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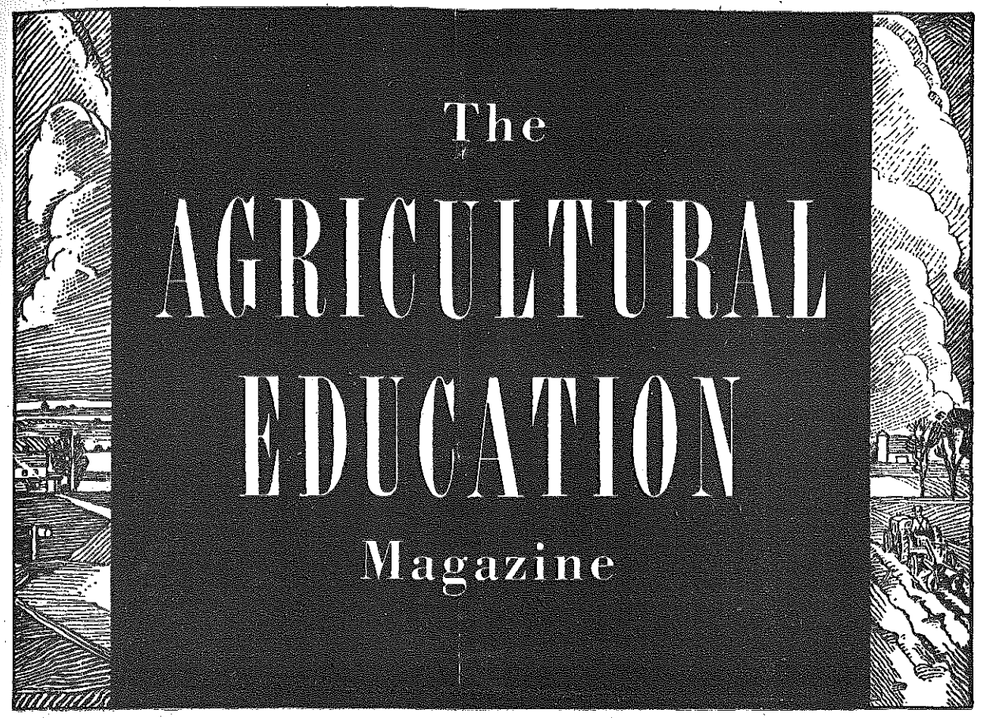

The AGRICULTURAL EDUCATION Magazine

"A chip on the shoulder usually indicates wood higher up."

VOCATIONAL AGRICULTURE
for
TEACHERS
Teacher Educators
And Supervisors
OFFICIAL PUBLICATION

The Agricultural Education Magazine

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Editorial Comment

Young Farmers Look Ahead

OUR job, as I see it, is the same as that of any other producer in any other part of the world. It is to produce a constantly improving production which we can sell at a constantly decreasing price.

Our responsibility in producing quality products goes beyond the mere satisfaction of known consumers' wants. For example, consumers, because of habit, prefer eggs with light yolks, yet we know that an egg with a dark yolk is more nutritional. Our job is to produce this more-nutritional egg by such methods as better feeding and then to help educate the consumer to want it.

Better handling of the product can also help us attain improved quality. To a limited extent this has already been done, but much more can be done in the future.

There will be periods of inflation and periods of deflation. I do not mean that the prices of farm products should not rise and fall with the price level. I do mean that we should increase our efficiency of production so that the trend in price will be downward. There are many ways in which we can become more efficient producers. For example, feeding grass silage keeps hens healthier and reduces flock mortality. Better breeding will give us larger-sized eggs. Better management will enable us to produce more with less labor.—A Poultryman

Even in this advanced age, there is not and never has been a perfectly run railroad, school, newspaper, bank, grocery store, factory, or farm. In science, much of the knowable is to be discovered—in fact most of it. We know little about astronomy. Chemistry and physics are little more than a mass of questions. We have merely scratched the surface of invention. There is much to be done in the industrialization of agriculture, and young farmers must play a large part. We can expect new synthetic materials made of products which the farmer can grow. There is also a big job to be done in rural electrification, for over half of our rural population is still using oil lamps, and thus is unable to use modern electrical devices.—A Student

Our job, as I see it, is to work to produce all the food necessary for this country with a smaller number of people on the farms. This seems to conflict with statements made about a back-to-the-land movement. Yet there definitely has been in the past, and will be in the future, only a certain amount of money that people in this country will be willing to spend for food. Only as we produce efficiently so that a small number can produce this food will this money reach around and provide good incomes for farmers.

Efficient selling is also important. Perhaps it is more important than efficient production. It seems to me that we have made more progress in increasing production-efficiency than we have in increasing selling-efficiency. Perhaps we should in the future place more emphasis on selling.—A Dairyman

Probably we have not seen anything in the past like what we will see in the future, so far as improvements in techniques of production and the efficiency of farming operations are concerned. The key to a high level of living for any country or any group of producers in a country is high production per worker. That has been true in the past and should be our objective in the future. This principle should be applied to more than just production. It should be applied to the distribution of farm products. Certainly there are a good many things we can do to increase efficiency of distribution. Many of our farm organizations, both commercial and otherwise, can foster research and practical programs. This is the area in which farmers meet laborers, and the point where we can meet them, either with our fists up or pulling together. We know that both labor and agriculture as a whole profit by low costs of distribution and the wide distribution of goods.

The third phase of our job is what I call farm-citizenship or just plain citizenship. I think that it is our job to be aware of the changes which are going on and to formulate opinions and let them be known. Agriculture can make a very important contribution to our democratic system. First, by doing the production job efficiently; second, by lending support to projects that will improve the distribution system; and third, by being informed citizens.—A Feed Dealer

Recouping Our Losses

NOW that the war is over, state supervisors are thinking intently about their postwar programs. In some states the quality of working conditions and of work has been reasonably well maintained. In other states the work has suffered. It is to the recovery of this lost ground that we should now direct our thinking with vigor and determination. By the time this editorial appears it will be too late for the best effort in some locations, but for many others it will still be timely. Let us face the situation purposefully and intelligently.

It is well to think of conditions related to the enactment of the first bill for vocational education and in many states the beginning of agricultural education. In those days a local school which had been operating under certain conditions, including teachers, classes and various related activities, was given an opportunity to initiate a department of vocational agriculture designed basically to prepare students in high school and young men out of high school, so desiring, for the vocation of farming. To this end were provided the services of a qualified teacher of agriculture to carry on this special type of instruction. And the school was asked to provide the necessary rooms, equipment, apparatus, and library. All other functions were to be continued by the teachers as before. There was no compulsion forcing schools to accept such a teacher; it was optional. This type of education had long been desired. It was popular from the beginning. Definitely it was a sellers' market.

With the experience of nearly 30 years, the requirements for good work in a broad departmental program have changed and the opportunities for vocational service by the teachers have increased. But during the war, in some states and in many communities, the quality of product deteriorated for various reasons. Some teachers have not been allowed to give full time to vocational duties. Also some teachers have chosen to limit their service for which they were employed and have used their time liberally for other employment. Some schools have cramped vocational teaching. Extra duties, nonvocational in nature, have been imposed on teachers so that, as a result, conditions unhealthy for a vigorous program now prevail. What shall be done?

One suggestion is to review critically the type of vocational education that is desired. Restate the standards necessary to bring about that high-quality product. Hold to those standards and insist on their acceptance in every department reopened or opened, beginning today! Today as never before since the early years of agricultural education, it is a sellers' market. The state supervisor has a product to offer; the supply of teachers limited. If a department is opened with conditions for work less than the best, it is the supervisor's responsibility, his blame.

From previous articles in this magazine we gather these suggestions. If a community wishes to reopen a department, or to open one, require that that community shall arrange for a meeting attended by the Board of Education, interested members of the faculty; and a liberal number of parents of prospective students in agriculture—a community meeting of 30 or more persons, if you please. This meeting will be attended by a member of the supervisory staff or a teacher-trainer who will present, preferably, a film-strip or movie of a good program of vocational agriculture. This will be supplemented by a talk featuring the important phases of a broad program. Questions and discussions may follow. Then the requirements will be stated for all needed physical facilities. Steps may then be taken to reopen or open the department, and it opens with a reasonable degree of accurate information on the part of those interested. "Chiseling," or violated standards, will be avoided and quality of performance will be maintained. As departments now operating are found with violations, the same type of community meeting will be arranged and the basis for remedying the faults will be determined—or the department discontinued.

Vocational agriculture may have suffered during the war, but it has its opportunity now to recuperate the losses if state supervisors will face their tasks purposefully and intelligently. It is their hour for action, vigorous and forward. Our future farmers deserve it. May we expect it? Will they receive it?

S. S. SUTHERLAND

Professional

HENRY S. BRUNNER

What Does "Reconversion" Mean As Applied to Problems of Agricultural Education

H. M. BYRAM, Professor of Education, Michigan State College, East Lansing

H. M. Byram

THE end of the war has brought about many changes and shifts of emphasis, as well as new needs not existent before. Removal of gasoline rationing, the prospective availability of new cars, and the removal of tire rationing will change teacher activities considerably. Changes in foreign demand for agricultural commodities and changes in the general economy of the country carry implications for shifts in teaching emphasis. Important adjustments are in the offing in the activities that constitute what we call the local program of agricultural education.

Vocational education in agriculture in the United States has been a powerful force in the battle for food production. It is important that teachers now clearly see the new role which agricultural education should play in the period of peace which we are now starting to build. This raises the question, "*How can teachers of agriculture convert their programs to a peacetime basis?*" Following are some ways in which we predict teachers will adjust their activities to the changed situation.

Training Programs for Veterans

Many states have set up plans for providing training for returned veterans in farming. "On-the-job training" under the Servicemen's Readjustment Act is a current development which will call for application of time-tried techniques of individual teaching on the farm as well as both job-instructor training and job-methods training. Supplementary class instruction for veterans in the regular part-time or evening classes or in special classes soon will loom large in the programs of many teachers of agriculture.

Of course, until the end of selective service and until the question of peacetime military training is settled, long-time plans will still be difficult to develop. However, teachers are finding it increasingly easier to talk with their all-day boys about long-time programs of supervised farming leading to establishment. Establishment in farming is now much less of a big "if" with an indefinite period of military service looming up in the foreground.

During the war many part-time classes for young farmers were discontinued, and the young farmers enrolled in Food Production War Training courses. Teachers are thinking of re-establishing these classes for young farmers so as to be able to continue to help the boys just out of high school and other young men to progress toward establishment. It will be easier now, too, to give individual guidance and assistance to these young men on such problems as finding farming opportunities, developing partnership agreements, financing the business, and securing equipment and livestock.

Functionalizing Instruction

There is a backlog of field trips that should have been taken but were not taken because school busses couldn't be used or because cars were not available for use. Some teachers are resuming such trips to supplement farm visits to individuals, to study farming programs and to interest the class as a whole in the development of farming programs. We can now go out to the farm to do or demonstrate the job that we have been trying to teach in the classroom during the last few years. There should be a tremendous "back-to-the-farm" movement in our instruction, both with classes and with individual help to students on their home farms.

In reconverting vocational agriculture to a peacetime basis, increased emphasis should be placed on visits to the farms of members of adult, part-time, and all-day classes to help analyze needs, to give individual instruction, and to stimulate development of better farming programs.

Emphasis on Farm Living

With less emphasis on quantity production, farmers will and should turn attention to improvement of the farm home. We should see an increase in home-improvement projects designed to beautify the home surroundings or to add conveniences and comforts to the home.

There is no question but that we shall also see an accelerated movement of people from the urban, industrial areas to rural acreages. These people will merit and need assistance from teachers of agriculture so that they can succeed in producing much of the family food supply from the land. Adult classes for part-time farmers are already being planned or organized, as well as classes for boys from part-time farms.

Changes in Emphasis in Course Content

We shall need to teach farmers how to cut production costs now rather than, or in addition to, teaching practices to increase production. Teachers can greatly aid farmers thru the use of measures of efficiency such as 56-day litter weights and butterfat records.

There is evidence that some farmers slighted soil-conserving practices during the war in order to make maximum use of the land in producing vitally needed food and fiber. A renewed emphasis on conservation of soil and rebuilding of soil fertility is called for.

Teachers who have offered adult classes in farm-machinery repair are beginning to shift the emphasis from repair to maintenance and operation. As materials become available, no doubt more emphasis will be given to construction of equipment needed on the farm.

As food and fiber become more plentiful and come closer to meeting demands, more emphasis will have to be placed upon teaching marketing. We must remember one principle that teachers learned before the war: The most effective way to teach marketing is to get students to engage in marketing activities of their own. State and regional F.F.A. marketing "days" or "schools" should be held. It would be a major blunder in reconversion if teachers and state and national leaders in agricultural education returned to the outmoded livestock and other shows and judging contests.

Many chapters will eventually be able to drop various wartime "drives" and special activities such as assistance on farm-labor problems. What will take the place of these activities? Attention should be turned to those community-service activities designed to make the rural community a better place in which to live. Generally speaking, chapters have greatly improved their financial status during the war. The wise use of funds for constructive purposes is an important consideration.

Improving the Equipment in the Agricultural Laboratory

Many teachers have had to postpone getting needed equipment—centrifuges, projectors, photographic equipment and tools—because of its unavailability or scarcity. When equipment becomes available, let us not forget that it is still needed. It appears that school shops will get some surplus war materials. Perhaps we may be able to get some materials for the agricultural rooms if we ask for it.

Reports from several states indicate that teachers of vocational agriculture have been called upon to spend time doing such chores as bus driving and supervision of study halls. Many teachers have been teaching academic courses in addition to courses in agriculture. These prorated departments were justified in the minds of superintendents or principals as a temporary wartime measure taken because of the general teacher shortage. If these administrators are sincere, then, as academic teachers and labor become more plentiful, teachers of vocational agriculture who have a full-time job to do—and who hasn't?—will be wise to seek release from their nonvocational assignments. Reconversion implies full utilization of manpower for the task ahead.

Doctor Anderson Writes From Poland

On leave from Pennsylvania State College, State College, Pa.

C. S. Anderson

IT IS two months since I flew to Europe. These two months have been filled with interesting, exciting experiences beyond description. I must not try to describe them, but will wait until I am home. I am seeing Europe in that critical period of transition from war to peace. It is most revealing.

We left LaGuardia Field about 6 p.m. As we drew away from New York, the skyscrapers and the Statue of Liberty looked like chess pawns beneath us. Only three of our party had ever flown before and none of us had taken a trip such as this one promised to be. We were too excited to eat our dinner. The New England coast and New England cities slipped past, and at midnight we landed for a snack and to refuel in Newfoundland. Then came the Azores and Casablanca (Morocco) where we made a stop of one and one-half days. Our ship was one of the Air Transport Command, a Deluxe C-54, Skymaster.

The desert, a stop at Tripoli, and then Cairo came next. We flew low over the Pyramids. I photographed them from the air, and then again the next day as we walked around them. We remained a day and a night in Cairo. We stopped for fuel at Baghdad. As we flew over the Holy Land, the pilot allowed me to sit at the controls of the plane. Traveling as we did as a private party, we had the run of the plane and we became very well-acquainted with our crew. Our flight officer had been a teacher of vocational agriculture in Mississippi and had received some of his Air Corps training at the University of Pittsburgh.

At Teheran the U. S. Army Air Corps turned us over to the Soviet Air Corps. Capt. "Jim" Olewine met me at Teheran and entertained me royally. I stayed overnight at his Officer's Club. I believe Jim landed in one of the world's worst dives for his army days.

The Caspian Sea is more beautiful than Hawaii. Having heard me rave about Hawaii, you know it must be really beautiful. We flew low, so low we could see the villages and fishermen. Baku, an oil center along the Caspian Sea, was our first stop in Russia. Then came a landing and a look at ruined Stalingrad. But the eastern Ukraine eclipses all the farming country I have ever seen. We remained a week in Moscow and were entertained royally. We were taken into the Kremlin, attended two Russian Ballets, dined on caviar and vodka, and were driven in motor cars all over that part of the U.S.S.R. Western news was a bit scarce, altho it was while we were waiting at the airport in Moscow for our plane to Warsaw that we learned that Congress had ratified the United Nations Charter and that Great Britain had voted in the Labor Party.

When we reached the ruins of Warsaw, we had flown 10,068 miles in 66 flying hours. I hope to return more leisurely by steamship. I hope it will be soon. Our delegation has accomplished its purpose, closing an UNRRA agreement with the Polish Government of National Unity. UNRRA will insist that I remain here until some one is called forward from either London or Washington to take my place as Requirements and Supply Specialist. I should be in Washington before Christmas, and I will stay there only long enough for the formalities of resigning my job.

I have a 1942 Hudson car, a driver, and an interpreter, and I am getting to see every corner of this war-torn country of Poland. I had no idea war ruins could be so complete. Tomorrow I leave for what was formerly East Prussia. I will be at Gdynia, the Baltic seaport of the old Polish Corridor. I have already made two trips there to observe the arrival of UNRRA goods. A shipload of 750 Holstein heifers is arriving this week. Last week I saw 800 farm tractors unloaded.

Conditions in Poland Pathetic

The Polish people are starving. She has already lost one-third of her population. Only about 20 percent are wearing adequate shoes. The weather today is like late October or early November at home, and there are lots of bare feet on the streets of Warsaw. About 400 thousand people have returned to Warsaw. The prewar population was 1½ millions. Next week I have scheduled a four-day tour of the universities. I will be in Lublin and probably Krakow. Before the war Poland had 350 intermediate schools in which agriculture was taught. There have been no schools, except underground, for the past five and one-half years. Every school building in Warsaw is a pile of rubble.

There are still no direct lines of communication from Poland to America. We understand that regular mail and cables go to Moscow for censoring and forwarding. For air-mailing letters we depend on the diplomatic pouch, and the more-or-less irregular arrival of an American plane from Paris. One usually arrives once each week. I write home each week and have sent five cables, but to date have received only one letter, written July 31. I also have had one cable. It left State College August 25 and reached me on September 3. So you see I am in sort of a news blackout. I passed up one chance to fly to Paris. Perhaps I will go later.

Inflation runs riot over here. The value of an American dollar on the street changes every day. We receive 1000 Polish dollars (zlotycs) daily to pay our expenses exclusive of our lodging, which is taken care of by the government. Yesterday I paid 75 zlotyes to have a shirt laundered. A cup of good coffee costs 60 zlotyes. Since we arrived the value of the zlotye has fluctuated from 150 to 350 to the U. S. dollar. The money is all paper. When I go on a trip most of my baggage space is taken up with my money.

I'll have stories of ruins to tell for the rest of my life. When it rains we hop from one pile of debris to another to keep out of the mud and water. When it is dry and the winds are blowing we breathe nothing but plaster and dust from crumbling buildings. It is raining today.

Mississipi Teachers Teach Farmers

R. H. FISACKERLY, District Supervisor, Jackson, Mississippi

THE teachers of vocational agriculture in the Mississippi Delta, realizing the importance of adult education, have attacked this problem with enthusiasm. These teachers for years have featured evening classwork. In July, 1944, the teachers met for a three-day district conference at which they made plans for the year. One of the major problems selected for the year was the broadening of the adult program.

In the year just closed, 1944–45, the 23 white teachers of vocational agriculture in the Delta District had an enrollment with regular attendance of 2,186 farmers in their evening-class programs. This was an average of 95 farmers per teacher. The 35 Negro teachers enrolled 2,597 adult farmers, or an average of 74.2 farmers per teacher. There were other farmers enrolled for a few meetings, but they were not considered members of evening classes unless they attended fairly regularly. This record was made with five of the white schools and five of the Negro schools without teachers for one or more months during the year. Three white schools and two Negro schools did not complete their evening classwork, and therefore, their enrollments are not included in the above figures.

Instructional Program Set Up

The question, "What were the farmers taught in the evening-class program?" naturally arises. The teachers realized that the instructional program would vary between schools depending upon the individual needs and wishes of the farmers. However, in their district conference an adult educational program was set up in order to have a basis on which to work. The program adopted and carried out by the white teachers was:

1. Livestock
   a. Outlook—beef cattle, dairy cattle, hogs
   b. Pasture development
   c. Feed production and conservation
   d. Sanitation and disease control
2. Soils
   a. Testing
   b. Liming
   c. Drainage
3. Cotton Production
   a. Varieties
   b. Fertilizers
   c. Insect control
   d. Marketing
4. Farm Machinery
   a. Selecting
   b. Use
   c. Care

The Negro teachers set up and carried out the following program:

1. Livestock (hogs, dairy cows, poultry)
   a. Pasture development
   b. Feed production and conservation
   c. Sanitation and disease control
   d. Breeding
2. Food Production and Conservation
   a. Planning the garden
   b. Preparing the seedbed
   c. Varieties to plant
   d. Harvesting and conserving

(Continued on page 167)

Supervision

LANO BARRON

Farming Programs—a Point of Emphasis in Supervision

COLA D. WATSON, Ass't. Supervisor, University of Vermont, Burlington, Vermont

"To think a man's problems out for him and then tell him what to do is a small educational service than to stimulate his own thinking so that he will develop ability to use his own head on the job."

THE farming programs of students of vocational agriculture are of prime importance, both from the standpoint of developing individual interest and that of presenting a basis for building the course of study for the department.

In recent years the programs in Vermont have ranged from poor to fair with altogether too few really good ones. Too many boys conducted a project type of program rather than developing one which was well balanced and comprehensive in scope. For this reason it was decided to place major emphasis in the program of state supervision on improving the farming programs.

Major Objectives Clear

The major objectives of the program were:

(1) To encourage the development of more productive projects in dairying, which is the major enterprise in the state.

(2) To encourage the development of more comprehensive and better-balanced programs.

(3) To encourage the incorporation of more improvement projects and supplementary farm practices in the program.

(4) To develop aids and suggestions for teachers to facilitate the development of better programs.

(5) To enlist the assistance and cooperation of administrators, teachers, and students in furthering the program.

(6) To give special assistance to new or returned teachers.

(7) To develop ways and means of filing and summarizing farming-program records and encourage their use.

During July and August a scheduled supervisory visit was made to each department of vocational agriculture in the state. On these visits questions of program-planning, supervision, record-keeping, and summarization were discussed with the instructor. A supervisory visit was made to at least four boys' farming programs in each department after which they were evaluated and suggestions made for improvement. A summarization of each department visitation was made indicating strong points, weak points, and suggestions for improvements. Copies were sent to the teacher and to his superintendent of schools.

Provide Plan of Action

The September issue of the V.A.T.A. Cooperator was prepared by the state office of agricultural education and was devoted entirely to improving the farming programs. The following plan of action for the use of teachers in developing farming programs which will help students "Grow Into Farming" was developed:

What to Do	How to Do It	When		Was It Done Results
		Ag. 9 & 10	Ag. 11 & 12	
1. Help students to determine opportunities	1.*Analyze farm surveys on all home farms (Class Activity)	Sept.		
	2. Analyze S.F.P. records of previous year. (Class Activity)	Sept.	Sept.	
	3. Conduct supervised farming tour, discuss relationship to F.F.A. (Class Activity)	Sept.	Sept.	
	4. Talk over tentative possibilities with each student and his parents (Teacher activity)	Oct.	As needed	
	5. Develop complete list of possibilities including supplementary farm practices and improvement projects. (Individual)	Oct.	Oct.	
2. Help students to plan program	1.*Plan projects, kind and scope of program tentatively for period extending 2 years beyond school, show relationship to establishment. (Class and individual activity)	Oct.	Oct.	
	2.*Plan kind and scope of program to be conducted in current year. (Individual)	Oct.	Oct.	
	3.*Execute written agreements with parent to cover operation of years program. (Teacher and Individual)	Oct.	Oct.	
	4.*Develop standards of size and efficiency factors for each enterprise. (Class)	Oct.	Oct.	
	5. Revise course of study to include work needed on farming program by majority of class. (Class)	Oct.	Oct.	
	6.*List jobs and problems which students will have to study individually and prepare individual study calendar. (Class and Individual)	Oct.	Oct.	
	7.*Plan the financing of the program: a. Budget estimate b. Amounts needed c. Source (Class and Individual)	Fall	As needed	
	8.*Plan operation of program: a. What is to be done. b. How it is to be done. c. When it is to be done. (Class and individual)	Fall	Fall	
3. Help students to carry out plans.	1. Prepare master list of programs with *critical periods and events* indicated as a *guide to supervision.* (Teacher)	Fall	Fall	
	2. Hold individual conferences with students on progress—schedule visits in advance. (Teacher)	Monthly or as needed		
	3.*Visit each student's program at critical times.			

What to Do	How to Do It	When		Was It Done Results
		Ag. 9 & 10	Ag. 11 & 12	
	a. Minimum of 10 visits b. Enter each visit in record book c. Invite principal, superintendent and members of school board to accompany. (Teacher)	Year around		
	4. Encourage students to bring problems before class. a. Keep egg-production graphs b. Utilize problems as basis of lessons. (Teacher)	Year around		
	5. Hold conferences with boy and parents on achievements, problems and records, etc. (Teacher)	Most visits		
	6. Coordinate farm mechanics and other instruction and to assist students with difficult problems. (Teacher) a. Construct brooder house b. Treat seed potatoes c. Dress broilers	Year around		
4. Help students to keep and use records.	1. Adopt a record book. (Teacher)			
	2. Class instruction in record keeping. (Teacher)	Fall	Fall	
	3. Initiate definite system of getting data recorded. (Teacher) a. Each student keep a diary on S.F.P. b. Records to be kept on normal enterprise cycle basis. c. Record books kept at school.	Fall	Fall	
	4. Evaluate programs by records at appropriate times in addition to the closing date: Examples: Cost of raising pullets to 12 weeks of age. Determining when to sell cockerels Review with parent to show cost to date. (Student & Teacher)	As needed	As needed	
	5. Encourage students to participate in local, district and state record book contests. (Teacher)	As held	As held	
	6. Summarize individual enterprise records as closed and total program as of June 1. Evaluate results, cost per unit, profit, etc. (Student)	June	June	
	7. Summarize records of all students by enterprises and in total. Give publicity. Evaluate in class. (Teacher)	June	June	
	8. File Financial Summaries of each program and Cost of Production Summary. (P. 21 and 23 in Vt. Acc't. Book) and encourage students to keep their books. (Teacher)	June	June	

Another device being used to stimulate the development of better farming programs is to have the officers of the Vermont Association of F.F.A. make an official visit to each chapter in the state prior to the Christmas recess. They will, among other things, check the farming programs of each member. This procedure has not been tried previously, but, it is hoped, will obtain results.

A portion of the time of the agricultural section of the State Teachers' Convention was devoted to a discussion of the topic and an all-day special conference of new and returned teachers was conducted on farming programs at which time problems were discussed, aids suggested, a farming program visited and evaluated, and teaching units selected. This work will be followed up on regular supervisory visits to the departments thruout the year. It is too early to evaluate the effectiveness of the supervisory efforts. However, it is already evident that most teachers are doing a much more thoro job of initiating satisfactory programs.

The summer supervisory visits resulted in a stimulation of teachers to initiate and promote better farming programs.

The main benefits to the teacher resulting from the program were assistance in:

1. Determining phases of the program to emphasize during home visitations.
2. Determining records which should be kept on farming programs.
3. Filing and summarizing program records.
4. Setting up standards of size and scope for farming programs.
5. Selecting teaching units for developing comprehensive farming programs.
6. Developing a systematized program of home visitations, with special emphasis on summer work.
7. Arranging the daily schedule so as to use some school time for developing and improving farming programs. A forenoon period scheduled as a farming program conference period, where the instructor is free in the agricultural classroom for consultation with individuals, and the last period in the afternoon scheduled as a home visitation period where the instructor may take a student with him and make a home visit.

Teachers Teach Farmers

(Continued from page 165)

3. Cotton Production
   a. Varieties.
   b. Fertilizing.
   c. Insect control.
   d. Marketing.
4. Home Sanitation
   a. Screening.
5. Farm Machinery
   a. Repair.
   b. Operation.
   c. Adjustment
   d. Care
   e. Selecting

In teaching the above program to adults, the 20 white teachers completing instructional programs held 608 meetings with adults, or 30.4 meetings per teacher. The 35 Negro teachers held 1,507 meetings with an average of 43 meetings per teacher.

Farmers Are Enthusiastic

In making supervisory visits to these schools, I have attended a great number of these classes, have visited many farmers with the teachers of vocational agriculture, and have found these farmers enthusiastic about the program of agricultural education carried on by the teachers.

The Mississippi Delta Supervisory District has been changed to the West Central Mississippi District for 1945–46. In this new area there are 39 white and 42 Negro teachers of vocational agriculture. These teachers are trying to improve their evening-class program in order to better meet the needs of the farmers. They realize if they have an educational program that is sound and practical, the farmers will attend the meetings. The 81 teachers in this area have as a goal to reach 8,000 farmers in 1945–46 thru their evening classes.

Methods of Teaching

G. P. DEYOE

Keeping Apace With Progress

RUSSELL B. DICKERSON, Teacher-Trainer,
Pennsylvania State College, State College, Pennsylvania

WE ARE progressing steadily toward a wider use of mechanical power, toward increased applications of science, toward improved methods of marketing, and toward cooperation among rural people. Progress has put an end to old ways and old methods of farming. Improving the quality of livestock and crops; practicing soil and water management to conserve soil and to maintain fertility; using capital, labor, machinery, and land efficiently; and constantly striving toward quality improvement in the products of the farm are among those phases of agriculture marked by constant progress.

Russell B. Dickerson

The need for vocational education in agriculture.—It came to our attention recently that since Pearl Harbor, for example, many of the modes and methods of farming have progressed to the point of a complete change from those in common or accepted use prior to the days of O.S.Y. and Selective Service.

Many new practices have come, and will continue to come, into accepted use. The young men returning from the services and from war-industry employment will come face to face with the necessity of becoming informed before they can intelligently become adjusted in farming. This fact is emphasized as an encouragement to teachers of vocational agriculture to project the advantages of young-farmer courses into the adjustment processes of the returning young men, who want to farm, in order to enhance their appreciation of agriculture as a highly specialized business necessitating specialized instruction.

Systematic instruction in vocational education in agriculture is the best-known means of assisting these returning young men in achieving success in their chosen vocation of farming. Whether it shall be given in the classroom, shop, laboratory, or out on the farm on an individual basis matters little. The real moment is that these young men are locating on farms, and it should be the business of the local teacher of vocational agriculture to contact these fellows very soon after their arrival on the farm, if not before, to discover how, when, where, and in what degree he may be of assistance.

Areas of progress—Let us consider some of the more important changes which have come about during the war years. In the subject matter fields of Agronomy, Agricultural Engineering, Animal Husbandry, Dairy Husbandry, Horticulture, and Poultry Husbandry, especially, many outstanding changes have taken place.

Progress in Agronomy

Agronomy—Probably heading the list in the agronomic field is ladino clover with its accompanying ability to completely revolutionize the pasture—and range-management programs for livestock, poultry, and turkeys. As a permanent source of hay and pasture, particularly on soils that are too wet and heavy for alfalfa, mixing ladino clover and orchard grass has become a standard practice on livestock farms. In the apple orchard, ladino clover has become a major factor in both conserving and increasing the fertility of soils.

Its acceptance by farmers generally has come about since Pearl Harbor while the farm boys were away. It serves, therefore, as a specific example of a need for systematic instruction in vocational agriculture for the returning young men.

Rapid strides have been made in the production of disease-resistant strains of hybrid corn adapted to the varying soil and climatic conditions of the state.

The fact that lodging is reduced to a minimum by using adapted strains of disease-resistant hybrids is a factor of prime importance in labor- and time-saving alone. Prospective young farmers must be made aware of these corn hybrids.

Then we have Thorne wheat which has completely outclassed the Leaps and Forward varieties with respect to yield and standability; Wong barley which is superior to other varieties for its tall, stiff straw, upright heads, very short beards, smut resistance and high yields; and Victland oats with its superior yields of grain and straw.

On February 8, 1944, the Pennsylvania Crop Improvement Association came into being. Thru its organized effort to do just what its name implies, farmers are receiving continuous benefit with respect to: (1) certification of seed, (2) acre-yield tests, (3) locations of demonstrations and experimental tests, (4) corn and grain shows, (5) reliable sources of adapted farm seeds, and (6) crop improvement with respect to seed, fertilization, methods of harvesting, storing, and nutritive content.

Soil and water management by contour stripping and diversion terraces, as soil- and water-conserving practices, and approved land-use are "standard equipment" on most farms thruout Pennsylvania. These practices were not so widely accepted prior to 1940–41.

The tendency to feed the crops as well as to build up the fertility of the soil has brought about the use of larger quantities of high-analysis fertilizers and greater amounts of lime. A 7–7–7,10–10–10 or a 4–24–12 fertilizer was practically unheard of five years ago.

Progress in Farm Engineering

Agricultural Engineering—New developments in the field of agricultural engineering during the last five or six years have given considerable impetus to: (1) Labor- and timesaving devices, including (a) portable elevators for handling hay and grain, (b) conveyors for handling bags, boxes, and barrels, (c) hoists for lifting the front end of wagons and trucks to cause the load to roll back, rather than shoveling it off, (d) hydraulic lifts on plows, (e) the buck rake, pickup baler, ensiling grass, and mow-drying of hay, (f) the small and large combines for grain harvesting and (g) the portable manure loaders for steer pens and large barns; (2) refrigerated storages above and below freezing which (a) permit harvesting over a longer period, thus improving labor distribution, (b) permit harvesting small fruits and vegetables at their best stage of maturity, (c) make possible a reduction in the loss of perishable products or the loss in quality of products, which occur between the field and table or market, (d) permit holding unsold produce in a salable condition from one market day to the next, or for a more favorable market, (e) make possible holding some products for out of-season consumption, (f) permit the slaughter of animals for home consumption or for sale during all seasons; (3) farm ponds for the production of food, good sport, fire prevention, stock watering, and irrigation which are available to farmers simply by harnessing up a 10- to 20-acre watershed near the farmstead; (4) insulation of farm buildings to control dampness and regulate temperatures. All these developments, pointed toward providing more sanitary conditions, increasing livestock production, and developing a more comfortable place in which to work, are among the more important changes in agricultural engineering.

Animal and Dairy Husbandry

Animal Husbandry—The use of more soybean meal has become standard in swine-feeding practices. Controlling sheep parasites with phenothiazine; using sulfa drugs in the treatment of calf pneumonia and calf scours; and providing larger quantities of more nutritious forage for cattle, rather than so much intensive grain-feeding, have all developed as standard practices in livestock feeding and management within the last five or six years.

Bacteriology—More attention to herd managment in the prevention and control of mastitis has been quite generally recognized as an essential measure in handling dairy herds.

Dairy Husbandry—Herd classification by the several breed associations came into standard and very practical usage during the war years. By having his herd classified a farmer learns which animals are of outstanding type. Thence he can set out to improve his herd by using only outstanding individuals with respect to type and production. It has been conclusively shown that a high correlation exists between high production and outstanding type. Farmers, therefore, do not need to depend upon fairs alone for an indication of which animals excel in type. Teachers of agriculture should be thoroly familiar with the principles and practices of herd classification. It would be profitable for them to attend some of the Type schools that are held by the several breed associations.

Artificial insemination of dairy cows has developed during the war years to the point where at present it is estimated that more than 70,000 dairy cows in this state alone are being bred artificially. Its merits must be studied and understood by both the teacher of agriculture and the prospective dairyman. Sources of firsthand information naturally include the five central units of the artificial breeding cooperatives located in the state as follows: Allentown, Clarion, Lewisburg, Landisville, and Tunkhannock.

Managed milking is another "war-baby" of great prominence in the dairy world. Fast milking, timed milking, faster milking, improved milking, managed milking, whichever one cares to call it, is here to stay. As a wartime food-production contribution its results have practical application including the following: (1) Secures an equal amount of milk compared with hand milking; (2) secures more milk than when cows are milked slowly by machine; (3) causes cows to require less stripping—practically eliminating stripping in most herds; (4) reduces mastitis troubles; and (5) saves labor and time.

An increased tendency toward a more strict inspection of dairy farms as a safeguard for a higher quality of milk and milk products has been manifest on most dairy farms during recent years. This has been accompanied by more careful attention to health regulations for cows and attendants, sanitary conditions, good stable ventilation, and fresh clean feed and water for the dairy cows. Concurrently all of these factors have stimulated interest in standard recommendations for the construction of ideal-type milkhouses for herds of different size.

Calfhood vaccination as a precautionary measure in the program of eradication of Brucellosis (Bang's disease) is standard practice among dairymen everywhere. Prospective farmers should be made aware of its possibilities and advantages in establishing and maintaining Brucellosis-free herds. Calfhood vaccination offers recognized advantages and it is believed that its practice should be encouraged, especially in areas of heavy infection.

Progress in Horticulture

Horticulture—Ladino clover has become "tops" among all cover crops in the apple orchard. Shorter duration of peach cultivation is standard now and should be of particular interest to the prospective peach grower. Many new varieties of peaches have come in during the last few years, some of which have completely crowded out the more or less standard varieties of a few years ago.

In feeding the orchard, complete fertilizers rather than nitrogen alone have come into rather common usage. It is only recently that orchardists came to the agreement that the orchard needs balance in N.P.K. as well as lime. These facts should be made known to prospective peach growers.

A greater volume of material going out of the nozzle at greater speed characterizes the latest accepted practice in the thoro spraying of the orchard. The speed-sprayer will come into general usage as soon as materials are available, resulting in more thoro covering with a considerable saving in labor, time, and materials.

Vegetable variety and strain testing, spacing, fertilizer placement, starter solutions, irrigation, hybrid corn and special emphasis on kinds and varieties of fruits and vegetables for freezing occupy the front lines in vegetable production work. Bulletins, circulars, and articles prepared by specialists should be studied carefully by teachers of agriculture and made available to prospective producers.

Progress in Poultry Husbandry

Poultry Husbandry—An increased number of birds per group has changed the management program on many poultry farms within the last few years. More birds per group with fewer drinkers, feed hoppers, etc. have helped cut down the labor and time necessary to care for the same number of birds in smaller groups. Dropping pits, built-up litter, insulated houses with controlled ventilation, cross-bred broilers, turkeys in sheds rather than on range, and permanent pastures with permanently located brooder houses or range shelters, represent some of the major practices which have been accepted by poultrymen in recent years.

In "Keeping Apace With Progress" every teacher of vocational agriculture has a major responsibility to the young and adult farmers in his community. He must take the facts of "progress" in his community and make the best use of them with his in-school farm boys and with his out-of-school young and adult farmers. They expect the teacher of agriculture to be informed and to interpret "change" to them in the light of a more abundant farm life.

It is thru a knowledge of how changes will affect the economic and social welfare of farmers that the teacher's ultimate success or failure may hinge. Let us all, therefore, be "Keeping Apace With Progress" in its broadcast connotation in the rural community.

J. F. Williams, Jr.

SUPERVISOR Williams of Florida passed away on December 26 following a serious operation. Mr. Williams graduated from the University of Florida in 1922 and received his master's degree in 1929. After teaching vocational agriculture five years he was appointed state supervisor in 1929. To Mrs. Grace Williams, Betty, and Lucy, we extend sympathy. H. E. Wood has been named his successor.

J. F. Williams, Jr.

for Teachers

E. Y. NOBLIN, Associate Professor,
Virginia Polytechnic Institute,
Blacksburg, Virginia

THE role teachers of agriculture have played in laying the foundation for Victory is a familiar one. Many of them served their country not only as teachers but in the Armed Forces. Many changes took place in the field of agriculture while they were away from their teaching duties. It is necessary for them to make adjustments and to receive some retraining before returning to teaching.

In Virginia, 95 teachers of vocational agriculture were called into some branch of the armed service and 52 answered the call of their country as soon as they completed training for teaching. The vocational education department feels that it has an opportunity and a definite responsibility for retraining these men. To meet the needs of this group of returning teachers, a two weeks' "refresher course" designed to fit them for a specific teaching job is being offered at the state agricultural college. All returning teachers are eligible and are urged to take the course which is without cost except for board and room. No credit is given for the course.

The program has been divided into eight parts:

1. New developments in the field of education
2. Organization of the department—equipment, supplies, and facilities
3. Setting up the program of work and teaching calendar
4. Instruction—including observation of teaching, lesson planning, and teaching aids
5. Supervised practice
6. F.F.A. and its expanding program
7. Shop
8. New developments in technical agriculture

The various phases of this program are integrated with one purpose in mind; that of qualifying the teacher for the specific school in which he is to teach. The new developments in the field of education are given as a starting point and as a basis for future planning and study.

Likewise, before beginning a study of the new developments in technical agriculture, a member of the department of agricultural economics gives the trends in crop and livestock production, land values, and shifts in production for the particular community concerned, and the pertinent factors affecting agriculture in the state as a whole. This class is followed by a two-hour conference with a specialist in each of the departments in the agricultural college; namely, agronomy, horticulture, vegetable production, animal husbandry, poultry, and dairy. During this conference, the main problems and developments are discussed and a list of the newest available references and teaching material is given to each member of the class.

The effectiveness of this type of short course depends upon the seriousness and the strength of purpose in which these returning teachers enter this training. Thus far we have found it all that could be desired; and we commend it to other teacher-trainers.

Farming Programs

C. L. ANGERER

Farm Management As a Supervised Practice

R. H. FISACKERLY, District Supervisor, Jackson, Mississippi

FOR the past 10 years, Mr. F. S. Fitzgerald, teacher of vocational agriculture at Inverness School in Sunflower County, Mississippi, has been including farm management in the boys' farming programs. In Inverness community it was found that a farming program of enterprises only did not fully meet the needs of all boys. A good number of the boys are interested in becoming farm managers. Therefore, it was felt that they needed experience in managing part of the farm. During the 10 years there have been 166 boys enrolled for two years or more in vocational agriculture. Of these, 31 have included farm management as a supervised practice in their farming programs.

R. H. Fisackerly

A survey was made to determine the qualifications, or abilities, required of farm managers on farms of different sizes in the Mississippi Delta. Thirty representative farms were selected. In this group of 30 farms there were 10 small farms, 10 intermediate size farms, and 10 large farms of the plantation class. On 17 of the 30 farms, one or more students have engaged in farm management activities as a supervised practice in their farming programs.

It was found from a study of the surveys that the principal qualifications, or abilities, required of farm managers working in the area are:

1. The ability to finance the farm business.
2. The ability to handle and secure farm labor.
3. The ability to plan and arrange cropping systems.
4. The ability to plan livestock programs.
5. Adequate working knowledge of production practices, especially as related to cotton.
6. The ability to care for, repair, and use farm machinery and equipment.
7. The ability to handle housing problems, including placement of tenants, rough construction, and repairs.
8. The ability to handle marketing problems.
9. The ability and a desire to maintain friendly relationships with labor and other associates.
10. The ability and willingness to work and cooperate with agricultural agencies and organizations.
11. The ability to analyze agricultural programs as they affect the unit on which he works.
12. The ability to treat common animal diseases.
13. The ability to handle at least the minor drainage problems.
14. The ability to supervise the control of insect pests, principally the boll weevil.
15. The ability to take and follow instructions as well as give instruction.
16. Honesty and loyalty to duty.

After determining the qualifications of farm managers, a study of the all-day boys is made, each year, to determine if there are boys who have the necessary training, experience, and interest for making satisfactory decisions in farm management. It has been found that there are boys with these qualifications interested in including farm management in their farming programs. The instructional program for these boys in the classroom is worked up just as for other boys. The instruction is based on the farming programs.

A three-year study of 10 student managers has been made to determine the efficiency of the farm units under student management as compared with those under the regular farm manager, on the same farm. These were under as nearly identical conditions as could be found. The only variation that might have been present was the possible difference between the quality of land and tenants. Each was given the same authority over the units under his supervision. However, it is likely that the boy manager may have sought more advice from the teacher of vocational agriculture, owner, and his father.

The average all-day student manager managed 141 acres, 6 head of cattle, 10 hogs, and 4.3 families of tenants while the average farm manager managed 1,067 acres, 63 head of cattle, 38 hogs, and 31.6 families of tenants. The following table gives the results secured by each group:

A Comparison of the Average Results Obtained by 10 All-Day Students As Farm Manager With the Results Obtained by 10 Adult Farm Managers on the Same Farms and Under Similar Conditions

Factors Considered	All-Day Student Managers	Adult Farm Managers
A. Crop yield per acre:		
1. Cotton, pounds lint	408	387
2. Corn, bushels	28	31
3. Oats, bushels	62	63
4. Hay (all kinds)	1.7	1.6
B. Net return per acre (on crops)		
1. Cotton (lint and seed)	$17.68	$16.61
2. Corn	5.90	5.65
3. Oats	13.00	13.00
4. Hay (all kinds)	9.80	9.00
C. Net return on livestock (per head)		
1. Cattle	$26.75	$18.17
2. Hogs	9.00	7.50

According to statements by farm owners the integrity and loyalty to duty of the all-day student seem to be equal, or superior, to these traits in the adult manager. The most unpredictable factor was the stability of the student's interest. The owners attributed this to the fact that the boys were doing farm management work generally because they wanted the training, while to the adult managers it was the sole means of providing livelihood.

Farm management as a supervised practice in a farming program is a good approach to the teaching of vocational agriculture in the Mississippi Delta. Tho there are many difficulties to be overcome in carrying out a satisfactory program for the all-day students, there is evidence of definite possibilities in this type of training.

Co-op Ventures

"COOPERATION" isn't just idle talk in the Los Gatos, California, chapter, for the boys are actually operating six different kinds of cooperative ventures and making plans to expand still further.

One venture is poultry raising, in which several hundred pullets and fryers are partly raised, and sold to back-yard poultrymen. Also a feed cooperative buys materials for mixing hog rations. Other feed is bought thru the Poultry Producers of which the chapter is a member.

The chapter grows cooperatively from 12,000 to 20,000 tomato plants annually for a cannery. (Last year this enterprise was operated at a financial loss due to unfavorable weather conditions.) The chapter leases a seven and one-half acre ranch, mostly in apricots and prunes with a little grain hay. The chapter received 75 percent of the profits and had an income of $495 last year.

A fifth cooperative venture is the harvesting of six acres of almonds on shares. The chapter gets one-third of the crop, and the money received goes into the entertainment fund. Chapter equipment pooled into a sixth cooperative consists of three sunshine brooders, four fattening batteries, 250 fruit boxes, ladders, picking baskets, shaking poles, almond knockers, and an orchard drag.

Plans call for an expansion of equipment to include a tractor, truck, and essential tillage equipment, and for a chapter-loan-fund cooperative whereby the group will guarantee project loans made to members.

The Dixon, California, chapter has several cooperative activities in operation, of educational and financial benefit to the chapter and interesting and enjoyable to the members.

Two members are feeding out a carload of beef steers for the chapter, to be shown at a livestock show. The junior-senior class harvested, hulled and marketed a quarter-ton of walnuts. Sophomores assisted local farmers by picking up almonds. A small walnut orchard was also harvested cooperatively. The chapter has purchased a large electric motor and feed grinder and bought eight tons of project feed. Future plans call for renting 10 acres of land for a cooperative feeder-pig project for town boys.

Cooperative Earning and Learning By Means of Group Projects

HAROLD GULVIN, Teacher, Forestville, New York

PRIOR to my coming to this school 10 years ago, money for chapter activities had been earned by putting on shows and entertainments. Other organizations in the school were using the same methods of raising money and there was a crowded feeling. Entertainments seemed a little out of line for a group of Future Farmers to indulge in. So, when a nearby farm owner called on me for the purpose of persuading the Future Farmers to take over her vineyard, I seized upon the opportunity as a good way for the boys to earn some money and also to learn some farming. The boys seconded my idea with plenty of enthusiasm.

The project was six acres of Concord grapes. The owner said she would remove the grape vines and use the land for other crops if we couldn't help her. Grape prices had been low, and hired help was not very dependable. We agreed to take the vineyard on a two-thirds share basis for ourselves. We drew up a two-year contract with her. For the time that we had the vineyard, we earned enough money to send 15 boys, each year, to the New York World's Fair. Most of the boys' expenses were paid by the chapter. The vineyard, under our care, had become so profitable that the owner took it over herself when our contract expired.

Alfalfa a Profitable Project

The village postmaster then asked us to take over five acres of land which he owned in the village. He had been renting it to others but was dissatisfied with the results. We drew up a contract with him which is still in force as written five years ago. Two acres of the land were in grapes, three acres were idle. There were about 20 cherry trees and a row of currants. We planted factory peas on the land the first year but with poor results. We tested the soil and applied three tons of lime. We then had a farmer plant the field to oats and seed it to alfalfa. Since then we have had a fine crop of alfalfa annually. As we have no hay equipment we sell the hay standing in the field. It has been an easy source of revenue. We get lime every year thru the AAA and put it on the alfalfa or grape land.

We have also tried potatoes as a group project but have not found it as satisfactory as grapes and alfalfa. Much of the work came during the summer season when the boys were busy at home. One year we provided 13 boys with 100 pounds of certified potatoes each. They planted and cared for them at home and were to bring the crop to our storage cellar in the fall. The potato crop was generally pretty much of a failure that year and the results were not satisfactory. The grape enterprise plus the currants and cherries seemed to be the best project for us because of the clean nature of the work and because the work could be spread thruout the entire year.

The income from the land rented from the postmaster has been about $150 each year. During the war these earnings have been used to buy War Bonds. This amount is considerably more than we could earn by putting on two or three entertainments. In addition, our cooperative group projects have provided opportunities for each boy to acquire many new skills. They have learned to prune, train, tie, fertilize, propagate, spray, and cultivate grapes. The significance of this is better appreciated when it is known that boys from grape farms are not taught how to prune grapes at home. It is considered too difficult, and a job for Father only.

Our projects have been small enough so as not to take too much time from other topics studied. An ideal teaching situation exists in that we can study about pruning grapes one day, the next day go out and prune, then restudy, and then prune much better on the following day. We have never had any complaints about our work from the owners even tho it has been done by 20 to 40 different boys with no prior experience.

From Junk to Jallopies

To facilitate operating our contracted land we have located equipment and jallopies in junk yards and converted them to our use. We have two jallopy tractors, a grape hoe, a disk, a drag, a plow, a tractor cultivator, and a potato-grape-currant sprayer for one of the jallopies. Many boys have learned how to operate cars and tractors while at work on our group projects. They have also learned how to use and maintain the equipment.

Our group projects have met with community approval. The people have been so impressed that many have suggested that the school district buy land near the school so that the Future Farmers can have it for their use. Altho a grape project will not be practical for a great many chapters, there are probably several types that could be used by most chapters. Using our experiences here as a guide, I would advise more chapters to try out group projects. It is a good way to earn while learning the art of farming.

Planning a Banquet

H. G. BARBER, Teacher, Floydada, Texas

PLANNING and executing a father-and-son banquet is one of the training devices that I have used in Future Farmer work to develop leadership and to help increase the boy's confidence in his ability to assume responsibility for jobs and to carry them out.

To begin with, the banquet is an annual affair and the boys look forward to it with a great deal of anticipation from the start. Therefore, the job of the adviser is purely one of directing the thinking and planning rather than having to generate and keep up interest.

If it hasn't already been brought up at some previous meeting, a suitable time may be decided upon by the president and the adviser, and a student may be primed to bring up the question of a father-and-son banquet at a regular meeting. Here the idea is discussed so that everyone will become familiar with no definite action is taken except to list the different committees that they feel are needed to put on a good banquet.

Since it is the president's duty to appoint all committees that are not elected and since the chapter usually gives the president the power to appoint the committees rather than elect them from the floor, he is called into conference with his adviser after the meeting and outlines his general plans for the banquet.

The adviser should make the president feel that he will help in every way possible only after the fellows have failed to do their job as a committee. Too, the president should be aware that the success or failure of the banquet depends on his ability to steer the different committees. After the adviser feels that the president's working knowledge is sufficient to proceed further, the chairman of the different committees are called in. Each chairman is asked to outline his plans and list his duties in order that the plans may move forward smoothly and in order that there will be no duplications of the different committees' activities.

We must keep in mind that the adviser's responsibility is one of training the boys to think and plan well rather than to do the job himself. In this way, he will not be doing the boys' jobs even tho sometimes it is easier to do the work than to get the idea over to the boys or to lead them.

The committees usually named by the president are: initiation, menu, arrangements, program, reception, finance, and dishwashing. There is an even distribution of members for each committee. Each committee is, in turn, divided into several subcommittees depending on the work to be done, but the main object is to have every boy on an active committee with a definite responsibility.

These committees should be called in by the president and adviser from time to time to make progress reports that are written and with definite objectives and accomplishments up until the time of the banquet. For example, we will use the invitation committee.

It is the duty of the invitation committee to have a list of all members and the guests that will attend the banquet. They make out a list which they bring before the chapter for its consideration and to ask what additional guests it should invite. After the list is completed, it is their duty to see that every person named on the list gets his invitation. It is well for the adviser to check the written invitations with the list to see that no guest is left off. The toastmaster should have a list of the special guests to see that none are slighted during the introduction of guests.

The president, with the adviser, should keep in touch with each main committee until the banquet is over and all settlements have been made, all borrowed property returned, and the banquet hall cleaned up well.

It is this type of training that gives the boys confidence in their ability to get the job done and affords them a great deal of pleasure in their work.

Or course, even then you will have some fellows wanting to do all the work and some who are just as anxious to let others do all of it. However, when each committee and each individual on the committee has his job well in his mind and knows that if it is done he must do it, you will get things done.

Farm Mechanics

R. W. CLINE

Buildings for Departments of Vocational Agriculture

A. H. HOLLENBERG, Specialist in Agricultural Education (Farm Mechanics)
U. S. Office of Education, Washington, D. C.

A. H. Hollenberg

MANY communities are planning to construct units in vocational agriculture in the near future or expand their old plants in order to have adequate facilities for the department. In some places the funds have been raised or budgeted to do this job. At the present time the building program has not gotten under way appreciably because of a shortage of building materials and labor.

Agricultural buildings will need to be carefully planned to facilitate the training needs of groups requiring the services of one, two, or more teachers. Several states are preparing bulletins at the present time on plans for buildings for vocational agriculture. Much care is to be exercised in this planning because the buildings are usually permanent, making alterations difficult.

The purpose of this article is to explain some of the requirements that any unit in vocational agriculture should provide, regardless of the design used. Elevations are not shown or given because buildings for vocational agriculture which are erected will, no doubt, follow the architecture of the other school buildings. The recommendations included herein are suitable for units for one, two, or more teachers.

The following suggestions are made as a guide to those who are planning new vocational units. It is suggested that:

The classroom for vocational agriculture and the farm shop be in one unit. This is desirable but it is recognized that in some parts of the country where an efficient agricultural science room is already available, the shop may have to be a separate unit. In such an instance the farm shop needs to be located near the agricultural science room. Since agricultural science and farm mechanics are so closely related, the one-unit plan is the best.

The farm-mechanics work be taught in a shop that is used only for that purpose. Activities in farm mechanics need a plant of their own. Different kinds of tools are used and the projects are generally of a larger size than those for most other mechanical activities taught in the school. Therefore, this plant must be available to the agricultural instructor at all times. Any tendency to use the farm-mechanics shop for general mechanics, woodworking, metalwork, auto mechanics, or other purpose defeats the efficient teaching of vocational agriculture.

The floor space in the farm shop be left as free as possible from workbenches. Place workbenches advantageously in the shop to permit the movement of large projects. Farm machinery and equipment are of large dimensions and space is necessary for efficient work. Furthermore, the class or individuals may be asked to gather around an item of farm equipment for a demonstration. Provide sufficient benches to facilitate the work. Those along the walls will care for most of the benchwork that is necessary.

Most of the benches in the farm shop be of a type that fits along the walls, these having a maximum width of 2 feet. This will have a tendency to leave the maximum floor space available for large farm equipment. Wall benches that measure over 2 feet in width are a waste of space and the back of the bench becomes a catchall for scraps of wood, metal, and machinery parts. Benches along the wall tend to be more satisfactory places to accomplish a job because they are more substantial and have better light if under windows. Several intermediate benches may be necessary but keep these to a minimum.

The benches used in a farm-mechanics shop have no shelves underneath them. Altho this seems to be a convenient place to store projects or parts of projects, it tends to become a trash catcher. Odd pieces placed on bench shelves are often forgotten, resulting in many farm mechanics parts being found there. Therefore, shelves under the benches in many shops are one of the causes of poor housekeeping. Storage space is always a problem in the farm-mechanics shop but shelves under benches is not the answer.

There be sufficient light in the building, natural and artificial, satisfactorily located and adequately protected. There must be a sufficient number of windows in the building to provide proper lighting without utilizing the wall space needed for cabinets. Place the windows so they will give the maximum of light and still be located for the minimum of breakage. Where natural lighting near a machine is not sufficient, artificial light must be provided. Place this light high enough above the operator to keep it from being broken, but close enough to serve its purpose. Where machinery or motors are being worked on, extension cords will aid greatly in giving light to facilitate a safer and better job. In many places the shop for vocational agriculture is used as much or more at night as it is in the day. That means that the entire shop will need sufficient electric lights of adequate size to enable efficient work to be safely accomplished. Have wire protectors on all the lights in the farm shop where they are likely to be broken.

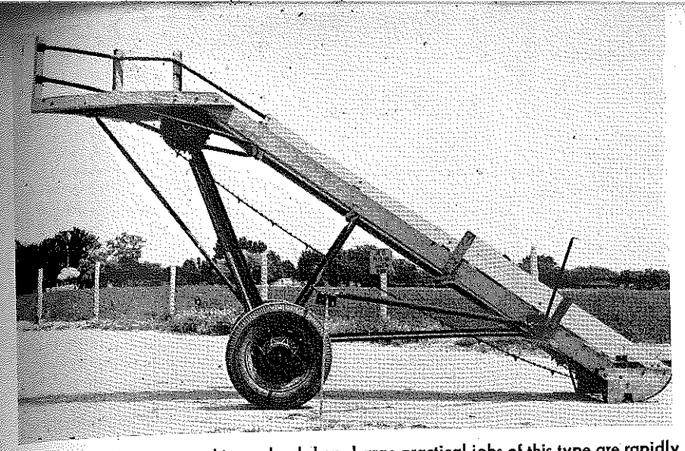
The walls between the two kinds of work, agricultural science and farm mechanics, be made as soundproof as is feasible. In departments where two or more teachers comprise the agricultural staff, this plan will facilitate the teaching of each phase of the program. This soundproofing will be helpful even in a one-man department when some of his students are in the shop and others in the classroom. Have part of the walls between the classroom and the farm shop made of windows to permit vision from one room to the other.

The storage rooms, offices and utility space be located between the farm-mechanics shop and the agricultural science room. This is a good location for these facilities and provides a buffer for noise between the two types of work. The office needs to be of sufficient size and fitted to permit conferences between teacher and student. A small conference table can be arranged in the office space to accommodate committee meetings.

The shop include at least one large door thru which farm machinery can be moved. Have this door at least 12 feet in width and 10 feet in height. Where the farm mechanics shop is long and narrow, two 12-foot doors, one at the end and the other on the side, will allow the movement of machinery and equipment with more ease. A door of the overhead type is probably more suitable than a sliding or folding one. It should fit snugly to aid in keeping the shop warm.

The floor of the farm-mechanics shop be made of concrete or building blocks. The floor should have a gravel or cinder fill underneath the concrete. Since heavy tractors and farm machinery may be placed upon it, the concrete should be five inches thick. The floor will have a better appearance and will be easier to keep clean if it is painted. When tractors or other farm equipment have tracks or lugs as a means of traction, make provision to protect the floor. Wood building blocks placed on end form a good, lasting floor and one that is more comfortable to stand on for long periods of time. If there is a place within the farm-mechanics shop where tools may become broken or damaged when dropped on a concrete floor, use movable wood racks.

No space be taken from the farm-mechanics shop for a toolroom. The toolroom method of caring for tools and equipment is contrary to the method used by farmers. When tools are properly stored on the farm, some sort of a cabinet is used. Industrial education uses a toolroom as a means of protecting tools and equipment because it is the practice in the trade. Often much time is wasted by students in checking in and checking out tools when this system is employed in a farm shop. Much valuable instruction will be lost by the student who is asked to take his turn in attending the toolroom. Then, too, the class period is short and students will many times need to stand in line in order to get the tools needed and to replace them. As stated elsewhere in this article, delicate, expensive tools or tools that are easily lost or broken can be kept in the storage room.



Hay-bale loader constructed in a school shop. Large practical jobs of this type are rapidly replacing the "saw-and-hammer" projects of yesterday. Such work requires large shops and modern equipment

Wall space be allowed for tool cabinets, such cabinets to be on a unit basis and placed advantageously for the work to be performed. This may sound a bit old-fashioned but it is still a good practice. Plan space for locating windows, benches and doors to permit tool cabinets to be satisfactorily placed. Provide cabinets for each type of tools, such as woodworking, metalworking, concrete, and automotive. All tools should be placed over silhouettes to facilitate the return of tools to their proper place. These cabinets will be of maximum service if they are located near the work that is to be performed. Tool cabinets can protect equipment as well as any other system if the program is properly handled. There are several other methods used in farm-mechanics shops, that do not employ the toolroom.

The building be so planned that it can readily be enlarged. This is a very important feature because nobody knows how large a building will be needed in the future. The lot or ground that an agricultural unit is placed upon should be large enough to permit expansion, and the building must be placed on it in such a manner that there is room for such expansion. Many agricultural units have been erected in the past which were large enough at the time they were built, but with the increase of farm population and the growing emphasis on adult education are now entirely too small. If provisions are made to allow for expansion, the building can easily be enlarged.

Storage space be provided for coal, lumber, iron, steel, paint, machinery parts, and other commonly used items. Where the roof is high enough to permit the placing of lumber in vertical (45 degrees) storage, it will work to better advantage than horizontal storage. Many lumberyards are coming to this type of storage because of less warpage of boards. Vertical storage of lumber also requires less space in the shop. Only a small supply box for coal is necessary near the forge. Larger quantities of coal should be stored elsewhere. Have storage racks for iron and steel near the place where they are to be used. Some state laws require that paint be kept in a fireproof room which has an outside door. Machinery parts are always a problem to store and to find when needed, if a storage bin is not provided. A rack of bins can be provided in the storage room for such parts.

The farm shop not serve as a bus shed and for bus service. Because of the size, location and the tools available in the farm-mechanics shop, there may be a tendency to place a bus or busses in the shop for storage or repair. This is a very poor practice because farm machinery must be moved around in the shop. The entire shop is needed for vocational work. It is the duty of the teacher of vocational agriculture to cooperate with the rest of the school, but the matter of using shop space, instructional tools and equipment for the repair and upkeep of busses is one that should be discouraged because it will interrupt a well-planned farm-shop training program.

A covered shed in connection with the shop be used for storing farm machinery before and after reconditioning, and for other large construction jobs. A covered shed will aid the vocational program by providing a needed service for the least amount of money that can be put into a building. Farm machinery which comes to the shop for reconditioning, repair, or demonstration can be stored in this shed. When in the shed it may be cleaned and otherwise prepared for work to be done in the shop. Many schools are now purchasing a tractor and farm implements which are used with it. This covered shed provides a satisfactory storage space for such equipment. The covered shed, in some seasons of the year, makes a good place in which to construct small portable buildings. Protect whatever farm equipment is stored in the shed by a heavy wire fence. A large gate in the fence will permit farm machinery or farm equipment to be brought into this space.

A farm-machinery wash rack with drain be provided and located near the covered shed. The wash rack will probably be located in the covered shed. Most farm machinery that comes from the farm will have dirt and grease on it. Before an efficient job of reconditioning can be done, the dirt and grease must be removed. A basin, collecting type of drain is most satisfactory with a wash rack. A wash rack is inexpensive and will aid greatly in conducting a sound educational program. A pressure washing machine will be helpful, but is not absolutely essential.

A washroom with toilets and clothes lockers be provided and conveniently located. Farm mechanical work is of a type that will cause most boys and farmers to get dirty. Coveralls or old clothes will be worn by trainees. In order to keep the shop neat and to keep the loss of clothing at a minimum, lockers are necessary. A shower may prove helpful, but it is not essential where schools have such facilities conveniently available as in connection with gymnasium work.

There be a floor drain in the farm-mechanics shop. Even tho farm machinery is partially cleaned before it comes into the farm shop, the floor will become soiled. The easiest and quickest way to do a good job of cleaning the floor is to flush it with water. In some large shops it may be necessary to have more than one drain.

Lumber racks be under a roof which is high enough to permit vertical storage. This lumber storage should not be a part of the storage room. As stated before in this article, vertical storage is preferable over horizontal. Lumber is more easily used from a vertical pile.

Racks for metal be located in a convenient place and along a wall. In our farm-mechanics shops today, much mild steel is used in the repair and construction of farm equipment. This mild steel can be stored neatly and conveniently if racks are provided along the wall near the place it is to be used. Where facilities permit, iron as well as lumber may also be stored vertically. It is often more satisfactory this way, but it has the drawback that iron must be cut into shorter pieces. A junk heap is unsightly around a school shop, even tho scraps are used in farming.

Provisions be made for lifting and moving heavy items within the shop. Many accidents will be avoided if arrangement is made for moving heavy pieces of equipment. An overhead beam or beams with a chain hoist provides a good means of doing the job, but is probably the most expensive way of accomplishing it. A crane made by commercial companies will also be a satisfactory way of lifting and moving heavy objects. Many farm mechanics shops have built "A" frames on heavy casters which have a chain hoist on them for this purpose. The "A" frame is not only inexpensive but will prove indispensable in the farm-mechanics shop.

When arc and acetylene welding equipment is available, it be portable within the farm-mechanics shop. Most of the farm-mechanics shops have either the oxyacetylene or the arc welder as a part of their regular equipment and some have both. The acetylene torch should have the tanks mounted on a hand truck which can be moved about the shop. It will be handy if this truck can be towed behind a pickup for use on jobs outside the shop. The tanks must be secured tightly on the truck because injuries may occur when tanks are dropped. Then, too, the gauges on the tanks are expensive and they will become damaged if the tanks are loose on the truck. The arc welder may be portable, but that is not absolutely essential because long leads will accomplish the same results. When arc welding takes place a shield of some sort must be a part of the equipment within the shop. Adequate individual shields for arc welding and goggles for oxyacetylene work are absolutely necessary.

An exhaust fan for ventilation be provided for the building. Better working conditions can be maintained with the aid of a ventilating fan. Either the pressure or the exhaust type of ventilation may be used.

(Continued on page 178)

WATSON ARMSTRONG

Farmer Programs

W. HOWARD MARTIN

Young Farmers' Instruction at Mt. Zion

A Broadcast Over Station WILL, University of Illinois

"DUKE" REGNIER: We have in our studio today Max Kuster, teacher of vocational agriculture at Mt. Zion High School, E. K. Graham, the principal of that high school, and four young farmers from that community—Stanley Wood, John Henneberry, Dick Wheeler, and Bill White. These folks are here to try to explain briefly how and what they are doing to further the agricultural knowledge of these young men. I believe you do this by means of a part-time school, do you not? Mr. Kuster, you explain what a part-time school at Mt. Zion is.

KUSTER: Well, Mr. Regnier, this is a group of young farmers who are out of high school and on the farm, but yet desirous of learning more about the things which they are actually doing. This is accomplished by going to school part time in the winter. These young men vary in age from 18 to 35 years with about half of them already farming for themselves and the others either working at home for their dads or for some other farmer in the community.

We have just completed our fifth winter of school work with these young farmers. Early each winter I call a meeting of an advisory council of four or five of these boys to decide on the topics which we will study, the time to hold our meetings, the problems which we will encounter, etc., keeping in mind the needs of this group and also what they, themselves, want. In order to give you an idea of the material we have covered in the past five years, I will tell you the topics we have discussed. In 1941 we had a general part-time school discussing many phases of agricultural work. In 1942 we had a dairy school, in 1943, the care and repair of farm machinery, last year beef production, and this year a school on soil conservation.

But rather than have me tell you any more about it, I would like to have you hear from some of these fellows who have been in these classes. Stanley Wood has always been one of our most enthusiastic members, being on our first advisory council and a steady attender ever since. Stanley, will you tell the radio audience just how we happened to start our short course in 1941?

STANLEY: In the fall of 1940 Mr. Kuster called together four of us farm boys for a meeting. Quite a few of us fellows had been interested in a group like this for some time, but it was not until then that we had the opportunity to organize a class. At this first council meeting we organized our topics on general farm subjects for that first year. I was pleasantly surprised when the first meeting brought together 20 fellows and the attendance held up well from then on.

From these meetings we learned that a topic like general farming could not be covered in 15 meetings thru the winter. Since that first year we have organized our classes on one enterprise and have found that we can do a much better job of covering the important material.

KUSTER: Stanley, how many of the fellows who came to the first school in 1941 are still coming back?

STANLEY: Well, just the other day when I was grinding corn, just before the bottom dropped out of my mill, I was trying to remember that first bunch. I counted 10 fellows of that original 20 who are still coming.

KUSTER: What happened to the rest of these fellows?

STANLEY: Some of these boys have gone to the army, and I think the rest have moved away.

KUSTER: One of the main objectives of the part-time school is to get the high-school graduates to come back the next year and join our young farmer class. Bill White, who lives on a large farm, is one of these boys. Bill, you just graduated from high school last spring, and I had you for four years of agriculture. Didn't you learn all that you needed in that length of time?

BILL: No. Even tho I had agriculture in high school, there is much more to learn because farming practices change from time to time, and everyone wants to keep up with the changes and new practices. In high school you learn mostly the general principles that don't change.

In farming there are everyday problems that come up and fellows like to get together to talk them over. In these young-farmer meetings we usually discuss some of these problems.

KUSTER: Well, you spent a couple of days in the classroom this winter testing soil. What was your reason for doing this?

BILL: I wanted to do it because we were going to apply lime and every field should be tested first to determine the places where it is needed and in what amounts. I found some of this soil that I tested needing four tons of lime per acre and some that didn't need any. By this testing the lime can be put where it will do the most good.

KUSTER: Then you would say that you learned something from our school on soils this winter.

BILL: By all means, yes. I tested our farm for available calcium, phosphorus, and potassium and then made a map for each. From these results we learned to interpret the needs for these fertilizers and when to best apply them to obtain good results. These things make farming more interesting and put more cash in your pocket.

KUSTER: I believe we will have to agree with you there, Bill. In the past five years of young-farmer classes John Henneberry has missed only two meetings. Does that mean that you were learning something, John?

JOHN: It surely does, Max. Any information on better farming is certainly in my line, and this part-time school has meant lots to me.

KUSTER: You didn't have any agriculture in high school did you, John?

JOHN: No. The high school where I went didn't have a department of vocational agriculture, but this made me all the more anxious to start going to our meetings. Practically all of the fine points, such as balancing feed rations, managing livestock and poultry, crop rotations, soil management, and many others that are so important for profitable farming, would otherwise have to be learned thru experience. This is often costly and causes much delay which we can't afford to have during these times. By learning how to balance a ration I have saved a great deal of feed which otherwise would have been unnecessarily lost. This might have taken several years to learn thru experience and I picked it up in one winter at our short course.

KUSTER: I believe, John, that you do most of the farming down there, don't you?

JOHN: Yes, my dad hasn't been able to help with the work for nearly three years. Thus, I have had all of the responsibility, so learning thru the part-time school has certainly been profitable for me.

WOOD: How big a farm do you live on, anyhow?

JOHN: I farm 360 acres and, just to fill in the spare time, we care for a herd of 25 milk cows, some hogs, and laying hens.

WHITE: I don't believe you would have much spare time. With that much work to do it hardly looks as tho you would have time to come to these evening meetings.

JOHN: Well, I'm still interested in profitable farming and a man has to use his head as well as his body to make a success. I feel that the young-farmer class has meant extra profits for me.

KUSTER: Last fall Dick Wheeler went to Kansas City to receive the American Farmer degree. We know that in order to get this honor you must have done a good job and be established in farming. Why did you come to the part-time school, Dick?

DICK: It has been my experience that the more I learn about farming the more I realize what there is left to be learned. Farming is the most complicated occupation in the world. A farmer must buy various products, sell his produce, work on the farm, manage that farm, keep adequate records, and do many more detailed jobs. No one farmer is best suited for all these. However, I firmly believe that, if we stay wide awake, read, and listen to scientific knowledge of agriculture, we can do a better job.

In the two years which I have been attending the part-time school there have been many of these helpful bits of information which I have learned from one of the other fellows or from up-to-date material presented by our teacher. When a small group of fellows gets together as we do with similar problems a great deal of learning takes place. This is especially true when it is done as we do it by having a sort of round-table discussion and avoid any lecturing.

KUSTER: The success of anything around a school is in direct relationship to the cooperation given by the administration in charge, Mr. Graham, our principal, has been a very frequent visitor at our evening meetings. Mr. Graham, I would like to have you give us your idea of how this young-farmer school fits into the general school program.

MR. GRAHAM: As you have no doubt gathered, a part-time school in agriculture is one made up of out-of-school farm boys over 16 years of age who came back to school during the winter for at least 15 meetings. The additional cost of instruction, if any, is paid for, 50 percent by the local community and 50 percent by state and federal aid as is the case with the regular salary of a teacher of agriculture. However, we feel that this work is important enough so that we would continue to conduct this class even tho additional financial aid were not offered.

For the past five years I have watched this group of young farmers come to the Mt. Zion High School. During that time one of the most encouraging features is that they have gradually changed from a more-or-less get-together group until now they seem like one big happy family with the schoolhouse their home for the evening.

As an administrator, I can say without reservation that one of the big problems is cooperation between the parents and the school system. Many parents never enter our schoolhouse doors. You can see how, when these young men begin to send their children to our school, there will be a much more favorable relationship due to our having kept the doors open to them thru this short course.

We feel that there is no place better equipped to offer educational training than the school; and with proper guidance, which our agricultural graduates get, they never lose contact and interest in our school. As they put their high-school teachings into actual practice they find they are faced with problems that they never heard of before. Yet with a more mature mind these young men are ready to meet these problems thru a more scientific knowledge of facts which our short course offers them.

KUSTER: You know, Mr. Graham, I just checked this year's class and found that, out of a total of 31 different boys who attended, 27 graduated from high school and 20 of these 27 had some vocational agriculture while in high school. Of course, people who didn't go to high school are just as welcome as those who did, because our school is open to everyone. However, it is plain to see that the fellows who tend to come back for more are those that have learned enough to realize that there is plenty about farming yet to learn.

GRAHAM: You say, Mr. Kuster, that your total attendance was 31. What was the average over the winter?

KUSTER: We had an average attendance of 24 fellows.

GRAHAM: This may not seem like a very large group but 20 to 25 is a rather ideal-sized class. We must also remember that these young men come because they want to. This means that they must be getting something from this school because, otherwise, they would be at home or in town seeing a picture show the next time class met. I wish that we could keep our boys and girls in other departments coming back to school as they have done in this young-farmer class.

WHEELER: You know, Mr. Kuster, I believe that another good thing about these meetings is the recreation that we have after the meeting is over. It does a fellow a lot of good to play a little with the other boys.

JOHN: I believe that this is especially true now because we are all working so hard and keeping our noses so close to the grindstone that occasionally we need to relax and forget about our troubles. To work, study, and play with the other fellows helps a great deal.

BILL: The refreshments which we have after the meetings take my mind off my troubles about as quickly as anything.

KUSTER: Thank you a lot, fellows. I believe that you can gather, by the feeling that these boys have expressed, somewhat their general attitude. It is foolish to think that the leader of a group like this can accomplish much without the cooperation of every boy who attends. It is my sincere belief that the chief factor in the success of our young-farmer classes for the past five years has been that friendly, good-natured feeling coupled with the cooperation of the entire group toward one another and the loyalty which they feel toward the class. The desire for knowledge alone will not bring many enthusiastic young men to a high school. Far too many part-time school leaders have failed to realize this and as a result the school has failed.

Farmers Like to Select Their Own Problems

E. L. AUSTIN, Teacher-Trainer, College of Agriculture, Kingston, Rhode Island

A RECENT legislature in Rhode Island enacted permissive legislation providing for the establishment of soil conservation districts. In a short time, thru the leadership of the State Conservation Office and the State Department of Agriculture, the state was organized with farmers as local officials.

E. L. Austin

A conference including regional and state representatives of the S.C.S., the state director of vocational education and the teacher-trainer resulted in the preparation of detailed plans for a course in soil conservation provided the farmers in the Southern Rhode Island District wanted one. It was decided to hold an organization meeting and proceed from there, if conditions indicated a desire to proceed. The need was apparent but, would the farmers respond?

The county agricultural agent (a former teacher of agriculture) and the local conservation committee sent out a special letter to a list of farmers who were interested in a conservation program. Teachers of agriculture "talked it up." Notices were printed in the newspapers. There were 29 men present for the first meeting.

The above statements are introductory to a central idea of this report, viz: Farmers like to select their own problems and they respond accordingly if proper techniques are used. The place of meeting was important—a Grange hall where the men could sit informally in a semicircle facing a large blackboard. The chairman of the local S.C.S. district, a farmer, opened the meeting, stated the purpose of the meeting, and introduced the chairman for the evening, the teacher-trainer. A luncheon-club type of introduction put everybody at ease and indicated that most of the men were dairy farmers with acreages running up to 100, with herds varying from 10 to over 100 cows.

What problems centering around soil conservation did they have? A dozen or 15 were suggested by the men which applied to their own farms. These were written on the blackboard. Everyone was surprised that there were so many. No. 1 problem was pasture improvement. They were unanimous in wanting more meetings. Nobody worried much about how many. Places for meeting were discussed. The men decided the Grange hall where they were meeting at the time was the best place. The Master of the Grange was present. "He'd take care of that." A canvass of the best night indicated Monday. Weekly meetings would be about right. The state conservationist then showed a sound movie in color and, believe it or not, the sound movie emphasized the same 10 points which the farmers had selected. Neither the farmers nor the chairman had seen the movie previously. When the meeting adjourned the county agent announced that coffee and doughnuts were ready. Small groups continued discussion or made new friends over the coffee cups. In all, about two hours were used for the first meeting and refreshments.

For the second meeting the soil conservationist secured two specialists, one from the agricultural extension service and one from the agricultural experiment station, who had been working on pasture improvement. Three farmers on whose farms successful conservation programs were already in operation made a total of five source people who were ready to supply practical answers or report progress toward solutions. Two short periods, not over 15 minutes each, were used by the specialists to present certain practical findings on work being done on pasture improvement. Colored slides and simple seed-combination formulas were presented. Questions and discussions from the group and specialists occupied the next hour. Again coffee and doughnuts with discussion followed.

And so it went for six meetings plus two field trips. On a very rainy day 20 men started the first tour and 45 finished.

The soil conservationist and his assistants began immediately to map each farmer's farm and to draw up in detail a program for each farm which did not already have one. Nine specialists were available during the course—a word never used during the series of discussions.

Attendance at all meetings was excellent. Farmers and county agents in other sections of the state heard about this course and are asking for others.

(Continued on page 177)

Future Farmers of America

A. W. TENNEY

Leadership Training in Kansas

WE ARE proud of the fact that almost 100 percent of the Kansas F.F.A. chapters can open and close their meetings without the use of the F.F.A. Manual or other notes. We are also proud of the fact that the officers in our chapters know considerable about the Future Farmers of America on a national and state level. Chapter officers in Kansas demonstrated in their district leadership schools that they know how to stand on their feet, face their audience, and say their parts. No table-leaners, no hands in trouser pockets, and no talking to the table. And what is equally as important, they have eliminated "jist," "pitcher," "area," "simmel," and other mispronounced and slurred words—all too frequently heard in opening and closing ceremonies where special attention and training has not been given to this important part of F.F.A. experience.

District F.F.A. Leadership Schools

The first district F F.A. "Officers' Training School" was sponsored by the Shawnee Mission chapter in 1931. Each year since, with the exception of 1942, district F.F.A. leadership schools have been conducted in Kansas.

The 1945 district F.F.A. leadership schools were held in 11 centers, the centers being selected with a view to equalizing the travel distance. Eighteen chapters failed to attend any leadership school. The F.F.A. officers and advisers from the chapters not in attendance missed considerable inspiration and worthwhile information of very great value in the proper conduct of F.F.A. chapters.

The purpose of the F.F.A. leadership school might be classified in three categories, namely: (1) ritualistic improvement; (2) broader knowledge of the F.F.A.; (3) exchange of ideas on building and executing a worthwhile program of work.

The 1945 F.F.A. leadership schools were organized in such a manner as to give maximum emphasis to boy participation. Much credit for the success of the 1945 F.F.A. leadership schools must be given to the state F.F.A. officers who assisted and to the cooperation of the local chapters assigned special roles on the program.

The F.F.A. creed was given at each of the 11 leadership schools. More use should be made of the F.F.A. creed by local chapters. This is one of the finest—if not the best—youth-organization creeds extant. Kansas F.F.A. members should be especially proud of the creed since it was written by a native Kansan. E. M. Tiffany, the author, was born and grew to manhood on a farm near Lyndon, Kansas. He graduated from the Lyndon High School, received the B.S. degree from Kansas State College, Manhattan, Kansas, in 1915, taught a few years in Kansas high schools, and at the time of writing the F.F.A. creed was in agricultural education work in Wisconsin. Every F.F.A. member in Kansas, as well as every adult F.F.A. leader, should be grateful to Mr. Tiffany for his splendid contribution to the idealism of the Future Farmers of America.

The Manhattan chapter used a four-man team in their presentation of the F.F.A. creed at the Clay Center leadership school. Colored slides depicting the principal theme of the various paragraphs of the creed were used. A colored picture of a beautiful farmstead was flashed on the screen to represent the principal thought involved in the first paragraph—"I believe in the future of farming." The picture was held while the first member of the team stepped to the rostrum and recited the first paragraph. At the conclusion of the paragraph, the speaker stepped back one pace. A second picture was then flashed, a second member stepped forth and recited the second paragraph of the creed, and at its conclusion, the speaker stepped back one pace. This was repeated for paragraphs three and four. Then a colored picture of the American flag was thrown upon the screen, and all four members stepped forward one pace and recited the fifth and closing paragraph of the creed in unison. This was the most effective rendition of the F.F.A. creed that your executive adviser has seen to date.

The more F.F.A. members know about the Future Farmers of America the greater will be their respect for the organization. F.F.A. officers (and advisers) too often are not adequately informed concerning the F.F.A. ritualistic performance, especially the opening and closing rituals which constitute the "show window" of the F.F.A. organization. It is important that all ritualistic performance be on a high standard, but especially important that the opening and closing rituals be well handled at all times. Parliamentary procedure should be given more attention by chapter officers.

The 1945 F.F.A. information test had a total of 102 possible points, as compared with 79 points in the 1943 test, and 68 points in the 1944 information test. The 15-year F.F.A. History, the F.F.A. Manual, Volume XVI of the Kansas Future Farmer Newsletter, and the September issue of the current year's issue of the Newsletter were used in formulating the 1945 F.F.A. information test.

The state office regrets that 18 chapters found it impossible to attend one of the leadership schools.

Lawrence District F.F.A. Leadership School Program

(Note: This is a typical program as organized for each of the 11 district F.F.A. leadership schools.)

Host chapter—Lawrence; Place—High School.

Date and Time: October 2, 1945; 3:30 p.m.

Order of Business.

1. Host chapter opens meeting with official opening ceremony.
2. Host chapter conducts roll call of chapters.
3. Welcome by superintendent or principal of host chapter.
4. Opening and closing ritual contest. All chapters urged to participate.
5. F.F.A. information contest. All chapters urged to participate. Officers only eligible to compete.
6. Talk by state F.F.A. officer—Boyce Dougherty, vice-president of the Kansas association.

Supper

7. Parliamentary-procedure demonstration—Olathe Chapter.
8. Recital of the F.F.A. creed—Dean Wilson, Highland Park Chapter.
9. Demonstration of the proper use of the gavel—Washburn Chapter.
10. Roll call of chapters: Special three minute reports on the following assignments.

    President or Vice-President: Program of work: How build? Committee responsibilities and check-up on performance; Calendar; School time; Outstanding activity goals planned for current year. By the following chapters: Shawnee Mission, Holton, Onaga, and Washburn.

    Reporter: How get F.F.A. recognition in school, community, and state? How bring news of activities of other chapters before local group? By the following chapters: Holton, Tonganexie, Silver Lake, Lyndon, and Shawnee Mission.

    Secretary: Chapter records; Plan for acquainting members with state and national F.F.A. activities; By the following chapters: Highland Park, Paxice, Berryton, Bonner Springs, and Onaga.

    Treasurer: Plans for raising chapter funds; state and national dues. By the following chapters: Lawrence, Overbrook, Seaman, Paola, and Holton.

    Be Prepared to Discuss: Methods used in acquainting members with the Future Farmers of America organization; How to improve ritualistic proficiency in Green Hand and Chapter Farmer degree work; How to train your officer group; Plan of teaching members parliamentary procedure; How to prepare the program of work, which is due in the state office on November 1; How to plan meetings; How to handle the annual F.F.A. parent-son banquet; How to improve F.F.A. leadership school.
11. Awards
12. Close

    The host chapter will look after local arrangements such as: Welcome from the superintendent or principal, meeting place, arrangements for meals, F.F.A. paraphernalia, etc.

To Demonstrate the Proper Use of the Gavel

(Note: This was one of the demonstrations used in the 1945 District F.F.A. leadership schools. There is not sufficient space to enable us to include in this Newsletter the F.F.A. information contest, and the parliamentary-procedure demonstration.)

A team should consist of four members, preferably the chapter president and three chapter officers to assist. Participating members should possess poise, good voices, and be able to speak clearly and distinctly.

President: (Stand and face audience before beginning.) Our part on this program is to demonstrate the proper use of the gavel, but before we give the demonstration, I will ask Bill Smith to give us a brief history of the gavel.

Bill Smith: The origin of the use of the gavel is obscure—some think it dates back to Alley Oop, but we question the validity of such an opinion. From here on we will stick to facts and let opinion rest.

The first definition of the gavel is found in A Dictionary of the English Language, published in 1860. The definition was by Joseph Emmerson Worcester, who defined the gavel as "a small mallet used by presiding officers to attract attention and preserve order; an emblem of authority."

In 1857, C. W. Phillee, in an article entitled "Akin by Marriage," published in the November issue of the Atlantic Monthly, which, by the way, was Volume I, Number I of this eminent magazine, tells of the place of the church in Puritan New England, and the use of the church sanctuary for holding all meetings for the transaction of public business. For more than 100 years prior to 1857 this had been the practice thruout New England. Meetings were held on weekdays, and no part of the meetinghouse was kept sacred from the world. Phillee states that "even the pulpit itself would have been given up to secular uses, but that, being so lofty, it was found to be an inconvenient position for the moderator's chair. So this important functionary was accustomed, from time immemorial, to take his place in the deacon's seat, below, with the *warning of the meeting* (this we interpret to be the gavel), the statute book, and the ballots arranged before him on the communion table, which in course of time became so banged and battered, by dint of lusty gavel strokes, that there was scarcely a place to put one's finger upon which was not bruised and dented. For in those days of the fierce conflict between the Federalists and the Democrats, the meetings were often noisy and disorderly."

Transaction of public business in the church in Puritan New England has long since ceased to be the practice. However, Phillee in this story gives us a vivid picture of how the gavel was used to govern. It is interesting to note that no mention is made of a gavel block, but instead the author pointed out how the church communion table had been badly battered and dented thru lusty gavel wielding. (Be seated.)

President: Thank you, Bill Smith. In this connection, I might add that State Executive Adviser A. P. Davidson, points out that the early New England Puritans, in not having a block upon which to pound the gavel, were in no worse condition than the state association of F.F.A. Mr. Davidson states that the state association has a gavel, but no block to pound upon—nor do they have a communion table.

I will now ask Jim Jones to tell us about the gavel as it relates to the Congress of the United States.

Jim Jones: Edmund Alton, in his book "Among Law-Makers," published in 1866, has the following to say concerning the gavel and its relation to our Congress. "The gavel is a small mallet of ivory with which the presiding officer of the Senate thumps upon his desk to command silence or attention. . . . In the House of Representatives, whose members do not behave as well as those of the Senate, they have a mallet with a long handle to it that will make more noise, and sometimes it reminds me of a blacksmith pounding away at his anvil to see the presiding officer of the House pounding away for dear life, trying to make the Representatives be quiet. In fact, the Speaker's gavel is known in the official parlance of that body as the 'hammer'."

So we observe that in 1866 the Senate had a gavel of ivory, a small one; and the House had a wooden gavel with a long handle. Both bodies used the gavel as a symbol of authority and order. (Be seated.)

President: Thank you, Jim Jones. I will now ask Charles Hill to tell us something of the history of the gavel as it relates to our own Future Farmers of America.

Charles Hill: You will be interested to know that each year at our national F.F.A. convention held in Kansas City, the Georgia Association of F.F.A. presents a gavel to the national president of the Future Farmers of America, to be used thruout the convention and thereafter to remain the personal property of the F.F.A. president. The gavel is made of wood taken from a magnolia tree from the farm of the late Honorable Dudley M. Hughes, in memory of two Georgia statesmen, Senator Hoke Smith and Honorable Dudley M. Hughes of the House of Representatives, originators of the Smith-Hughes Act—the act of Congress that appropriated funds for vocational education in the United States.

The gavel owned by the Kansas Association of Future Farmers of America and used at all official meetings of the state association, was presented to the state association by the Shawnee Mission Chapter in 1944. The president of the Shawnee Mission Chapter in making the presentation before the House of Delegates read the following message: "The walnut wood from which this gavel was made was taken from The Old Shawnee Mission in northeastern Johnson County, Kansas. In the Mission, built in 1837, the first vocational work in the state of Kansas was taught to the Indian children by the Methodist missionaries. The wood was taken from the enormous walnut trees growing on the farm. The first fruit orchard in Kansas was started there.

"Three of the buildings are still standing and are furnished with the same furniture that was used in early days. Those buildings are open to the public and should be visited by every F.F.A. member.

"The Shawnee Mission Chapter takes pleasure in presenting this gavel to the state association. May it be wisely used by our president, to insure justice to all members and special favors to none. If from today the F.F.A. will, like the old Mission, be as sound and firm as ever."

It is interesting to note that the Shawnee Mission Chapter presented the gavel to the state association with the admonition that it be used to dispense justice to its members, with special favor to none, rather than as a symbol of authority.

President: Thank you Charles. In using the gavel, it should be grasped firmly and used as a symbol of authority, as well as a means of dispensing justice. The manner in which the gavel is used usually reflects the leadership ability of the presiding officer.

I will now demonstrate seven uses of the gavel. (Grasp the gavel firmly, be positive in using same—do not pound, but tap firmly; numbers 1 and 7 are louder taps and much faster than other five used.)

1. As a symbol of authority—several taps.
2. Call meeting to order—2 taps.
3. Have members stand—3 taps.
4. Have members seated—1 tap.
5. Motion passed or rejected—1 tap.
6. Meeting adjourned—1 tap.
7. When distractions occur—several taps.

In closing, may I suggest that local F.F.A. officers give further study to the correct use of the gavel, and practice using it, so that your meetings will reflect the kind of leadership that makes for successful F.F.A. work.

(Adjourns by tapping table once with gavel.)

Note:

1. Team members will take their positions around a table in a quiet and orderly manner, and be seated.
2. Each member will rise and face the audience to present his part.
3. While standing, do not lean on table. Do not place hands in pockets, keep head up, and talk to the audience. In using notes, hold the notes to the side so that they will not obscure the speaker's face.
4. Practice reading clearly and distinctly, with timing and inflection that will best bring out the meaning of the material to be presented.
5. Substitute the names of your team members for those used in the script.
6. At the close of the president's demonstration of the use of the gavel, he will adjourn the meeting by one tap of the gavel, and team members will return to their places in a quiet and orderly manner.—Kansas F.F.A. Newsletter.

Farmers' Problems

(Continued from page 175)

It was successful because:

1. There was need for practical help.
2. A pleasant, hospitable, practical and yet systematic teaching procedure was used.
3. The farmers chose the time and the place of meetings and the character of materials used. The soil conservationist provided the technical helpers.
4. Expert assistance was available when needed.
5. Good leadership was provided.
6. Practical follow-up was encouraged and provisions made for it.
7. Participation in discussions was nearly 100 percent. Attendance was excellent.

Buildings

(Continued from page 173)

Electric-convenience plugs be sufficient in number and satisfactorily located in the farm-mechanics' shop and the agricultural science classroom. Many auxiliary pieces of equipment may be used if convenient outlets are available. Milk testers, slide machines, motion-picture machines, electric drills, trouble lamps, and air compressors are some of the examples of auxiliary equipment that are commonly used in the agricultural unit. A good place to locate them is along the wall and above the benches. Install convenience outlets for both 110 and 220 volts in the building.

Adequate storage be provided for the agricultural-science room and the farm shop. In a well-planned unit for vocational agriculture there need to be two storage rooms. The one for the agricultural-science room should be adjacent to the classroom. This storage room will be more convenient if it is fitted with shelves and cupboards. The shop storage room should be of adequate size and placed between the shop and classroom. Have the shop storage room well equipped with bolt racks, shelves, and cupboards.

The instructor's office be so located as to permit full vision of the activities within the farm shop and the classroom. An office located between the two units, with glass on each side will permit the teacher to observe what is going on in both the classroom and the shop.

An adequate heating system be provided. An adequate heating system is necessary for both the comfort and the health of the trainee. Good workmanship cannot be conducted in a poorly heated building. This may or may not be a part of the regular school heating system.

Tables in the classroom be placed in such a manner as to permit conference procedure. Take care to place the tables in such a manner that the minumum number of students face the light. Some prefer the horseshoe arrangement with the instructor's table at the open end. Others will prefer the arrangement of one table behind another. Rearrangement of tables is facilitated if they are movable. The blackboard must be visible from all places within the classroom.

In the classroom sufficient space for books, bulletins, and other reference material be provided. A neat, handy, and workable classroom is a feature that must be available. In planning a new building or in remodeling an old one, much thought needs to be given to sufficient and orderly arrangement of space for instructional material.

Safety features be provided thruout the building. While this is probably the most important single item, it should be recognized without a comment. Guards should always be provided and used on equipment. Chips of wood or metal must be kept off the floor. Lights will aid in keeping down accidents. Statements in this paragraph and those concerning other items herein have been made in general in recognition of the varied conditions prevailing thruout the entire country.

The Editor's Comment: This detailed analysis of buildings and departments constitutes an excellent outline for an illustrated bulletin in this area. We suggest it to Mr. Hollenberg for his early consideration.

Doctor Broyles Retires

W. A. Broyles

DR. WILLIAM A. BROYLES of Pennsylvania State College, retired November 1 after 25 years of service in that institution. Doctor Broyles is Indiana reared, a graduate of Tri-State College and Indiana University with a Master's degree from the University of Wisconsin and the Doctor's degree from the University of Illinois. In his early years he was best known in agricultural education for his organization of the Walsh County Agricultural and Training School at Park River, North Dakota. The F.F.A. chapter in that school now bears his name. In 1916 he went to Texas A. & M. College where he was professor of agricultural education until coming to Penn State in 1920. At Penn State his particular responsibility has been teaching with emphasis on special methods of visual aids. He served as acting head of the department on two occasions.

His publications include "Graduate Work in Agricultural Education" and a series of workbooks for pupils studying vocational agriculture. He also developed a device used in computing scores of participants in livestock-judging contests, The National Computing Fan.

Doctor Broyles has been an active member of a number of educational associations, Gamma Sigma Delta fraternity, and an honorary member of the Keystone Association of F.F.A. His staff associates say, "It is highly improbable that Doctor Broyles will be wholly inactive in the affairs which have so long claimed his interest in his period of retirement; he simply isn't that kind of a man. We hope, however, that the tempo of his activities may be appreciably diminished and we wish both him and Mrs. Broyles Godspeed in this richly deserved experience."

Book Review

A. P. Davidson

APPROVED Practices in Poultry Production, by G. C. Cook, pp. 187, paper back, illustrated, list price $1.50, published by The Interstate Printers and Publishers, Danville, Ill. The booklet contains a list of activities which involve approved practices with information on performance in the poultry enterprise. The information necessary to carry the practice to successful completion has been carefully selected and condensed to a minimum. The activities are centered around nine chapters as follow: Growing Healthy Chicks, Selecting Profitable Layers, Feeding the Laying Flock, Housing the Laying Flock, Controlling Parasites and Diseases, Producing Capons, Producing Turkeys, Marketing Poultry and Eggs, and Keeping Records.

A.V.A. Convention Notes

THESE officers were elected at Buffalo: as president, C. L. Greiber of Wisconsin; as vice-president representing Agriculture, H. G. Fetterolf of Pennsylvania; and as vice-president representing Part-Time Education, Dr. Edna Henderson of Arkansas.

Also announced was the appointment of R. W. Gregory to succeed Dr. J. C. Wright as Assistant Commissioner for Vocational Education.

The next convention city will be Atlantic City or Miami or St. Louis.

BANQUET BANTER

Toastmaster: Ladies and gentlemen, one of the very best friends which we Future Farmers have is a local minister, Reverend Hance. He is along with us boys on all our summer trips; he is wonderful in teaching us group games and, as you all know, he gives his congregation a good message every Sunday. We have honored him in a small way by electing him Honorary Chapter Farmer and this evening he is to represent that group at this time. It seems a bit sacrilegious to dish up a story on a minister but, with some of the jokes which were played on us on a trip last summer with no one apparently admitting the blame, we boys decided the "good boy himself" had no small part in it. So here goes.

As I get the story, Reverend Hance started his ministerial service in a small country church which was not any too well-to-do, financially. At one time they were needing hymnbooks, and, in the course of inquiry, Mr. Hance received a proposition from a certain commercial firm that they would furnish the books free if they could insert a small amount of advertising. This seemed too good to be true so the offer was accepted. The books came. Mr. Hance looked for the advertising and found none. He was delighted and proceeded to pass the word around the congregation even faster than women usually do. All was well until they used the books the first Sunday just before Christmas, and the first verse they sang went like this:

"Hark the herald angels sing,
'Johnson's pills are just the thing';
The angelic voice meek and mild;
Two for man and one for child."

Ladies and gentlemen, Reverend Hance.

Speaker: Ladies and gentlemen, these Future Farmers are certainly in high gear tonight. They have put on an interesting display of their ability thruout the evening and, if any of you don't associate with them very much, I can tell you that this is about their usual speed. If I were their teacher, I would want my desk in the corner to make sure they did not come after me from two sides at once. You have heard the popular gag about the young fellow who remarked to his girl, "How about some old-fashioned loving?" She replied, "All right, I'll call Grandmother down for you." Well, that wasn't our toastmaster. He is more apt to have been the young fellow who when asked, "Who was that peach I saw you with last night?", replied, "She isn't a peach, she's a grapefruit." "How come?" "Well, every time I squeeze her, she hits me in the eye."

OFFICE OF EDUCATION, WASHINGTON, D. C.

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J. C. Wright—Ass't Commissioner for Vocational Education
W. T. Spanton—Chief, Agricultural Education

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

ALABAMA
d—R. E. Cammack, Montgomery
s—J. C. Cannon, Montgomery
s—H. R. Culver
ds—L. L. Sellers, Auburn
ds—H. F. Gibson, Auburn
ds—T. L. Faulkner, Auburn
ds—R. W. Montgomery, Auburn
ds—H. R. Culver, Auburn
t—S. L. Chesnutt, Auburn
t—D. N. Bottoms, Auburn
sms—C. C. Scarborough, Auburn
ct—Arthur Floyd, Tuskegee Institute
ct—F. T. McQueen, Tuskegee Institute

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

ARKANSAS
s—C. R. Wilkey, Little Rock
as—S. D. Mitchell, Little Rock
ds—T. A. White, Monticello
ds—O. J. Seymour, Arkadelphia
ds—J. A. Niven, Russellville
t—Roy W. Roberts, Fayetteville
at—LaVan Shoptaw
ct—J. C. McAdams, Pine Bluff

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

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

CONNECTICUT
d—A. S. Boynton, Hartford
s—R. L. Hahn, Hartford
t—C. B. Gentry, Storrs

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

FLORIDA
d—Colin English, Tallahassee
s—Harry E. Wood, 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
as—P. D. Brown
ds—George I. Martin, Tifton
ds—C. M. Reed, Carrollton
ds—J. N. Baker, Swainsboro
ds—J. H. Mitchell, Athens
t—John T. Wheeler, Athens
t—O. C. Aderhold, Athens
sms—A. O. Duncan, Athens
t—R. H. Tolbert, Athens
ct—Alva Tabor, Fort Valley
ct—Benj. Anderson, Industrial College

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

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

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

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

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

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

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

LOUISIANA
d—John E. Coxe, Baton Rouge
s—D. C. Lavergne, Baton Rouge
as—C. P. McVea, Baton Rouge
as—J. J. Arcenau, Baton Rouge
t—J. C. Floyd, Baton Rouge
t—C. L. Mondart, Baton Rouge
t—A. Larriviere, Lafayette
ct—M. J. Clark, Baton Rouge
cit—D. B. Matthews, Baton Rouge
ct—E. C. Wright, Baton Rouge

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

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

MASSACHUSETTS
d—M. Noroross Stratton, Boston
s—John G. Galvin, Boston
t—F. E. Heald, Amherst

MICHIGAN
d—E. B. Elliott, 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—G. C. Cook, East Lansing

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

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

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

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

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

NEVADA
s—Louis Titus, Carson City

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

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

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

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

NORTH CAROLINA
d—T. E. Browne, Raleigh
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, Woodland
t—Leon E. Cook, Raleigh
t—L. O. Armstrong, Raleigh
t—J. K. Coggin, Raleigh
cs—S. B. Simmons, Greensboro
ct—C. E. Dean, Greensboro
ct—W. T. Johnson, Greensboro

NORTH DAKOTA
d—Edward Erickson, Grand Forks
s-t—Ernest L. DeAlton, Fargo
t—Shubel D. Owen, Fargo

OHIO
d—J. R. Strobel, Columbus
s—Ralph A. Howard, Columbus
ds—W. G. Weiler, Columbus
ds—E. O. Bolender, Columbus
ds—H. G. Kenestrick, Columbus
ds—F. J. Ruble, Columbus
t—W. F. Stewart, Columbus
t-ds—C. E. Rhoad, Columbus
t—A. C. Kennedy, Columbus
rt—Ray Fife, Columbus

OKLAHOMA
d-s—J. B. Perky, Stillwater
as—Bonnie Nicholson, Stillwater
ds—W. R. Felton, Stillwater
ds—S. M. Crosnoe, Stillwater
ds—Byrl Killian, Stillwater
t—C. L. Angerer, Stillwater
t—Don M. Orr, Stillwater
t—Chris White, Stillwater
ct—D. C. Jones, Langston

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

PENNSYLVANIA
d—Paul L. Cressman, Harrisburg
s—H. C. Fetterolf, Harrisburg
s—V. A. Martin, Harrisburg
t—Henry S. Brunner, State College
t—William F. Hall, State College
it—Russell B. Dickerson, State College

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

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

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

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

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

TEXAS
s—Robert A. Manire, Austin
s—R. Lane Barron, Austin
s—George H. Hurt, Austin
ds—B. C. Davis, Austin
ds—O. T. Ryan, Lubbock
ds—C. B. Barclay, Commerce
ds—C. D. Parker, Kingsville
ds—W. E. Williams, Alpine
ds—L. V. Halbrooks, College Station
ds—J. B. Payne, Stephenville
ds—L. I. Samuel, Arlington
ds—J. A. Marshall, Nacogdoches
ds—Thomas R. Rhodes, Huntsville
t—E. R. Alexander, College Station
t—Henry Ross, College Station
t—J. L. Moses, Huntsville
t—Ray L. Chappelle, Lubbock
t—S. V. Burks, Kingsville
sms—W. R. Sherrill, College Station
it—G. H. Morrison, Huntsville
it—T. L. Leach, Lubbock
ct—O. J. Thomas, Prairie View
cs—W. D. Thompson, Prairie View
cs—Paul L. Rutledge, Palestine
cs—Gus Jones, Caldwell
cs—E. E. Collins, Texarkana
cs—S. E. Palmer, Tyler

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

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

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—E. Y. Noblin, Blacksburg
t—C. E. Richards, Blacksburg
ct—J. R. Thomas, Ettrick
ct—A. J. Miller, Ettrick

WASHINGTON
d—H. G. Halstead, Olympia
s—Bert L. Brown, Olympia
as—M. C. Knox, Olympia
t-s—E. M. Webb, Pullman

WEST VIRGINIA
d-s—John M. Lowe, Charleston
s—H. N. Hansucker, Charleston
t—D. W. Parsons, Morgantown
t—M. C. Gaar, Morgantown

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

WYOMING
d—Sam Hitchcock, Cheyenne
s—Jack Ruch, Cheyenne