that expansion and improvement must be made year by year. It infers that supplementary farming skills and the general improvement of the whole farm may be attendant results to the conduct of a good program of supervised farming. This further infers intelligent co-opera-

tion between the boy, his teacher, and his parents in an orderly and systematic growth into farming.

tion between the boy, his teacher, and his parents in an orderly and systematic growth into farming.

Other provisions of the law require careful accounting and accurate farm records. However, Charles Wallis, teacher of vocational agriculture at Artesia, New Mexico, feels that the only really hard part of the law is that first clause of the law which provides that each boy in his beginning year must buy some purebred livestock. He feels that when that part of the law has been lived up to the rest is as easy as shooting fish in a rain barrel. He states that in no other way can so much improvement be brought about in the supervised farming programs of vocational agriculture students "west of the Pecos" or east of it either, for that matter.

Procedure Used

Mr. Wallis went at his program of "law and order" in the fashion approved in the days of Billy the Kid. He got together a group of vigilantes composed of older F.F.A. members. Most of these vigilantes had conducted or were conducting successful long-time programs of supervised farming. History fails to record where the vigilantes met or how they were called together, but it is known that out of this meeting came a plan for helping to enforce this F.F.A. law.

This plan had its inception in the philosophy that "procrastination must be outlawed." The vigilantes felt that putting off until *manana* the doing of things which should really be done today had caused most of the trouble experienced by boys in purchasing purebred livestock. Applying this procedure to the purchase of the stock delayed its purchase. This all resulted in wishing for complete ownership in purebred livestock and a continuing of the postponement of the actuality of ownership until *manana*. The vigilantes declared first that they would outlaw *manana* and find a way to do

something today.

They first considered the fact that a number of the first year boys in the all-day vocational agriculture class wanted to purchase registered hogs but did not have anything tangible to use for money. This lack of money was postponing from day to day activity leading toward actual ownership of registered gilts.

Several of the older F.F.A. vigilantes came into the beginning class and made pep talks on the new law and order campaign. They must have been eminently successful for all of the prospective outlaws promised to become good citizens and acquire self-ownership of some registered gilts if they could be aided financially in their purchase and helped in their planning.

Financial Assistance Provided

Financial assistance was promised in the guise of help in individual savings. The future farmer chapter treasurer was appointed custodian of funds for purchasing livestock. Each boy was ordered by the vigilantes to deposit with him all loose moneys. Follow-up meetings announced beginners who had accumulated savings sufficient, or nearly so, for the purchase of one registered gilt and prodded slower savers to greater effort. Needless to say, accurate records were kept on all amounts each boy had on deposit for the purchase of his gilt or gilts.

Other vigilantes, working with Mr. Wallis, located a sufficient number of registered gilts which would be ready to move in about six weeks time. This allowed quite a series of *mananas* to elapse before all purchase moneys would be really needed, but a deadline was set up anyhow to allow for the contracting for the pigs by the F.F.A. chapter group. These pigs were 18 miles away and one of the boys agreed to use his pick-up and deliver the pigs for a charge to cover only his actual expenses.

Results

Only one boy failed to make his savings complete before the deadline. He tried and failed. Before a decision could be made in his case his father intervened and asked for a two-day extension of time for him. This extension was granted, and would have been granted without parental intervention, but Mr. Wallis appreciated the interest of the boy's father in trying to help out anyhow.

When the day came on which the boys were to get their gilts, Mr. Wallis took in his car, all the boys who could not crowd into the pick-up. When the boys were all present, and the gilts penned up in a big pen, the selection began according to prearranged plans. The first boy to complete the saving of the purchase price of his gilt or gilts was allowed his choice of the gilts in the pen. The boy who had completed his saving second got second choice of the gilts in the pen. In order of completion of savings, then, each boy got to choose from those left in the pen the gilt he wanted for his own. Mr. Wallis was highly gratified at the carry-over of instruction in selection evidenced by his boys.

Since the gilts were selected one has died and no registration papers have been received on another. The rest of the gilts are all developing into very good hogs

Farmer Classes

E. R. ALEXANDER

W. H. MARTIN

Training and Supervising Special Teachers

W. HOWARD MARTIN, Supervisor, Vermont

INDIVIDUALS employed to teach who have had no professional training look to those who have had training for guidance and help. The teachers of vocational agriculture are in a position to give such assistance to teachers of Rural War Production courses. Experience in working with special instructors in the program indicates that they may be helped to improve their instruction if the teacher of vocational agriculture will give attention to the following:



W. H. Martin

1. Insure a clear understanding of the purposes and functions of the Rural War Production Training Program.
2. Develop an appreciation for the relationship of the program to other public education.
3. Assist in the selection and organization of content.
4. Discuss, select, and evaluate with the special instructor the methods of instruction.
5. Encourage and assist the instructor to evaluate the results obtained from instruction.

Purposes

It is very important that all special instructors should understand the purpose of the Rural War Production Training Program in order that their efforts may be directed toward the achievement of the desired objectives.

The teachers of vocational agriculture who are supervising the special instructors have placed emphasis on several items; the chief ones are:

1. Reasons for the need of expanding agricultural production.
2. The ways in which systematic instruction can help to stimulate production and aid farmers in solving new problems.
3. The need for greatly expanding the teaching force if the job is to be done.
4. The importance of securing immediate and positive results.

The general practice of supervising teachers has been to endeavor to do this job thru personal conferences and discussion at the time the prospective teacher is being contacted for employment. In some instances additional literature left by the local supervisor proved to be a valuable means of accomplishing this purpose.

Relationships

Somewhat similar in nature is the problem of relating the Rural War Production Training Program to public education.

releases have appeared which credit the program to the War Manpower Commission, the War Production Board, and other agencies. Teachers of vocational agriculture have a real responsibility and need for keeping the program closely identified with public education. It is a difficult responsibility because:

1. The program is new and extensive both in scope and type of courses offered.
2. It is operated in communities outside of the regular vocational centers.
3. The school officials are often not closely identified with its development and operation.

Some things which teachers of agriculture have done to insure an appreciation of relationships are:

1. Arrange to have possible candidate interviewed by the superintendent of schools.
2. Invite the teacher candidates to visit schools conducted by the vocational agriculture teacher.
3. Invite the special teachers to district conferences of agriculture teachers.
4. Arrange for school officials to visit programs taught by special teachers.

The preceding activities are in addition to a careful explanation of the organization within the state and local community which also includes the method of financing the operation of the program.

Planning Instruction

The problems of content and method are quite different from those of understanding objectives and relationships. The correct solution of those problems has been made by some without help from the agriculture teacher, but usually the teacher has had to devote much time in assisting the instructor to select and organize content. This is especially true for commodity courses. In some instances teachers have reported that they had to spend as much time in working with the special instructor as would have been necessary if they themselves were teaching the course. However, this appears to have been the exception rather than the rule.

Specifically, the untrained teachers needed careful guidance on the following points:

1. Selecting those problems common to farmers of the group.
2. Selecting those problems which could be dealt with effectively and immediately.
3. Planning a logical sequence of meetings to include the problems selected.
4. Organizing material for each unit in proper form.

The general practice of special instructors appears to have been to plan each unit on the basis of a few detailed farm practices of an approved type. The

in time sequence as they related to the particular job. In general, the practices were sound and the arrangement logical. However, from the standpoint of teaching, most analyses could have been criticized for a lack of experimental evidence to support the practices which were considered and for failure to include an adequate answer to the question—Why?

Methods

Between instructors there was great variation in the methods employed. Teachers of agriculture can profitably spend more time in assisting these teachers to utilize a wider variety of methods. Demonstrations and actual field work should be stressed more. More attention should be given to film strips, charts, graphs, and other visual aids in order to increase the effectiveness of instruction.

Here is a real challenge to the teacher of agriculture to develop versatility in special teachers.

The conference and group discussions were widely used methods, and generally the special teachers proved adept with them. They do need guidance from an experienced teacher in order to improve their technique. *The most common difficulties have been a failure to arrive at some definite conclusions, a tendency to allow the discussion to wander too far afield, and a failure to make sufficient use of the blackboard.* Probably the same criticism could be made with respect to regular teachers of vocational agriculture.

In general, both supervisors and special teachers have considered the objective results obtained in farm machinery repair programs to be an adequate measure of effectiveness. Even in this type of program, however, more farm visits are indicated as a means of checking to make sure that critical problems are not overlooked and that the skills and knowledges acquired are utilized in the daily problems on the farm.

Evaluation of Results

Where the teacher of vocational agriculture is able to give close supervision, the special teacher can be encouraged and assisted to evaluate the results of instruction. Experience to date indicates that special teachers of production courses have encountered difficulty in securing much in the way of group agreement on practices to be carried out. On the other hand, farmers have been frank to admit that they are going to make some changes in practices as a result of instruction. Probably the most interest in changed practices has been evidenced in those practices which war conditions require the farmers to adopt. They want to know how to make those changes and what the probable effects may be. Special teachers have been encouraged to make farm visits, but lacking definite responsibility for this activity they have made few visits to farms to check and assist with a change in practices. *It is*

range to spend at least one day visiting with the special teacher some of those farmers who were enrolled in the production course. This would give him an opportunity to do some informal training in the field of supervision and evaluation of instruction.

Class attendance is considered by most supervising teachers as a reliable index to the effectiveness of the program. They have made a strong point of working with the instructor or class members to determine means of improving instruction when attendance has shown a tendency to decline.

State Supervision

The large number of courses in operation makes much direct supervision from the state level impossible. The plan has been to work thru the local teachers of vocational agriculture to develop a strong program of local supervision.

I. To be familiar with the problems of group members.

Importance: Problems with which group members are faced are the problems with which the instruction must deal. It is the desire to solve those problems which bring members to attend War Production classes. Therefore, in order to serve as teachers for this group, it is of vital importance that we should be familiar with their problems.

- Suggestions:**
- a. If you are a farmer, you are faced with many of the same problems. Make a list of these.
 - b. Talk with individual members of the group. Make a list of the difficulties expressed or noted.
 - c. As each portion of the course is developed, secure from farmers statements of their problems.

II. To gain the interest and confidence of group members.

Importance: Unless members of the group can be interested in seeking a solution to their problems, and unless confidence in the ability of their instructor to lead them to such a solution can be gained, the total program will be of little value.

- Suggestions:**
- a. Organize a committee of the members to assist in planning the course.
 - b. In carrying on the instruction, make certain that all members participate in group activities.
 - c. Insofar as it is possible, the solutions to problems should be drawn from members of the group who have had successful experience in solving those problems.

III. To get results from teaching.

Importance: These courses are designed to assist farmers to bring about immediate increases in production of essential foods. It is, therefore, evident that every effort needs to be made to have farmers individually put their knowledges or skills acquired in this course to work on the farm production line.

- Suggestions:**
- a. Make out a list of present practices now being followed with respect to those problems which will serve as the basis of instruction.
 - b. Check those practices which need improvement and double-check those practices which need immediate improvement.
 - c. As each problem is developed, make a list, secured from the group, of suggestions as to ways and means of improving the present practices.
 - d. Present and discuss the reasons, based on experimental data and farmers' experience.
 - e. Secure agreement of class members:
 - (1) As to the desirable changes in practices.
 - (2) To introduce said improved practices in their farm operations.

Visual Presentation of Information

(Continued from page 87)

e. *Chart on size and efficiency of the farm business.* This chart shows for each boy's home farm the total acres, tillable acres, animal units, and productive man work units per acre.

In addition, an instructor's manual was prepared in which an attempt was made to help the special teachers give proper direction to their efforts. The suggestions contained therein are found in the outline given below.

Agricultural education is meeting a new and difficult problem in helping the special teachers to do an effective job of instruction. The local teacher of agriculture is in the best position to give assistance and guidance to special instructors. More attention needs to be given to ways and means of:

1. Having instructors make farm visits.
2. Developing with the instructor an appreciation of his relationship to public education.
3. Assisting instructors to make better use of experimental data.
4. Acquainting special instructors with a wider variety of teaching methods.
5. Improving instructors' ability in the use of the conference method.

2. Visibility.

Charts should be made large enough for the entire class to see what is written on them. It is sometimes desirable to test the visibility of a chart while it is being made. Some charts may be made small and then enlarged by throwing on a screen by means of an opaque projector.

3. Color and Attractiveness.

Color is often an advantage, whether the chart is placed on the blackboard or on white cardboard or cloth. Some colors attract the eye more quickly than others, as for example, yellow. Some colors are more difficult to see if used in combination, for example red with dark blue or black. Charts should be made attractive enough to catch the eye and hold the observer's attention. Every chart should have a title printed clearly at the top.

4. Neatness.

The amount of material to be placed on a chart should be limited to the amount that can be shown neatly. Ample margins and neat tables should be used. Lines should be straight. Charts should not be lined excessively. Lettering should be done according to a standard pattern, either with stencils or by a person with some ability in printing or writing.

5. Simplicity.

Rather than to try to get many things on one chart it is often desirable to prepare several charts with only one or two major ideas presented on each. This is particularly true if the chart is used as part of an exhibit to be viewed by people who normally spend only a few seconds reading what may be presented as part of the exhibit.

6. Significance.

It almost goes without saying that the data placed on charts should be important data. The students and their parents, under the guidance of the teacher should be the judges of whether the data are important. Nothing is important merely because it appears in a bulletin or a reference book, or just because some artist has made a good picture of it. Those things are important which help teachers, boys, and parents to achieve the objectives of vocational education in agriculture.

Law West of the Pecos

(Continued from page 89)

and all of the boys are interested in doing all they can to keep them in good shape and make something from them.

Mr. Wallis supplies the moral of this story when he says that this motivation and thrift program have made "two-thirds of the boys buy registered gilts who would not have done so otherwise; three-fourths of the boys have been encouraged to greater expansion and improvement of their supervised farming programs than would have been possible otherwise; and the F.F.A. chapter will donate a registered gilt to the boy who shows greatest improvement in his farming program."

Finally, the coming of law and order may be tamer than in the days of the outlaws "west of the Pecos" but it is also more lucrative, and leads to greater achievements in supervised farming.

g. *Monthly local prices of farm products.*
h. *Scrap drive chart.*

Minimum Essentials in Preparing Charts

1. Accuracy.

The instructor should carefully check all data before allowing them to be put into a chart for instructional or exhibition purposes. Better not to have the chart at all than to present incorrect data which

Farm Mechanics

L. B. POLLOM

Machinery Repair Courses Serve Nebraska Farmers

DEXTER HAWS, Teacher, Lyons, Nebraska

LYONS, Nebraska, is a town of about one thousand inhabitants, who secure their living either directly or indirectly from the near-by farms. The average size of the farm unit in this community is 160 acres. The farmers in general specialize in livestock feeding and grain production. The principal crops grown are corn and small grains, which require use of a great deal of power machinery. Every farm in this area has from one to two tractors and the necessary power attachments to go with such equipment. The topography in general readily lends itself to mechanized farming. The principal hay crop is alfalfa, which usually makes up about one-eighth to one-fifth of the farm unit. In all it can be seen that the maintenance of the farm machinery in top notch condition is as vital to these farms as producing livestock.

School Shop Well-Equipped

Our high-school farm shop is well equipped to handle a complete farm machinery repair program. We have both electric arc and oxyacetylene welders, metal lathe, and all the hand tools necessary to do a complete overhaul job on any farm machine. In fact our shop is better equipped than the average repair shop in town. This in itself offers an inducement to the farmer to come in and repair his equipment because he can learn to use tools that formerly were beyond his skills. It is true that not all the members of the classes become skillful enough to operate all the above mentioned equipment, but usually they specialize in some one phase, such as arc welding. Then they help others who have specialized in some other skill. This helps to put across the spirit of co-operation between farmers.

The welding in itself has saved many farm machines from the junk yard or scrap pile, because lack of repair parts would have rendered them useless. But welding broken or worn parts and machining them down in the lathe saves the machine and puts it back into service to help win the battle of food production.

Our local repairmen have either left our community for war work or are already so overburdened with repair work that they are unable to service properly the farmers' machinery. The ones who are still in the community readily endorsed our courses as an aid to the farmers. It offers a way for many of the farmers to take care of some of their own repair work.

Serves Large Numbers

During the past year we have carried on a rather extensive OSYA program of

eight courses to the farmers of the Lyons' community in the repair of seeding, harvesting and tilling machinery. The courses were offered in all to a total of 105 farmers ranging in age from 21 to 60 years. All of them were established in farming for themselves and were vitally interested in putting their own machines in first class shape before heavy spring work began. One course was carried into the late spring and early summer so that the farmers could repair minor breakdowns that might put a machine out of use at a critical time.

The general course outline followed in all of the Farm Machinery Repair courses is as follows:

Meeting No. 1—Talk by implement man on the ways of securing repair parts—those that were difficult to get. General survey of machines that needed repairs. Safety measures to be followed in the use of the shop equipment. Demonstration by the instructor of the arc and acetylene equipment.

Meeting No. 2—Demonstration by instructor of proper forging practices. Proper adjustment, servicing, and care of tractor mowers.

Meeting No. 3—Demonstration by instructor of the operation of the metal lathe. Proper adjustment, servicing, and care of tractor plows.

Meeting No. 4—Demonstration by instructor of painting a tractor plow, using the home mixed paint. (Lead Industries Painting Kit.) Demonstration on the proper adjustment, servicing, and care of tractor cultivators.

Meeting No. 5—Demonstration of the proper adjustment, servicing, and care of corn planters.

Meeting No. 6—Demonstration of the proper adjustment, servicing, and care of endgate seeders.

Valuable Repairs Effected

Meetings No. 7, 8, 9, 10 were used entirely for the repair of machinery brought in by the farmers, the instructor giving individual help to the farmers where needed.

The farm machinery repair program in this community can be measured as to its value to the farmers by the following example. Herman Rewinkel, a farmer living south of town, decided that in order to save time in hauling manure this past spring he would construct a tractor-operated manure loader in the farm shop. He secured the iron necessary from an old disk and binder and by using the arc welder built a manure loader at a total cost of \$46.25. If it had been possible for him to purchase such a machine new, it would have cost him \$150.

A farmer living east of town broke two

brought the pieces to town, hoping to get them repaired at once, but the repairman was too busy to do the job immediately. This meant delay for the farmer, so he asked if he might use the repairman's acetylene outfit to do the job, to which he readily was given permission, thereby saving the farmer many hours. This farmer tells me that this one instance more than repaid for the time he spent taking the course.

By checking the shop cards kept by the farmers it was estimated the work done by the eight classes meant a savings to them of around \$4,000. Figured on the basis of shop hours, it meant that each farmer was earning on the average of 75 cents per hour for the time he spent repairing his own machines. In all, the 105 farmers enrolled repaired over 100 machines ranging from tractor plows to endgate seeders.

A machine in good repair and ready to go and do a season's work without a major breakdown means time saved for the farmer as well as more food produced for the war effort. As this article is being written more and more farmers are appreciating the fact that they have their machines in first class shape.

Our Program—Past and Present

(Continued from page 83)

ship than over-emphasized competition. Winning a prize, especially a large sum of money, in a judging or showing contest is likely to set up false standards of value which a boy cannot realize in the common farm operations. I know, however, that if "good sportsmanship" results from these competitions, some of the adverse criticisms may be weighed off.

One of the promising signs of sound advance in our program is the studying and attacking of the whole community relationships with reference to scientific agriculture, and a more satisfying rural life, by the teachers of vocational agriculture. Just as students of vocational agriculture are now taking the whole farm into consideration as they study and practice production and management, so teachers of vocational agriculture are beginning to see, to study, and to put to work all the natural and human resources of the community in a program of agricultural and rural life improvement. There are surveys, advisory councils, part-time classes, evening schools, and evaluation and development activities—all in addition to the regular all-day classes for the Future Farmers of America.

As I have frequently told our teachers in Illinois, so I repeat here, "Take definite steps, here and now, and follow the gleam." Our program in vocational agriculture is taking more clearly definite steps. We know where we are going. We follow the gleam—a happy, successful, American rural life for all who want it and can hope to secure it.

Procedures in Organizing Rural War-Production Training Courses

L. J. PHIPPS, Teacher, Carbondale, Illinois

WITH a goal of five OSYA courses set in the fall of 1942 for every vocational agriculture department in Illinois to reach during the year and with tire and gasoline rationing imminent, I saw that we must take these courses to the farmers and their wives.

Teachers as Key Individuals

With this idea in mind, I started out to get acquainted with the rural school districts surrounding the vocational agriculture department at University High School, Carbondale, Illinois. The county superintendent supplied the names and addresses of teachers in the rural school districts surrounding Carbondale.

In the afternoons I met with these rural school teachers, explained the OSYA program to them, and found out whether they had received any training in agriculture while in college. I asked them for their opinions as to the possibility of conducting courses in their districts and received from them lists of names and addresses of the farmers in their districts. I also asked them for the names of board members.

If the local teacher believed that a course would be beneficial to the community and that the community would support it, we took our first steps in organization.

The first class we organized was in a very small district, which was bounded on three sides by a river so that we had to depend almost entirely upon the people within the district. Since the district was small and since there were only 13 families in the district, I was dubious as to the possibility of setting up a course there, but the local teacher was very optimistic.

One afternoon after school the local teacher and I visited most of the families in the district. We explained the program to these families, explaining to them that it would be necessary to obtain regular attendance if the course were to succeed because we must have an average attendance of 10.

Most of the families were in favor of starting the course, but about half of them were dubious as to whether attendance could be maintained. All said that if the course was started they would support it.

In this way we had formed a "council" including most of the families in the school district and they did support the school! We had 100 percent enrollment of the families in the area and good attendance altho many times they had to walk to the meetings. The average attendance at the 10 meetings was 14.

Later, in organizing another community, I contacted a teacher who was very optimistic about the way her community would accept the course. In this particular course time was very short so that, instead of setting up a council, I took a chance and called a meeting of the community to discuss the possibilities of the course. The local teacher took it upon herself to contact the community and I understand that she made many personal calls. At the organization meeting

discussed and all those wishing to enroll were asked to raise their hands. Fourteen persons enrolled that night and many more enrolled later. The advantage of this method of organization, as I see it, was that all of the enrollees had enrolled in public and therefore knew they were enrolled, and that they were expected to attend, and that they were responsible for the success or failure of the course. It is hardly necessary to add that the course was very much a success; the average attendance was 16 for the 10 meetings.

The Community Council

The typical plan of organization was to form a council, in each community, made up of the local school teacher, the teacher of the OSYA course, and one, two, or sometimes three leaders in the community. The more farm leaders persuaded to work on this council the better, but time was often pressing and many of the schools had councils of three members.

In many cases I went out with some of these council members and we made personal contacts and enrolled members. Of course this was not done except when necessary, but the teacher must be ready to be the driving spirit when necessary. As the old saying goes, "If you want something done, do it yourself." After I had gone out with the council members for part of an afternoon they generally saw what their part of the job was, and could carry on from there if they were really interested in seeing the course succeed. I would rather have a small council of persons who I know are interested than a large council of persons of doubtful enthusiasm. After I had a few courses started I had a considerable number of farmers offer to be council members in their communities in order to get courses started.

The key person in each council was the local school teacher. The teachers were invaluable because:

1. They were usually acquainted personally with all, or nearly all, of the people.
2. They knew the leaders in their communities.
3. They were generally highly respected in their communities and their judgment was respected.
4. They could give publicity to the courses thru their pupils.
5. They were personally interested in seeing that their schools made good showings.
6. They had many personal contacts with the people in the community.

If a local person who is respected in his community can be found to be the teacher of the OSYA course he may become the second key man in the council. The reason for his importance is that he can make many personal contacts which are invaluable in keeping up attendance and enthusiasm. A teacher of an OSYA course who does nothing but teach and who does not help supervise makes it very difficult for the vocational agriculture teacher. If the teacher of vocational agriculture has a large community council, the OSYA

courses, he will have an impossible job if his special teachers are of this type.

Many Courses Taught

By using the above methods of organization, the goal of five courses was soon passed. At the close of the school year, 32 courses had been completed or were in progress. Thirty-one additional courses have been arranged for the summer. By the same methods with a certain amount of polishing and with slight revisions we hope to continue organization of OSYA courses in even greater numbers next year.

In summarizing the methods used, I would suggest:

1. Locate your community center. In my case I found it to be the rural grade school; in one case it was a rural church. The high school was not the natural community center for many families in the area which I serve.

2. Obtain the good will and confidence of the local school teacher.

3. With the help of the grade school teacher and the teacher of the OSYA course select some leaders to serve on your council. It is important that you obtain their advice on council members because they probably know their community better than you do.

4. Have council members contact personally every member of the community.

5. Ask each enrollee if he will help to organize the course for you and get his neighbors to enroll.

6. Send out cards or letters the day before the first meeting as reminders of the meeting.

7. Send out other card reminders until enrollees form the habit of coming.

8. Have the instructor in the course make as many personal contacts as possible.

9. Start the first meeting off with a bang by having a discussion and demonstration if possible, so that the enrollee can go home feeling that he has learned something. If this can be done, the enrollment is likely to be doubled at the next meeting.

The courses completed during the fall, winter and spring have been: Poultry and Egg Production, 13; Production-Conservation, and Processing of Food, 8; Vegetable Production, 5; Pork Production, 2; Soybean Production, 1; Milk Production, 1; Training Farm Labor, 1.

In acknowledgment of meritorious services rendered in behalf of the National Scrap Harvest, the War Production Board recently presented a citation award to the Future Farmers of America.

F.F.A. members in North Carolina are helping to recruit and train 5,000 non-farm boys from 35 town and city high schools.

"The development of leadership plays an important part in the educative process; to be effective such leadership must be recognized and accepted by the group, and must avoid domination on the one hand and subordination on the other."

—Agricultural Situation, February, 1942

Patriotism and self-interest combine to make an investment in War Bonds the best form of financial reserve for farm people. *W. J. Meyers*

Studies and Investigations

C. S. ANDERSON

The Development of Criteria for the Selection of Prospective Teachers of Vocational Agriculture

G. L. O'KELLEY, Teacher, University of Georgia Demonstration School

VOCATIONAL education in agriculture in Georgia has undergone a wholesome growth in the relatively short time it has been a part of the public school program of the state. In 1917 twenty-one schools availing themselves of the provisions of the recently enacted Smith-Hughes Act, introduced a new phase of secondary education by including for the first time courses in agriculture as a part of the regular school curriculum. By June 30, 1940, there were 302 white schools and 104 colored schools throughout the entire state offering instruction in agricultural classes under the direction of approved teachers of agriculture. Only 1,057 white persons were reached thru classes conducted by teachers of agriculture in 1918, but 2,546 were reached in 1926, and more than 40,000 in 1940.

With the steady growth of vocational education in the schools of Georgia and the slow but regular turnover of teachers in service (6 percent yearly from 1935 to 1940) the number of new teachers entering the profession and of prospective teachers entering the training programs has shown marked increases. This fact is evidenced by 11 graduates in 1933 from the teacher-training department at the University of Georgia as compared with 57 in 1937. Logically the value of these additions will depend to a large extent upon how well they are individually suited by environmental and hereditary backgrounds, personality development, and general initiative for the work required of them. In other words the careful selection of trainees ranks as one of the foremost contributions that the teacher-training institutions can make toward the success of the entire program.

The purpose of this study was to determine the relative value of certain traits and characteristics of prospective teachers as they contribute to their future success as teachers of agriculture in Georgia. The study in no way undertook to limit the factors contributing to success in teaching to those used in this investigation. An effort was made, however, to evaluate the influence of certain selected factors on later teaching success with a view in mind of developing criteria applicable to the selection of prospective teachers of agriculture.

Research Procedure Employed

After careful study of several modes of attack, an approach to the problem was undertaken whereby a group of prospective teachers of agriculture were rated on certain pre-employment factors and later rated on the success of their teaching efforts while actually employed as teachers of agriculture. With

for both the initial and final ratings it was a simple matter of statistical computation to determine the coefficient of correlation between the two.

The Selection of Pre-employment Factors to Be Studied

Thru a process too lengthy to be presented here the factors to be studied with regard to influence on teaching success were set up for investigation. In brief, these factors were based upon the teacher qualifications recommended by the Federal Board for Vocational Education, the matriculation requirements of several leading teacher-training institutions, the findings of several research studies in this field and to a much lesser extent the inquisitiveness of the investigator. The pre-employment factors finally selected for investigation are shown in Table I.

The Selection of Devices for Measuring Pre-employment Factors

After a careful study of the reliability, the validity, the time and skill required to administer as well as the cost and availability of many measuring devices, the devices shown in Table I were selected for use in this investigation.

In the selection of the group of prospective teachers to be studied, arrangements were made to collect data from all

available students enrolled in the Department of Vocational Education in Agriculture, College of Education, University of Georgia, during the school year 1938-39. These students agreed without coercion of any kind to cooperate in the study, giving a total of 45 seniors and 26 juniors or a grand total of 71 students comprising the test population. The tests were submitted to the test population in such a manner as recommended by the authors of the various tests and approved by the Department of Educational Psychology, College of Education, University of Georgia.

The Development of a Rating Scale for Determining Teaching Success

During April, 1938, the apprentice supervising teachers of agriculture in Georgia developed a list of the major activities engaged in by practically every successful teacher of agriculture in the state in the establishment and promotion of a functional and permanent community program. In reality these problems formed a "job analysis" of the activities of a successful teacher of agriculture.

These problem groups—20 in number—were converted by the investigator into a rating scale for determining teaching success in the field of vocational education in agriculture. In order to give a component weight or value to each of the problems composing the scale and thus to facilitate scoring, the scale was presented for study to 18 teachers of agriculture, three teacher trainers, and one supervisor of agricultural education in Georgia—a total of 22. These persons were requested to assign relative weights or values to each of the 22 problems with a 1,000 point total score for perfect per-

Table I
Pre-employment Factors Studied and Measuring Devices Employed in Investigation

Factor Studied	Measuring Device Selected
College scholastic achievement	College grades
Studiosness	Wrenn's Study Habits Inventory
Vocational interest	Strong's Vocational Interest Blank
Mechanical aptitude	Stenquist's Mechanical Aptitude Test
Teaching aptitude	George Washington University Teaching Aptitude Test
Social adaptability	George Washington University Social Intelligence Test
Environmental adjustment	Bell's Adjustment Inventory
Leadership	Morris Trait L Index Test
Personality adjustment	Bernreuter's Personality Inventory
Socio-economic status	Sims' Score Card for Socio-Economic Status
Impression made on others	Rating scale developed by the investigator
Previous teaching experience	Questionnaire
Family educational background	Questionnaire
Family occupational background	Questionnaire
Extra-class activities	Questionnaire
Age	Questionnaire
Tenure on home farm	Questionnaire
Method of financing college education	Questionnaire
Apprenticeship experience	Questionnaire

formance. Average figures for those values were then placed on a key for use in determining relative scores on teaching success.

Application of Rating Scale to the Activities of Teachers Involved in Study

At the end of one year the investigator visited the school where each teacher of agriculture co-operating in this study had completed his first year of active

teaching. While in this situation a thorough study was made of the teaching program which had been developed by this young teacher, both in the school and the community. Based on impressions gathered in this manner, the rating scale previously prepared for the purpose was employed in checklisting the teaching activities of each teacher thus contacted.

Following the investigator's rating (check list) of each teacher's activities and accomplishments, the assistance of

the district supervisors of agricultural education in the state was obtained in evaluating the teaching program of each teacher involved in the study. When these evaluations had been completed for all teachers, a numerical value or score on "teaching success" was obtained from the weighted scale previously developed.

With scores on all factors selected for study and also scores for teaching success available in numerical form for each teacher in the study, it became merely a matter of careful and detailed calculation to determine the inner correlations existing between the criterion and the several independent variables. In cases where factors were expressed in categorical terms biserial correlations were used. In the remaining cases Pearson's r served as the method of determining relationship. In addition all teachers in the upper 20 percent and those in the lower 20 percent of the group on teaching success scores were grouped separately for comparison. The relationship between the scores made in each of those groups and the mean scores for the group as a whole on all variables were determined in an effort to discover any possible discriminatory tendencies.

The Data

The data when tabulated and analyzed revealed the existence of a significant degree of correlation between teaching success and certain of the pre-employment factors studied. For certain other factors the correlation was negligible. Co-efficients of correlation for all factors are shown in Table II. As may be seen from the figures shown in this table, those pre-employment factors for which the coefficient of correlation was a significant figure are as follows:

- College scholastic achievement—as shown by grades in:
 - Academic courses
 - Education courses
 - Agriculture courses
 - Average of all courses
- Socio-economic background (as measured by Sims' Score Card for Socio-Economic Status)
- Personality (as measured by Bernreuter's Personality Inventory—Scale B 4-D)
- Social adaptability (as measured by Bell's Adjustment Inventory—Social Adjustment Scale)
- College extra-class activities (as shown by membership in honor societies)
- Impression made on others (as measured by personality rating scale)
- Method of financing college education (as shown by having stopped school to work in order to finance further education)
- Apprenticeship experience.

In addition to the correlations already noted, a further effort was made to determine the presence of any marked discriminatory tendency among either the most successful teachers or the least successful teachers to be outstanding on any of the pre-employment factors studied. To this end a study was made of the pre-employment factor scores for the most successful teachers (upper 20 percent) as compared with scores for the least successful teachers (lower 20 percent) as shown by the percentage of each group which surpassed the mean score for

Table II
Coefficients of Correlation Between Teaching Success and Various Pre-employment Factors

Factor	Measure	r.	P.E.r.
College achievement	College grades: Academic	.477	.060
	Education	.447	.067
	Agriculture	.451	.067
	Total	.456	.067
Studiosness	Wrenn's Study Habits Inventory	.234	.077
Vocational interest	Strong's Vocational Interest Blank		
	Farmer Teacher	.076	.079
		.266	.073
Mechanical aptitude	Stenquist Mechanical Aptitude Test	.085	.079
Teaching aptitude	George Washington University Teaching Aptitude Test	.025	.08
Social adaptability	George Washington University Social Intelligence Test	.090	.079
Environmental adaptability	Bell's Personality Adjustment Inventory:		
	Home Adjustment Scale	.094	.079
	Emotional Adjustment Scale	.131	.079
	Social Adjustment Scale	.311	.073
	Health Adjustment Scale	.174	.077
	Total	.237	.077
Leadership	Morris Trait L Index Test	.203	.077
Personality adjustment	Bernreuter Personality Inventory Blank:		
	B I-N Scale	-.094	.079
	B 2-S Scale	-.005	.08
	B 3-1 Scale	-.047	.08
	B 4-D Scale	.299	.073
	F 1-C Scale	-.137	.079
	F 2-S Scale	.051	.08
Socio-economic background	Sims' Socio-Economic Scale	.298	.073
Previous teaching experience	Statement on questionnaire	.267*	.112**
Impression made on others	Classmates' rating: Appearance	.285	.073
	Personality	.294	.073
Parents' education	Mother's education	-.022	.08
	Father's education	-.001	.08
Parents' occupational background	Father farmed	.066*	.119**
	Mother taught at some time	.164*	.126**
High school extra-class activities	Participation in forensic activities	.012	.079
	Participation in athletic activities	.120	.079
College extra-class activities	Participation in forensic activities	.029	.08
	Participation in athletic activities	.210	.077
	Number of club memberships	.268	.073
	Memberships in honor societies	.384*	.073**
Age	Age of decision to teach	.029	.08
	Age professional training began	.044	.08
Family tenure on home farm	Family ownership of home farm	.176*	.133**
Method of financing college education	Financing college education:		
	Borrowed money	.078*	.13**
	Worked in school	.046*	.07**
	Stopped school to work	.359*	.09**
Apprenticeship experience	College grades	.409	.067

Future Farmers of America

A. W. TENNEY

Co-operative Food Conservation Program

EDD LEMONS, Executive Secretary of F.F.A., Stillwater, Oklahoma

AMONG other direct contributions to the war effort made by the farm boys and girls of the Noble community in Cleveland County, Oklahoma, add one ton of cherries.

It came about like this. With only about a 10 percent crop of fruit on his cherry trees, C. R. Haskett, a Noble fruit

the remaining 65 percent.

One group of boys and girls took ladders and lug boxes and gleaned the fruit from the trees with amazing speed and efficiency. Another group of workers stationed themselves in the washing and packing shed, and with the help of the owner's machinery and equipment,

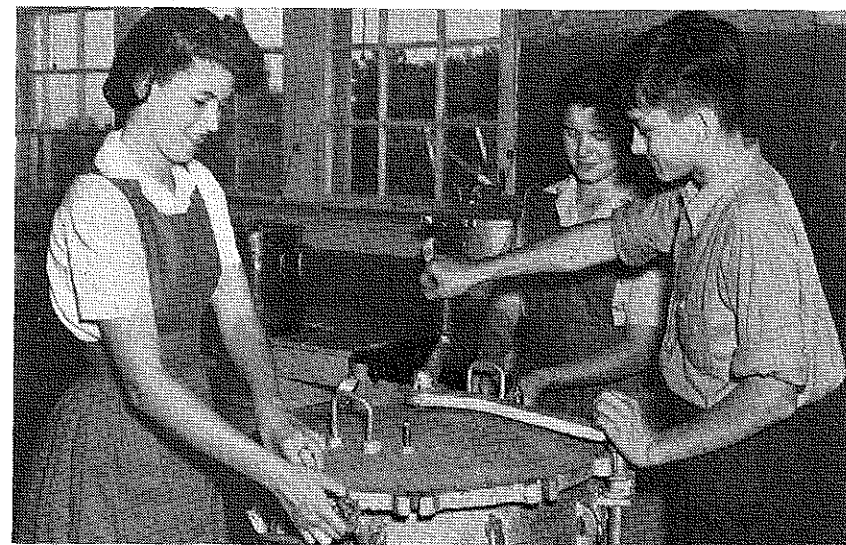
washed, sorted, and pitted the fruit as fast as it arrived from the trees. The cherries were packed into 30-pound cans for convenience in transporting and then moved by automobile to the vocational agriculture building a short distance away where pressure cookers and other canning equipment was set up and in operation by the third group of boys and girls under Miss Alexander's direction.

Canning Procedure

Here it was packed into 20-ounce tin cans, sealed with a hand-operated machine, and placed in the huge pressure cookers for the required time. When the day's work was done each of the 84 students who took part in the fruit picking job had an average of about 12 cans of fruit, plus the satisfaction of knowing they had saved approximately a ton of food at a time when our country can least afford to let such products go to waste.

State Canning Program

Thru the vocational agriculture teachers and vocational home economics instructors, processing and preservation of foods is being stressed thruout Oklahoma this summer. More than 1,800 foods courses have been taught to adult farmers and farmers' wives in night schools over the state, mostly in rural school houses. From September 1 thru May 15, a total of 25,552 persons had received training in these food production and conservation courses, and it is estimated that such training will be directly responsible for getting a million jars of food canned this summer in 500 Oklahoma communities.



With the home economics teacher in charge, F.F.A. boys and home economics girls at Noble, Oklahoma, had complete charge of canning a ton of cherries which they picked in one day from a nearby orchard. Left to right here, putting the finishing touches on a 132-quart pressure cooker filled with 20-ounce cans of cherries, are Bettie Jean Belt, left, Inabelle Watson, and Herbert Black

grower, was ready to spray his orchard with poison, put up warning signs, and write the whole thing off as a complete loss. He knew that with such a small crop he could not afford to hire high-priced labor to pick the cherries, and past experience had demonstrated the folly of inviting the general public into the orchard to pick the fruit on shares. Damage to his trees more than offset the value of his share of the cherries.

Co-operative Program

Instead of standing by and watching the delicious, tho sub-normal, cherry crop on a thousand trees go to waste, Victor Riffe, vocational agriculture teacher, and Miss Jeanette Alexander, head of the vocational home economics classes in the local high school, made a deal with Mr. Haskett and saved the entire crop at no expense to the owner and a big profit in canned fruit for the 84 boys and girls who participated.

Under close supervision of Mr. Riffe, 52 F.F.A. boys and 32 home economics girls harvested, washed and canned a ton of cherries in one day, with Miss Alexander taking charge of the canning work. The orchard owner received 35 percent



Arriving fresh from the washing and packing shed in 30-pound cans, the cherries were placed in 20-ounce tin cans, sealed with the aid of a hand-operated machine, and

F.F.A. Boys Carry On Demonstration Projects in Poultry

W. W. GREGORY, Teacher, Junction, Texas

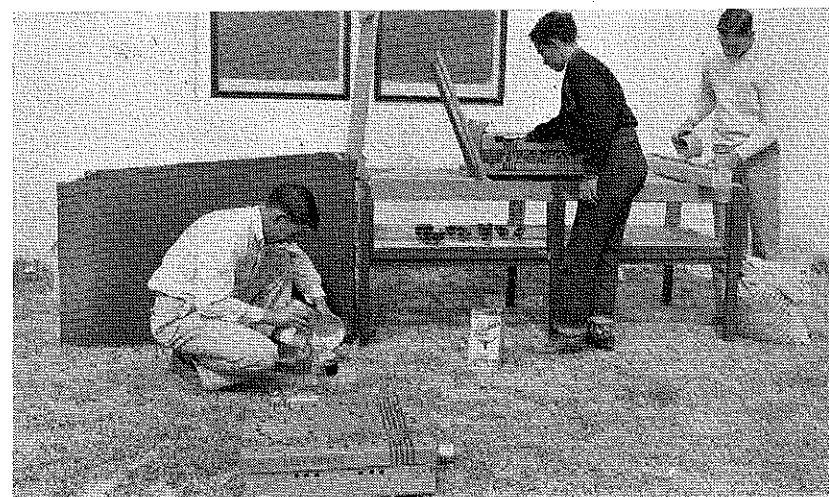
AN OUTDOOR demonstration project to create more interest and more care in raising small, farm and backyard flocks of poultry is being sponsored by the Junction Chapter of Future Farmers.

Because all hatcheries available have been operating at full capacity, further increases in the number of chicks hatched has hardly been possible, altho a reduction of only five percent in the mortality rate would result in an increase of 200,000,000 dozen eggs and 100,000,000 pounds of poultry meat. The only way this can be attained is thru more cautious sanitary measures. That is how the outdoor brooder can make a very definite contribution toward increased production.

With a wire runway and a wire floor with a removable litter board, diseases and insect pests can be kept to a mini-

mum with the least possible cost. In this way flocks can be kept in the backyard in town, since a 5' by 6' house with a runway 6' by 8' will take care of at least a dozen hens. If screen wire is used, contamination from flies is further eliminated.

Our community is strictly a ranching territory, and interest in poultry has been negligible, but the demonstration brooder placed in front of a wool and mohair warehouse has resulted in the construction of a number of similar brooders by ranchers as well as townsmen. It seems natural to assume that there will be a number of additional small flocks in our community that will contribute some production, as the result of the demonstration project, and in all probability a reduction in the mortality of still other flocks.



F.F.A. boys build and operate brooder.

F.F.A. Chapter Does Seed Testing

J. MORRIS CHRISTY, Teacher
Tipton, Iowa

MEMBERS of the Tipton, Iowa Chapter of the Future Farmers of America are rendering a service to the farmers of the community and at the same time are securing valuable information for themselves by conducting seed germination and purity tests as a part of their vocational agriculture work.

A Needed Service

The service played an important part in the farming operations of Cedar County this year as seed testing laboratories at Iowa State College and the State Department of Agriculture in Des Moines have been swamped with samples to be tested. The service being conducted by the Future Farmers of Tipton assures farmers that they can obtain results of tests in seven days, whereas it would take considerably longer if samples were sent to Ames or Des Moines.

ing problem was presented to the boys of the Tipton Chapter. They decided to purchase a seed germinator. They purchased a Mangelsdorf Germinator at a cost of \$40. The boys decided that all testing for their fathers should be conducted free of charge and that other farmers of the community should pay 25c per sample for a germination and purity test.

The first week of March the germinator was put into operation and farmers brought in so many samples that it was operated at capacity for several weeks.

Students Do the Testing

The farm crops class under the direction of the vocational agriculture instructor did all testing work. The boys prepared the samples for germination and placed them in the germinator for four days where a constant temperature and humidity was maintained. The seeds of each sample that germinated were counted. The seeds that failed to germinate were placed back in the germinator for three more days and checked again. The total germination was computed and the results sent by post card to the farmer

seed prepared for germination consists of 400 seeds placed between wet blotters. Check was also made for weed seed, inert material, other crop seed and damage. Samples of corn, oats, soybeans, timothy, alfalfa, red clover, sweet clover, and rape were tested.

By the first week of June, 123 tests were completed for 74 different farmers. Thirty-one samples of seed were so low in germination that they were unfit for farmers to use as seed. Enough money had been received to pay half the purchase price of the germinator.

The project has been an excellent service to farmers and has proven to be an excellent teaching device. The farm crops students have been very interested in doing the work and have developed considerable ability in discerning good and poor samples of seed.

Palmetto F.F.A. Chapter Buys \$1,000 War Bond

T. P. WINTER, Teacher
Palmetto, Florida

THE Palmetto Chapter, Future Farmers of America, purchased a \$1,000 War Bond with funds derived from the sale of farm produce grown co-operatively on their land laboratory area this fall. The event was the high-light of their annual Parent-and-Son banquet, at which Honorable Colin English, State Superintendent of Public Instruction, was speaker.

The Palmetto Chapter has conducted a five-acre land laboratory area supplementing their classroom study for the past three years and each year the enterprise has netted them approximately \$1,000. This project enabled them in previous summers to take, as a group, a trip to Cuba and to spend a two-weeks outing at the beaches. The war emergency made it necessary to forego a summer recreational program and the Chapter elected instead to purchase the War Bond, thereby accomplishing two war efforts in one. They have already produced over a 100,000 pounds of fresh produce this fall to help fill the nation's breadbasket.

Net Farm Income in 1942

Farm income in 1942 reached a new high mark. Data available on farm income and expenditures during 1942 indicate that the net return to farm operators for their labor, capital, investment and management, and for other unpaid family labor, was about 10.2 million dollars. This total was 3.45 million above farmers' net income of 1941, and 1.4 million higher than the previous record reached in 1919.

The estimates of cash income for 1940 and 1942 are given by commodities and by states in tables 1 and 2 of this report. These estimates take into account revisions in production, disposition, and prices that have been made in the past year, as well as more complete information that has become available on the time when farmers received their payments on commodities placed under loan and on the additional income received by farmers from the redemption of

Selection of Prospective Teachers

(Continued from page 95)

factor ratings. This study indicated a discriminatory tendency for teachers ranked at the upper end of score distribution on teaching success to:

1. Earn better than average grades in all college classes
2. Make better than average scores on Bell's Adjustment Inventory
3. Score above the mean score on the George Washington University Social Intelligence Test, as a measure of social adaptability
4. Earn better than average scores on Wrenn's Study Habits Inventory, a measure of studiousness
5. Score high on Morris Trait L Index Test, indicating leadership qualities
6. Score high on Strong's Vocational Interest Blank, Teacher scale indicating marked interest in the teaching profession
7. Receive high personality ratings by classmates
8. Be members of farm supported families
9. Decide to teach agriculture before reaching 20 years of age
10. Stop school, if necessary, to work in order to finance remainder of college education
11. Earn above average grades on apprenticeship experience.

Based upon the data already reported, the following conclusions were drawn regarding the relationship of pre-employment factors studied and teaching success:

1. None of the factors studied, when taken singly, is of marked value in the selection of prospective teachers of agriculture in Georgia.
2. None of the factors studied can be employed as the valid criterion for the prediction of success in teaching agriculture in Georgia.
3. The trainees most likely to develop into superior teachers (upper 20 percent) will be identified by the following characteristics:
 - a. Ability to earn better than average grades in all college agricultural classes, all college academic classes, all college education classes, and average of all college classes
 - b. Superior ability to adapt self to environment, including the unexpected
 - c. Ability to become socially well-adjusted—to possess ability to meet and contact people with favorable results
 - d. Superior habits of study and concentration
 - e. Excellence in qualities of leadership
 - f. A strong and abiding interest in the teaching profession
 - g. Ability to impress favorably associates thru desirable personal qualities
 - h. An adolescent home life supported by "farmer fathers"
 - i. Decision to teach agriculture made at an early age
 - j. An unquenchable desire to complete college to the point of leaving school to seek employment in order to finance further schooling, if necessary
 - k. Successful experience in appren-

Hogs Are Important in the Southwest

WARNER G. BUTTERFIELD, Teacher, Anthony, New Mexico

SUPERVISED farming activities in the Valley Union High School at Anthony, New Mexico, are carefully planned, organized, and supervised. Each boy in the vocational agriculture department is required to work out a long-time program of supervised farming to cover a period of at least four years. Each year of the period during which the boy remains in high school that part of his program which is to occur during the year and in the years to follow is revised and planned in detail. Normally another year or more is added so that upon graduation three or four years' program is already outlined.

Work Calendar

The detailed plans which each boy makes for his program for the year contain such items as estimates of costs and expenses. There is set up also for each boy a job calendar. This job calendar lists the jobs each boy has to do in each productive enterprise in his long-time program which is in operation during the year. It also includes jobs in his improvement projects and skills in which he has determined to become proficient.

Most of the boys have as one of the productive enterprises in their supervised farming programs that of swine

production. The majority of the swine owned by vocational agriculture boys are Poland Chinas. There are a few Duroc Jerseys and Hampshires on some of the boys' farms.

Repeated winnings at local and out-of-state livestock shows have demonstrated the fact that some of the best Poland China pigs to be found in this area belong to members of the Anthony Future Farmer Chapter. In order that this caliber of pigs may be continued, practically all of the younger boys buy gilts from the top pigs of older boys' litters. Every two years or oftener, an outstanding boar is purchased to breed up chapter sows.

Johnny Eddy, one of the Anthony F.F.A. Chapter's State Farmers, purchased the boar, "Broad's Kayo," son of the famous Kayo, this past summer. He paid \$150 for this boar as a junior yearling. The cost has been justified by his siring the grand champion fat barrow over all breeds at the Colorado State Fair. In addition he has sired many other fine pigs. Boars are bought by individual members of the F.F.A. Chapter, but are underwritten by chapter funds until they have paid for themselves out of service fees charged other F.F.A. boys. It might be stated in passing that all F.F.A. boys agree to breed to this sire.

VICTORY WAR PROGRAM

of the Kansas Association of Future Farmers of America

1. A farming program of maximum size and scope for each boy, commensurate with the ability of the boy and the home farm opportunity.
2. A continuous program of repair and construction of farm machinery and equipment.
3. Prevent waste of all kinds. (Conserve natural resources; control farm fires, livestock losses; eradicate pests.)
4. Assist in training and adapting town boys for farm work.
5. So far as possible produce on the farm all the needs of the farm and farm family.
6. As individuals and as chapters purchase all War Bonds and Stamps possible.
7. Take every precaution against farm accidents. They result in suffering, loss of manpower, damaged equipment, and sometimes lives.
8. Carry on a continuous salvage campaign. The scrap metal and rubber from American farms can be a vital factor in winning the war.

Wartime Accomplishment of the Kansas Association of F.F.A. in 1942-43

Total face value of War Bonds purchased by chapters.....	\$ 5,252.50
Total face value of War Bonds and Stamps purchased by members.....	90,941.81
Pounds of scrap metal collected by chapters.....	5,497,773
Pounds of paper collected by chapters.....	314,805
Pounds of rags collected by chapters.....	9,786
Pounds of rubber collected by chapters.....	23,940
Number of burlap bags collected by chapters.....	5,710
Number of Victory gardens grown by members.....	2,129
Total acreage in gardens.....	1,324
Number of farm workers placed on farms thru aid of F.F.A. chapters.....	1,420
Number of F.F.A. members who assisted Victory Farm Volunteers to become acquainted with farm life.....	529
Total number of farms serviced by Victory Farm Volunteers.....	720
Number of farm machines repaired by F.F.A. members.....	3,675
Total number of F.F.A. members serving in Armed Forces.....	2,489
Average amount of money per member invested in farming.....	\$ 245.00
Total amount of money invested in farming by F.F.A. members.....	\$980,599.87

OUR 1943-44 GOAL—SURPASS THIS RECORD

OFFICE OF EDUCATION, WASHINGTON, D. C.

John W. Studebaker—U. S. Commissioner of Education
 J. C. Wright—Ass't Commissioner for Vocational Education
 W. T. Spanton—Chief, Agricultural Education

Regional Agents: C. H. Lane—North Atlantic J. H. Pearson—North Central
 D. M. Clements—Southern E. J. Johnson—Pacific
 W. N. Elam—Special Groups

Specialists: F. W. Lathrop—Research A. W. Tenney—Subject Matter
 H. B. Swanson—Teacher-Training R. E. Naugher—Part-time and Evening
 D. L. MacDonald

d—directors s—supervisors rs—regional supervisors t—teacher-trainers
 ds—district supervisors it—itinerant teacher-trainers rt—research workers
 cs—colored supervisors ct—colored teacher-trainers
 sms—subject matter specialist

ALABAMA

d—J. B. Hobby, Montgomery
 s—R. E. Cammack, Montgomery
 ds—J. C. Cannon, Auburn
 ds—H. F. Gibson, Auburn
 ds—L. L. Sellers, Auburn
 rt—C. G. Scarborough, Auburn
 ds—T. L. Paulkner, Auburn
 t—S. L. Chesnut, Auburn
 t—G. T. Sargent, Auburn
 ts—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—Fred A. Smith, Little Rock
 s—C. R. Wilkey, Little Rock
 ds—T. A. White, Monticello
 ds—O. J. Seymour, Arkadelphia
 ds—J. A. Niven, Russellville
 ds—Earl G. Landers, Batesville
 t—Keith L. Holloway, Fayetteville
 t—Roy W. Roberts, Fayetteville
 sms—Henry L. Cochran, Fayetteville
 ct—J. C. McAdams, Pine Bluff

CALIFORNIA

d—Walter F. Dexter, Sacramento
 s—Julian A. McPhee, San Luis Obispo
 rs—B. J. McMahon, San Luis Obispo
 rs—E. W. Everett, San Luis Obispo
 rs—B. R. Denbigh, Los Angeles
 rs—Howard F. Chappell, Sacramento
 rs—A. G. Rinn, San Luis Obispo
 rs—Weir Fetters, San Luis Obispo
 rs—Harold O. Wilson, San Luis Obispo
 rs—Wesley Smith, San Luis Obispo
 rs—H. H. Burlingham, San Luis Obispo
 t—S. S. Sutherland, Sacramento
 t—B. J. McMahan, 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—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
 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—Ellis Whitaker, Industrial College

HAWAII

d—W. W. Beers, Honolulu, T. H.
 s—W. H. Coulter, Honolulu, T. H.
 t—F. E. Armstrong, Honolulu, T. H.

IDAHO

d—William Kerr, Boise
 s—Stanley S. Richardson, Boise
 ds—Elmer D. Beinap, Idaho Falls
 t—H. E. Lattig, Moscow
 t—H. A. Winner, Moscow

ILLINOIS

d—Ernest J. Simon, Springfield
 s—J. E. Hill, Springfield
 s—L. C. Cannon, Springfield
 s—B. A. Tomlin, Springfield
 t—H. M. Hamlin, Urbana
 t—Melvin Henderson, Urbana
 t—J. N. Weiss, Urbana
 t—H. J. Rueker, Urbana

INDIANA

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

IOWA

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

KANSAS

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

KENTUCKY

d—R. H. Woods, Frankfort
 s—E. P. Hilton, Frankfort
 t—Carnie Hammonds, Lexington
 it—Watson Armstrong, Lexington
 it—W. R. Tabb, Lexington
 ct—J. J. Mark, 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
 ct—M. J. Clark, Scotlandville
 ct—Dallas Matthews, Scotlandville
 ct—E. C. Wright, Scotlandville

MAINE

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

MARYLAND

d—Glen D. Brown, Baltimore
 s—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. Wells, 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 Sweeney, East Lansing

MINNESOTA

s—Harry J. Peterson, St. Paul
 t—A. M. Field, St. Paul
 t—G. F. Ekstrom, St. Paul

MISSISSIPPI

d—H. E. Mauldin, Jr., Jackson
 s—A. P. Patherree, 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—H. O. West, State College
 it—V. P. Winstead, State College
 ct—W. A. Flowers, Alcorn
 ct—A. D. Fobbs, Alcorn
 ct—Robert Ross, Alcorn

MISSOURI

d—Roy Scantlin, Jefferson City
 s—J. H. Foard, Jefferson City
 ds—Joe Duak, Springfield
 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—Sidney Owen, Lincoln
 ds—L. D. Clements, Lincoln
 s—H. W. Deems, Lincoln
 t—H. E. Bradford, Lincoln
 t—C. C. Minter, Lincoln

NEVADA

d—R. B. Jeppson, Carson City
 t—W. C. Higgins, Reno

NEW HAMPSHIRE

d—Walter M. May, Concord
 s—Earl H. Little, Concord

NEW JERSEY

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

NEW MEXICO

d—Mrs. Georgia L. Lusk, Santa Fe
 s—Frank E. Wimberly, State College
 t—Carl G. Howard, State College
 t—H. M. Gardner, State College

NEW YORK

d—Oakley Furley, Albany
 s—A. K. Getman, Albany
 s—W. J. Weaver, Albany
 s—R. C. S. Sulliff, 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
 s—Roy H. Thomas, Raleigh
 ds—R. J. Peeler, Raleigh
 ds—E. N. Meekins, Raleigh
 ds—J. M. Osteen, Rockingham
 ds—T. H. Stafford, Asheville
 ds—T. B. Elliott, La Grange
 ct—S. B. Simmons, Greensboro
 ct—C. E. Dean, Greensboro
 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
 s—Ernest L. DeAlton, Fargo
 t—Shubel D. Owen, Fargo

OHIO

d—Kenneth C. Ray, Columbus
 s—Ralph A. Howard, Columbus
 s—W. G. Weiler, Columbus
 s—E. O. Bolender, Columbus
 t—W. F. Stewart, Columbus
 t—H. G. Kenestrick, Columbus
 t—C. E. Rhoad, Columbus
 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
 t—C. L. Anzorer, 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
 s—Kirby E. Brumfield, Salem
 t—H. H. Gibson, Corvallis

PENNSYLVANIA

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

rt—C. S. Anderson, State College
 t—William F. Hall, State College
 it—Russell B. Dickinson, State College

PUERTO RICO

d—Lloyd A. LeZotte, San Juan
 s—Nicholas Mendez, San Juan
 ds—Lorenzo Garcia Hernandez, San Juan
 t—Ernesto Vazquez Torres, Mayaguez
 ds—Juan Acosta Henriquez, Arcibago
 ds—Juan Robles, Cayey
 ds—Andres Ramirez, Mayaguez
 ds—Samuel Molinary, San Juan

RHODE ISLAND

d—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
 t—W. G. Crandall, Clemson
 t—H. M. Stribling, Clemson
 t—J. B. Monroe, Clemson
 ct—J. P. Burgess, Orangeburg
 ct—Gabe Buckman, Orangeburg

SOUTH DAKOTA

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

TENNESSEE

d—G. E. Freeman, Nashville
 ds—G. B. Thackston, Murfreesboro
 ds—J. W. Brimm, Jackson
 ds—L. A. Carpenter, Knoxville
 t—N. E. Fitzgerald, Knoxville
 t—J. B. Kirkland, Knoxville
 rt—A. J. Paulus, Knoxville
 rt—E. B. Knight, Knoxville
 ct—W. S. Davis, 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
 it—Malcolm Orchard, College Station
 rt—W. R. Sherrill, College Station
 t—J. L. Moses, Huntsville
 t—S. V. Burks, Kingsville
 t—Ray L. Chappelle, Lubbock
 it—T. L. Leach, Lubbock
 it—W. E. Driskill, Huntsville
 it—F. D. Shackelford, Kingsville
 ct—E. M. Norris, Prairie View

UTAH

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

VERMONT

d—John E. Nelson, Montpelier
 s—W. Howard Martin, Burlington
 s—George E. Webster

VIRGINIA

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. Groseclose, Blacksburg
 t—E. Y. Noblin, Blacksburg
 s—E. O. Richards, Blacksburg
 ct—G. W. Owens, Ettrick
 ct—J. R. Thomas, Ettrick

WASHINGTON

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

WEST VIRGINIA

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

WISCONSIN

d—George P. Hambrecht, Madison
 s—Louis M. Samsan, Madison
 t—J. A. James, Madison
 it—vsa Fay, Madison
 it—Clarence Bonsack, Madison

WYOMING

d—Sam Hitchcock, Cheyenne
 t—Earl Hutcherson, Cheyenne