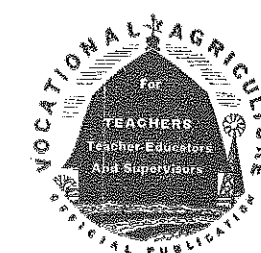


*"I am doing what I am doing in the way I am doing it
only until I can find some better thing or some other way."*



The Agricultural Education Magazine

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

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Editorial Comment

Do We Use Our Magazine?

How much do we use our magazine *Agricultural Education* in promoting the program of vocational education in agriculture and in upgrading the various services concerned? The magazine is maintained to serve as a medium of exchange of ideas among supervisors, teacher-trainers, and teachers. What has brought benefits to one individual is reported with the thought that others may, by applying the practice, receive additional help. It might be timely to examine ourselves concerning our use of the ideas presented during the past two years.

Of special interest to supervisors were "Area Schools—Conversion or Reconversion" (March 1945), and "The Institute Idea" (December 1945), which are in keeping with the expansion of our program as provided in the new legislation.

With reference to new departments "Criteria for the Establishment of Departments" (August 1945), "Building Plans as Loans to Boards of Education" (May 1945), and "Buildings for Departments of Vocational Agriculture" (March 1946) are particularly beneficial at this time when departments are being reopened or new departments established.

Concerning supervision as a whole, "Are We Too Soft?" (July 1944), "Supervision That Works" (April 1945), and "Recouping Our Losses" (March 1946) should be profitable.

In developing a program with teachers, enterprise improvement state-wide is ably presented in "A State-Wide Potato Improvement Project" (June 1945). Projects other than potatoes might be improved on the same pattern. The important concern is to have a state-wide improvement program operating in one or more enterprises. Other areas on supervision are included in "Farming Programs, a Point of Emphasis in Supervision" (March 1946) and "An Annual Program of Supervision in Vermont" (April 1946).

Veterans' training is the particular attention of supervisors, and excellent articles in this area have appeared under these titles: "Training Veterans in Vocational Agriculture" (May 1945), "Agricultural Training for Returning Veterans" (December 1945), "A Training Program for Returning Veterans" (January 1946), and "Secondary Schools Provide Agricultural Training for Veterans" (February 1946).

If you are not sponsoring advisory councils you should benefit by "Safeguards in the Use of Advisory Councils" (January 1946). Also "Three Years of Program Planning and Evaluation" (September 1945) provides a pattern of measurement that is simple in organization yet effective in accomplishments.

From this sample of articles appearing the past two years, it is appropriate to ask our supervisors, "How much are you using our magazine?"

Teacher-trainers must for the most part direct their activities to the attainment of objectives prescribed by the administrative agencies within the state. Within that pattern procedures should be continually re-examined for their effectiveness and measured for their achievements. "Teacher Training Ahead" (September 1944) provided a worthwhile activity for the "low tide" of the war period. "The New Role of the Teacher-Trainer" (October 1945) is one of the professional masterpieces of the year. "Suggestions for Beginning Teachers" (January 1945) and "Engineering Phases of Teacher Training" (January 1945) are timely and "Improving the Program of Instruction in School-Community Canning" (February 1946) is most comprehensive. Of special benefit to teacher-trainers is the section on Methods of Teaching where ideas large or small are presented for the simple reason that "they work." To our teacher-trainers the query is directed, "How much do you use our magazine?"

Teachers on the job are rendered the greatest service by the magazine thru their exchange of successful ideas from their programs. If you have not gone thru the files for the past two years you will be surprised at the number of ideas which have been presented with the mark of approval by many of our successful teachers.

Dealing with classroom instruction, the following are mentioned: "Giving Instruction in Proper Land-Use to Farm Boys" (December 1944), "A Plan for Evaluating Student Effort" (November 1944), "Relating Instruction to Farming Pro-

grams" (April 1945), "Practical Instruction Thru Beef Projects" (June 1945), "A Plan of Organized Instruction" (January 1946), "Teaching Students How to Organize Farm Work to Save Time and Effort" (September 1944), and "A Community Sheep Program Makes Good Teaching" (October 1945).

A special phase of instruction in farm shop and engineering is included in "Farm Shop Activities" (January 1946), "Improving Farm Mechanics" (May 1946), "The Cooperative Use of Farm Machinery by Students" (February 1946), "Farm Machinery—Build, Buy, Repair" (April 1945), "Community Shops" (February 1946), and "Using Job Instruction Techniques in Teaching Farm Mechanics" (June 1944).

Concerning farming programs and project accounting, equally good ideas are found in "Selling Farming Programs" (October 1944), "Approved Practices and Their Place in Developing Farming Programs" (August 1944), "Teaching Farming Program Elections" (February 1945), "Rating Farming Programs" (May 1945), "Helping Teachers to Improve Student Farming Records" (July 1945), "Project Agreements Are Essential" (September 1945), "An Analysis of Project Records" (September 1944), and "A Summary of Project Records" (April 1946).

Just as each state program should be driving ahead with special emphasis upon one or more enterprises, so each teacher might well concentrate upon the improvement of one or more enterprises in his community. To this end suggestions are found among the following: "A Summary of Sow Testing Data" (January 1946), "Measuring Efficiency in Sow and Litter Projects" (May 1946), "A Measurement of Swine Management" (June 1944), "Dairy Improvement Successfully Promoted" (November 1944), "Group Projects as Farming Opportunities" (July 1945), "Improvement Projects in Dairying" (September 1945), and "Group Projects Create Interest" (October 1945).

For the improvement of the F.F.A. chapter, many suggestions are given including the following: "F.F.A. Officers Training Schools" (February 1945), "Leadership Training" (June 1945), "F.F.A. Initiation" (October 1945), "The Master Chapter Plan" (April 1945), "F.F.A. Loans to Members" (August 1944), "A State Contest in Chapter Procedure" (April 1944), "I Rise to a Point of Order" (December 1944), and "Fun Feeds Are Popular" (May 1946).

Future Farmer projects in cooperation and community improvement are especially fruitful. A few include "Chapter Sponsors Pasture Improvement" (January 1946), "Future Farmers Control Grubs" (July 1944), "Chapter-Owned Hay Bales" (March 1945), "Cooperative Marketing of Turkeys" (September 1944), "The Kentucky Future Farmers Cooperative" (January 1945), "Iowa Falls Duroc Breeders Association" (March 1945), and "A Venture in Cooperative Marketing" (December 1944).

In the area of young farmer and adult education, excellent ideas are found in "Planning Instruction for Young and Adult Farmers" (September 1944), "The Future in Adult Education" (November 1944), "An Entire Community Goes to School" (November 1944), "Education for Living" (August 1945), "Community Food Processing in Georgia" (January 1945), "A Cooperative Program in Farm-Family Living" (December 1945), "A Long-Time Young Farmer Program" (August 1945), "Meetings of Young Farmers and Homemakers" (April 1945), and "Three Vital Needs" (June 1945).

For teacher improvement "The O.A.T.V.A. Program" (April 1945) had suggestions as has "A Functioning District Program" (April 1946), and "Meetings of Teachers of Agriculture" (April 1946).

What a program each teacher would have were he making use of all the suggestions found in this extended list of articles. To the teachers in the field, the usual question is repeated, "How much are you using our magazine?"

No doubt many a reader of this article has been surprised at the number of suggestions, the richness of content found in our magazine. It should be a service paper to all of us. The important step is to discard the old and accept the new—the same trait in human nature that teachers of vocational agriculture are trying so persistently to change in the practices of farmers. Only now the application is in reverse.

What are you going to do about it?

A Broader Responsibility for Teachers*

CHARLES E. MANWILLER, Department of Curriculum Study, Board of Public Education, Pittsburgh, Pennsylvania

DO WE need a new orientation of our teaching personnel? Has tenure made us self-complacent or has it helped us to keep our minds on our children and not on "holding the job?" Have we gotten old on the job? There are those who say we fail to understand children.

Listen! One of your critics speaks—"The average modern teacher is still a purveyor of subject matter or an artisan with a bag of tools and tricks," says the Division of Child Development and Teacher Personnel in a report published by the American Council on Education. There is still too much "lip service" in our schools and not an adequate understanding of our pupils. Pupil maladjustments are created out of such factors as (1) requiring children to learn things inappropriate to pupil abilities, developmental levels, adjustment problems or motivation. (2) requiring them to behave in ways that are inappropriate to their backgrounds and physical conditions, and (3) seeking to control their behavior by humiliating means before their classmates.

Now listen to one of our own teachers†—"I have taught in high school for 10 years. During that time I have given assignments, among others, to a murderer, an evangelist, a pugilist, a thief, and an imbecile.

"The murderer was a quiet little boy on the front seat who regarded me with pale blue eyes; the evangelist, easily the most popular boy in school, had the lead in the Junior play; the pugilist lounged by the window and let loose at intervals a raucous laugh that startled even the geraniums; the thief was a gay-hearted Lothario with a song on his lips, and the imbecile, a soft-eyed little animal seeking the shadows.

"The murderer awaits death in the state penitentiary; the evangelist has lain a year now in the village churchyard; the pugilist lost an eye in a brawl in Hong Kong; the thief, by standing on tiptoe, can see the windows of my room from the county jail, and the once-gentle-eyed little moron beats his head against a padded wall in the state asylum.

"All of these pupils once sat in my room, and looked at me gravely across worn, brown desks. I must have been a great help to those pupils—I taught them the rhyming scheme of the Elizabethan sonnet and how to diagram a complex sentence."

How many of our vocational teachers are aware of moral values inherent in their shops, laboratories, or classrooms? Do they see the total picture of the forces which operate under their very eyes? Let

* Excerpt from "Newer Emphases in Education Today"—a paper presented before the meeting of Vocational and Practical Arts Teachers in Harrisburg, Pennsylvania, on December 26, 1945.

† "I Taught Them All," *The Clearing House*, October 1944, p. 111.

them study the forces for good or evil which bombard the children daily, hourly. Let them study via sociograms the forces of acceptance, rejections, etc., in the class, the school, the community. Here are the things that are perhaps more permanently educative than the skills which are frequently emphasized at the expense of morals and character.

Moral Disintegration Must Be Checked by Teachers

The world is suffering from moral disintegration. In Europe, the German occupation of France brought a distortion of moral values difficult for adults to set aside, and for youths it is necessary to revert to the beginning of learning. Illegality and lies in the underground became the order of the day. Aliases and false identification papers became a part of living and existence. Half of France hiding the other half. It was silence or lies. Children now are called upon to substitute honesty, loyalty, and truth for deceit and trickery. Their moral problems are confused. Here character building must begin anew.

In the United States, babies born in wartime will soon be in kindergarten or grade one. Many of these have been growing up with fathers absent, mothers working, homes unsettled. They will need much understanding by teachers. What is their background of friendliness, of fun, of play? How do they express their satisfactions or unhappiness by their behavior? Is it sulking, shyness, destructiveness? How much self-discipline do they have?

Grim statistics of increased juvenile delinquency and crime point to the breakdown of the home, and the parental indifference toward junior problems, and the need for activities which account for more controls of Junior's time. In theory, the home should be responsible for Junior's schedule after school hours, but the teen-ager is on his own after school. Even at breakfast he shifts for himself and has a cup of coffee and cigarettes at the corner "dive" or drugstore. It is alarming to see this picture even before the opening of school, to say nothing of the thousands of youngsters who may be seen on the streets of any town after dark.

What Can the School Do?

Is this the school's business? Some educators think so, and therefore are planning a continuous school program of study, work, recreation. One hears of movie clubs, broadcasting stations, sports clubs, etc., to function all year, summer and winter. Activities programs are used to teach citizenship, social orientation, responsibility, getting along with other

students, business principles, parliamentary law, democratic government, finances, business experiences thru student-operated cafeterias and garages.

Man's biggest enemy today is man himself. Science has provided tools for progress as well as tools for destruction. If only the moral principles of the Great Teacher could be lived by all peoples of the earth there would be peace on earth and good will toward all men. The teacher's challenge is to help bring about faith and purpose in life, to elevate the dignity and respectability of man, to exemplify and teach truth, justice, peace and mercy for all races of mankind having God as Father and men as brothers everywhere.

Of course we want our students to know the latest in metals, plastics, labor-saving devices, aeronautics, electronics, television, and textiles. It is astounding, for instance, to learn what is ahead of us in the manufacture of textiles. In Milltown, New Jersey, cotton is fed to a machine, and cloth comes out at the other end without spinning or weaving. More than two million yards will be produced this year. A plastic binder holds fibers together. It is non-spun and non-woven—a revolutionary step in textile industry.

"Masslinn" is used for toweling, diapers, milk filters, shoe and coffin lining, tablecloths, window curtains.

"Webiril" is used for tea bags. It can be stitched by heat and pressure. No sewing is required.

"Resloom" treatment prevents shrinking, tailors better, is more resistant to wrinkling, and wears longer. Wool suits can be washed with Monday clothes.

The Merlon treatment gives cotton a wear-resistant finish. Bed sheets at 5 cents a sheet extra are expected to double time in wearing qualities.

"Lytan" keeps trousers from bagging at the knees and prevents shininess in serge.

Other chemicals help resist mildews, moths, and fire.

"Velon" and "Vinyon" will give nylon a race for sheer hosiery.

"Aralac" is a fiber from cows' milk woven into felt hats (15 percent).

Now, let us not forget that men and women work with textiles but textiles also work on us. Out of this area alone will come social, economic, and moral problems which youth must help to solve. We live, indeed, in most extraordinary times—days of strange and violent possibilities.

The One Great Objective

The one great objective for education today is toward man's attempt to govern himself. With all the youth problems involving misdemeanors, crime, drinking, sex, delinquency, strikes, intolerance toward races and creeds resulting from broken homes, adult neglect, patterns set by adults and agitators, is it any wonder that the effectiveness of the teaching of the social studies as to method and content are being challenged?

Our schools are not very democratic as a rule. Students have little voice in formulating school policies which they are expected to enforce or uphold. They are not consulted as to the type of school community they would like to see, nor do they derive the experiences, thrills, or benefits of techniques of social planning for their little democracy which they call school. These schools are not in a sense considered training grounds for democracy.

As to the content, Professor Bailey of Stanford believes it difficult to teach the truths in history to youths. "Nurtured on Flash Gordon, weaned on Dick Tracy, taught to read by the funny books, to think by Walter Winchell, the American youth must have his history with a snap and a punch." "Unhappily the truth is often dull, and seldom comes adorned in a low-cut gown and heralded by a brass band."

Dr. Nicholas Murray Butler in his annual report January 25, 1945 stated: "The fact is that the history of the United States from the settlement of this continent down to the present day is probably now the most important subject of study in the whole field of modern history. This is not because it is American, but because it illustrates and reveals the operations of the Federal principle to which the coming world must look for prosperity and for peace."

History cannot take the whole burden for doing this job. Peace around the dinner table and peace in the shop can be learned in school and in the home. The home must be more than a filling station. Mr. Yen, a Chinese educator, expresses this thought as follows: "We are all talking these days about world council, world court, international police force. They all have an important place, but they are only superstructures, and unless they are built in the hearts and the minds of the people, backed by the intelligence and the conscience of the masses of the world's peoples, they are doomed to fail as they have failed before. We must not only organize the world for peace; we must also educate the world for peace. Peace, to be lasting, must be built on the people. . . ."

Foundations for Government

Yes, once again we have slain the dragon—war. Each time his threat becomes more devastating, paralyzing, costly in human life and property, and more demanding in its effort to force a decision for mankind as to whether humanity shall learn to solve its problems peaceably or ultimately succumb to utter destruction. When we are told that two-thirds of the inhabitants of the globe may be destroyed in a brief moment and without warning, when physical scientists, who created the greatest destructive powers yet achieved, appeal to social sciences, politicians, and statesmen to control social tensions, nationalisms, and economic forces so as to prevent another war, it is urgent that each of us do his part to bring about peace on earth. Who would not substitute individual or collective sacrifices for complete annihilation?

Doctor Langmuir, Nobel prizewinner in chemistry and associate research director for General Electric Company, told the Association of Cambridge Scientists that it would be only three to four years before Russia could eclipse our

stock pile of atomic bombs—"She will have a greater stock pile than we will have within 10 years. What we must do during the next two years is to lay the foundation for a real world government."

There is a revolution in global thinking. All domestic problems are beginning to be scrutinized in the light of world problems and intercultural effects. This is being worked out by countries seeking self-determination in a world where the masses of people are not yet free. As Senator Morse recently stated, peace is constantly jeopardized by nationalist thinking. The atomic bomb outlaws the balance-of-power politics on the world scene.

Emphasis on Democracy

Mr. Philip Cummings recently said that the G.I. is an internationalist, but he also wants us to emphasize America while we study Russia, France, and other countries.

In a special session of Congress on July 4, 1861, Abraham Lincoln said: "It is a struggle for maintaining in the world that form and substance of government whose leading object is to elevate the condition of men—to lift artificial weights from all shoulders; to clear the paths of laudable pursuits for all; to afford all an unfettered start and a fair chance in the race of life." This is truly a worthy objective for public education if it is to be a democratic process for all the children of all the people.

Our Responsibility

Our future emphasis must be not only on skills, but (1) on maintaining national security in an unpredictable world; (2) in civic progress for the best interests of all races, creeds, and colors; (3) on initiative, responsibility, health and character of each individual; (4) on perpetuating the democratic way of life; (5) along with developing skills to distinguish truth from propaganda and to expose "isms" and race hatred; and (6) on the humanities to preserve and improve our spiritual values and our faith in individual liberty.

We must give up emphasis on the credits and mechanics of education. We believe that all education is self-discipline which comes thru application, group participation, and skillfully guided discussions.

The acid test of a school system is the effectiveness with which our pupils cope with problems of life all along into adulthood.

The best curriculum draws upon not one, but many functions (physical, mental, social, emotional) of growth curves.

The best teacher recognizes different rates of maturation and of learning for her children; she realizes that retarded children show greater difficulty in meeting life's problems as they grow older; and she realizes physiological limits for her pupils.

The best lesson is one which makes the child less dependent upon adults and leads him toward solving his own problems independently.

Have we lost sight of the Great Teacher, who showed us the value of a life of service and sacrifice? Where is our faith? We must rededicate ourselves to our profession. We have power, inherent power to change mankind, if we will.

Farmer Problems in the Years Ahead*



W. I. Myers

BECAUSE of the chance for individual judgment unswayed by mass psychology, farm people are a bulwark in society, the nation's largest group of independent citizens. The farm operator, as both capitalist and worker, is the connecting link between conflicting groups.

However, family farms will survive only if they can compete successfully with corporate and other forms of organization in years to come. If they are to continue their dominance in agriculture, there must be free public education at all levels, publicly supported agricultural research thru the Land-Grant colleges and experiment stations, and cooperative organizations giving equality of opportunity with corporations in marketing and purchasing.

"A reasonable equity in financial returns and levels of living is necessary between farm operators and industrial workers." There is danger in carrying government price supports of individual farm products too far and it would be better to taper off such supports and end them soon. Farm prices will continue to follow the trend of the general price level, and "even if farm prices are unfavorable, strikes by farmers are impractical because of the biological basis of agricultural production."

A six-point program toward solving the problem of equitable farm incomes includes: (1) government programs to reduce the violence of price level fluctuations; (2) government encouragement of private enterprise to maintain high levels of productive employment; (3) free communication, which is necessary for the knowledge of relative employment opportunities; (4) programs to make farming attractive to an adequate number of able young people; (5) the use of agricultural productive capacity to promote a better diet for all people; (6) educational opportunity equalized for rural and urban youth.

"In spite of opportunities in farming and rural industries, it seems probable that perhaps half of our rural boys and girls will seek jobs in unrelated occupations," and it is difficult to provide adequate educational facilities for these young people. The high schools and colleges are to be congratulated for their specific training in farming and home-making fields, but there is a need for nonrural vocational education so that farm boys and girls may compete successfully with city children as skilled workers.

As remedies for the present inadequacy, there should be greater cooperation between rural high schools in providing a wider variety of vocational

*Summary of Statement by W. I. Myers, Dean of the New York State College of Agriculture at Cornell before the Annual Meeting, Agricultural Section, American Vocational Association, Buffalo, February 8, 1946.

Methods of Teaching

GEORGE P. DEYO

Teaching Job Simplification in Agriculture

RAY L. BRIGHT, Teacher, Millheim, Pa.

A NEW and challenging teaching situation is developing for teachers of vocational agriculture. Throughout the war, farmers were asked to produce more food with less manpower and with limited equipment. By long hours and hard work they achieved the goals set for them. The contribution of vocational agriculture to the record-breaking production is well recognized. Farm machinery-repair courses conducted under the Food Production War Training program kept thousands of irreplaceable machines from the scrap pile. Other courses in food production added to the fundamental skills necessary to maintain a high level of production. New machines will soon be available, but the outlook for farm labor at wages the farmer can afford to pay is less certain. Machine costs will doubtless be higher and farm-produce prices lower. It becomes apparent, then, that in the near future an important concern of all farmers must be to make the most efficient possible use of labor and equipment.

Job efficiency has been an important part of industrial management for decades. Mass production methods such as those used in the automotive and aircraft industries are the result of diligent studies in labor-saving methods and devices. By continuous study of the work methods of employees and the adoption of labor-saving devices and practices suggested by the study, industry has continued to increase the efficiency of each worker. The technique by which job operations are studied and analyzed for the purpose of improving efficiency, time consumption, and results is called job simplification.

Within the last few years, agricultural leaders have become aware of the possibilities for increasing the efficiency of farm workers by employing the technique of job simplification. Specially trained workers, in cooperation with the U.S.D.A., have conducted studies in farm job simplification. The findings of these investigators over a wide range of job operations prove conclusively that farm jobs can be simplified and done more efficiently. Teachers of vocational agriculture are in an excellent position to convey this knowledge of farm job simplification to high-school boys as well as to young and adult farmers in their classes by integrating job simplification with the entire program of instruction in agriculture.

(Continued on page 229)



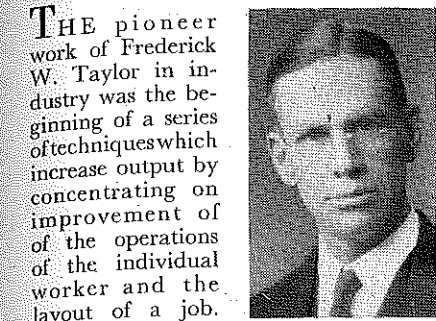
Ray L. Bright

THE DAIRY ENTERPRISE

- Can the number of elements of a job be reduced, leaving out some of the details?
 - Are pastures carefully planned to reduce steps in feeding? Pastures provide good feed with minimum labor.
 - Is running water provided for the dairy herd? Pumping water by hand is inefficient and tiresome. "When water is pumped by hand the trough is always empty."
 - Are cows provided with individual fountains? This convenience reduces labor and increases production.
 - Are calf pens equipped with running water? Running water in the calf pens will save many hours of labor each year.
 - Does the milkhouse contain water-heating equipment? Carrying hot water from the house is dangerous and time consuming.
- Can some of the details or elements of a job be combined?
 - Are grain carts filled directly from overhead storage thru spouts? Bagging and carrying concentrates is time consuming and tiresome.
 - Is the silage cart filled directly from the silo? Throwing silage on the floor and then shoveling it into carts makes unnecessary work.
 - Are extra trips from the cow stable to the milkhouse avoided by taking the milking equipment on the way to the barn? Cows respond to a fixed routine by a more rapid flow of milk. This reduces milking time.
- Can the order of doing jobs or elements of jobs be changed?
 - Is there a fixed procedure in stabling, feeding, and milking the herd? Finishing milking chores first avoids contamination.
 - Are cows tended and milking chores done before the livestock chores?
- Are feeds, supplies, and equipment conveniently located to reduce travel to a minimum?
 - Is there water-heating equipment in the barn to provide warm water for bathing udders? Tools should be kept near the place where work begins.
 - Is there a convenient place for each fork, shovel, and broom used in cleaning the stable?
 - Are grain spouts and hay chutes provided in feed centers?
- Can buildings, lots, doors, or gates be rearranged or relocated for greater convenience?
 - Is the milkhouse conveniently located with respect to the cow barn? A saving of 125 minutes daily and 10,655 feet of travel is reported as a result of changes made in a 22-cow dairy.
 - Are doors arranged to provide direct travel to milkhouse and other work centers?
 - Is the stable arranged to eliminate excessive travel in doing milking and feeding chores?
- Is the equipment adequate and suitable for the job?
 - Are approved electric fences used to enclose temporary pastures and cattle lanes? Electric fences are quickly erected and more reliable than other temporary ones frequently used. Use only approved fences for the sake of safety.
 - Is the water supply adequate to meet the demands throughout the year?
 - Is adequate water-heating equipment provided to care for dairy utensils? A 30-gallon electric heater will supply enough hot water for a 20-cow dairy farm.
 - Are mechanical milkers used? Rapid, mechanical milking can reduce milking time 50 percent. One unit is recommended for each operator for four-minute milking.
 - Are feedcarts large enough to feed the herd from a single filling?
 - Is adequate provision made for the removal of stable manures? Gutter-type conveyors or litter carriers are a means of reducing time and effort in keeping stables clean.
 - Is a ramp provided to permit dumping of stable manures from wheelbarrow into spreader? Manure should be hauled directly to the field when possible. Dumping manure directly on the spreader saves one hand operator.
 - Are barn and milkhouse provided with adequate electric lighting? Light circuits should be arranged to avoid overloading and voltage drop. All parts of the barn should be well lighted.
 - Is adequate equipment provided for cooling milk? Spring-water cooling is allowed by some milk dealers but much stirring is necessary. Surface coolers require extra sanitary measures to insure sanitation. Ice cooling requires extra labor. Electric cooling is now the recommended practice.
 - Is adequate cleaning equipment available for cows? Brushes, clippers, pails, and cloth to keep cattle well groomed should be kept at a convenient place.
 - Is there a well-equipped, first-aid cabinet in the barn? Equipment to treat injured operators or animals may save time and possible infection.
- Can hand jobs be made less tiring?
 - Are milk benches provided for hand milking when necessary? A three-pronged fork is not suitable for handling straw, or a garden spade for scooping grain.
 - Are tools on hand suitable for the job?

Some Subject Matter in Farm-Work Simplification

F. W. LATHROP, United States Office of Education, Washington, D. C.



F. W. Lathrop

THE pioneer work of Frederick W. Taylor in industry was the beginning of a series of techniques which increase output by concentrating on improvement of the operations of the individual worker and the layout of a job. This approach led to astonishing results in improving the effectiveness of factory workers. Greater output per worker in agriculture has come thru changes in the size of business, higher yields, more mechanization, and better organization. On the other hand, many of the variations in labor accomplishments cannot be explained by these factors.

During the war period the shortage of farm labor forced us to find easier and better ways of doing farm jobs. We discovered that much time was being wasted in dairy, swine, and poultry chores, hay harvesting, and many other farm jobs. Farm-work simplification has taken its rightful place as an important element in farm management.

Job-Methods Training

During the war, the "Training Within Industry" section of the War Manpower Commission developed as one of the courses of instruction "Job Methods Training." The course was described as "a practical plan to help you get more and better work done in less time and with less effort by making the best use of the manpower, materials, and equipment now available."

The agricultural extension service of the United States Department of Agriculture conducted several 30-hour institutes in different parts of the country for extension leaders. Dr. L. J. Vaughan and Mr. Herman Welsh were responsible for applying Job Methods Training to farm-work simplification.

The Farm-Work Simplification Project

In order that there might be a headquarters for the general direction and co-ordination of the studies needed in farm-work simplification, a grant of funds was made by the General Education Board. Dr. E. C. Young, dean of the graduate school, Purdue University, was named director of the national project. Purdue University accepted the grant of \$87,400 with the understanding that it would be used for the organization of research in farm-work simplification on a cooperative basis in about 12 land-grant colleges throughout the United States.

The primary objective of the national project was to subject the work of agricultural laborers (their physical activity, work methods) to scientific study and analysis with the thought of developing improved, more effective ways of doing the many jobs associated with agricultural production.

Extension Farm Labor Circular No. 21, entitled Farm Work Simplification issued by the United States Department of Agriculture includes the following table which gives an outline of what has been accomplished in the states:

State	Commodities studied
Colorado	onions, potatoes, sugar beets
Florida	beans, celery, potatoes, tomatoes, land clearing
Illinois	beef cattle, sweet corn
Indiana	hogs, poultry, tomatoes
Kentucky	tobacco
Massachusetts	celery, lettuce, tomatoes
Minnesota	dairy
Nebraska	hay
New Hampshire	dairy
New Jersey	potatoes, poultry
New York	apples, beans, corn silage, dairy, hay, potatoes, poultry, tomatoes
Oregon	beans, potatoes
Vermont	dairy, corn silage, hay
Washington	apples, barn arrangement

Some Types of Farm-Work Simplification

Dairy-barn chores: (Vermont)

In the summer of 1942, Vermont began a study of efficiency in the dairy barn using methods and procedures developed in industry. Vermont Bulletin 503 shows how a 22-cow barn was reorganized and labor-saving methods introduced. Two hours of time and 2 miles of travel were saved per day.

Harvesting hay: (New York)

Detailed time studies have been made for two seasons. Some of the results were reported in a leaflet entitled, *The Buck Rake Saves Time and Effort in the Hay Field*.

Pork production: (Indiana)

To determine easy and effective ways of doing the various jobs involved in pork production. Bulletin 506, 1945, Purdue University, is entitled *Simplifying the Work and Management of Hog Production*.

Apple picking: (Washington)

A method of study whereby details of picking methods could be recorded was worked out. As a result recommendations for changes in picking methods and equipment were made. The study was reported in the proceedings of the Washington State Horticultural Society for 1943. The State College of Washington published Extension Circular 67, *Suggestions to Apple Pickers*.

Feeding beef cattle: (Illinois)

Methods of preparing feed, distributing feed, and hauling and spreading manure have been studied on several farms in the principal cattle-feeding areas. A mimeographed report of the study was prepared.

Vegetable growing: (Massachusetts)

Studies of harvesting and packing lettuce, marketing tomatoes and celery, silage production and silo filling were made. Mimeographed reports were issued.

Tobacco production: (Kentucky)

Virtually all of the work-simplification-research techniques were employed in

Meet Your New Business Manager

DELAYED is this announcement of the election of W. Howard Martin as business manager to succeed Dr. G. F. Ekstrom, the editor-elect. Mr. Martin, supervisor and teacher-trainer in Vermont for the past decade, and special editor of the magazine for several years, is well known to our regular readers. A Vermont product, his graduate work done at Cornell University, Mr. Martin has won deserved recognition in New England by his professional leadership. The business affairs of the magazine will be in good hands during his term of service.



W. Howard Martin

studying the major operations in the production and harvest of tobacco. Several leaflets and reports were issued.

Some Available Material

Successful Farming. Meredith Publishing Company, 1700-26 Locust Street, Des Moines 3, Iowa:

September, 1945. *Chore Clinic for Hog Raisers.* L. S. Hardin and J. W. Oberholtzer.

October, 1945. *Chore Clinic for Dairymen.* Ivan R. Bierly, Cornell University.

November, 1945. *Chore Clinic for Poultrymen.* Ivan R. Bierly, Cornell University.

December, 1945. *Less Toil in a Day's Work.* C. E. Hughes.

(Reprints on these articles can be obtained.)

Country Gentleman, Philadelphia, Pennsylvania:

December, 1945. *Assembly Line Feeding for Beef.* J. F. Schaffhausen. Working drawings are available. Send 10c to Architectural Editor, Country Gentleman, Philadelphia 5, Pa. Ask for 1029-CG.

How to Get More Work Out of a Shovel. Folder published by The Union Fork and Hoe Company, Columbus, Ohio.

Farm Time Savers. Bulletin published by Sinclair Refining Company, 630 Fifth Avenue, New York 20, N. Y.

Obtaining State Publications on Farm-Work Simplification

The author has collected a large number of recent state publications on farm-work simplification. These are not generally available outside the states where issued. However, it would be possible for the author to obtain 50 copies of many state publications. He could send them to the person in a state, possibly the subject-matter specialist, who is designated by the state supervisor to receive them. Then in a given state, some method of obtaining desired publications or duplicating them for teachers could be worked out. Please write the writer if you are interested in such a plan.

The Good Teacher of Agriculture

ARTHUR FLOYD, Teacher-Trainer, Tuskegee Institute, Alabama

ONCE in a blue moon a few students complete all of the requirements for graduation from our teacher-training courses in agriculture. Because of the selection, guidance, and performance of this relatively small number of graduates, they may be put under the grouping of *excellent* when considered as prospective teachers of vocational agriculture. For this small number of teachers, no effort will be made to suggest criteria which an employing agent may use in considering them for placement. It has been the writer's experience that the large majority of students who graduate from the teacher-training classes in agricultural education would fall under the headings: (1) Good, (2) Fair, (3) Poor, (4) Unsatisfactory.

No attempt is made to define these arbitrary headings. Their meanings are to be taken in a broad, general way which will indicate only a grouping of characteristics that are common to the four types of teachers under consideration. In an attempt to formulate standards with which to measure a prospective teacher of vocational agriculture in order to classify him, one is immediately faced with many subjective factors that defy objective measurements. In setting down the characteristics under the headings named, no effort is made to list them in their order of importance. It is very likely true that, in any individual prospective teacher, the factor named as most important in considering him for employment may not have been as important in the evaluation of another prospective teacher in the same group.

It is the writer's thinking that, by and large, the trainee who completes the requirements for the job as a teacher of vocational agriculture to be considered *good* should have the following minimum qualifications:

I. Good—

1. Farm reared or its equivalent
2. No major physical handicaps
3. Satisfactory attitude (positive sense of humor)
4. Above average in ability and performance of academic assignments and requirements
5. Rank in upper three-fourths of class in agricultural offerings
6. Interested in making a career as a teacher of agriculture
7. Exhibited initiative and was aggressive in work assignments (work related to agricultural practices)
8. Takes suggestions gratefully and catches on with minimum of instruction and assistance
9. Sober in social habits
10. Has satisfactory ability to become adjustable and adaptable to situations
11. Desirous of growing professionally
12. Trustworthy
13. Unlimited energy and desire to get the job done
14. Satisfactorily completed all requirements for graduation in the prescribed course
15. Shows evidence of being willing to work with associates
16. Shows evidence of desiring to render full and worthwhile service to the people he is to help by exemplary teaching and living

Those who may fall under the group-

ing as a *fair* teacher of vocational agriculture should have at least the following minimum qualifications:

II. Fair—

1. Farm reared or the equivalent
2. No major physical handicaps
3. Satisfactory attitude
4. Average in ability and performance of academic assignments and requirements
5. Rank in upper half of class in agricultural offerings
6. Interested in doing a good job as a teacher of vocational agriculture
7. Did a fairly satisfactory job in carrying out work assignments
8. Takes suggestions and benefits from instruction
9. Sober in social habits
10. Considerate in working with others
11. Completed requirements for graduation from prescribed course

The characteristics of those falling under the headings as *poor* teachers of vocational agriculture would be:

III. Poor—

1. Farm reared or its equivalent
2. No major physical handicaps
3. Questionable attitude toward work
4. Below average in ability and performance of academic assignments and requirements
5. Rank in lower half of class in agricultural offerings
6. Has difficulty in carrying out work assignments in agriculture.
7. Only slightly benefited from supervisory instruction and assistance
8. Social habits questionable
9. Gives little or no importance to work
10. Considers the job of teaching vocational agriculture as only a means to an end
11. Has little or no ambitions to progress on the job
12. Barely completed requirements for graduation

And that other large number of students who take the course in agricultural education in spite of our major efforts at better guidance and who fall under the heading as *unsatisfactory* for teachers of vocational agriculture would have some or all of the following undesirable characteristics:

IV. Unsatisfactory—

1. Insufficient farm background
2. Below average in ability and performance of academic assignments and requirements
3. Rank in lower half of class in agricultural offerings
4. Fail to benefit materially from supervisory instruction and assistance
5. Social habits questionable
6. Unadjustable and unadaptable to work situations
7. Negative inclination to work with associates
8. Untrustworthy
9. Working only for the pay check
10. Incompleted or barely completed requirements for graduation.

Many teachers now employed would fall into the last two groups because of the shortage of teachers resulting from the draft, and teachers leaving their jobs to enter other vocations. There has been a great lack of desirable trainee material in recent years.

Reprieve

C. J. CHALLEY, Teacher, LaMoure, North Dakota

TO TEACHERS

whose classes require the use of a large assortment of bulletins, reference books, papers, reports, magazines, tools, rulers, chairs and tables, the problem of keeping the room in order repeatedly presents itself. The following procedure was found to be a great help.



C. J. Challey

"Please put your chairs in place!" "Put your bulletins away!" "Clean off your desks and put away your notebooks!" "Do not lean back on your chairs!" "Put your tools back on the tool board!"

To the teacher of vocational agriculture such expressions ring with familiarity. The close of the class period and the end of the school day often are "celebrated" with the monotonous ritual above, or it ends with the teacher's "rounds" of putting things in order. In either event, it proves no boon to the disposition, and surely it is time consuming.

Tired of the repetitious oratory and weary of the physical exertion, an idea dawned on me. Why not put this thing on a self-government basis? Classes in agriculture and F.F.A. members were enthusiastic. Together we worked out a list of common violations and set up small fines. There would be no "squealers." Each member would be a one-man F.B.I. to apprehend and enforce the law, for this is the kind of citizenship and cooperation an F.F.A. member should understand. No doubt funds collected would find a worthy use.

Boys in the farm-shop class soldered two tin cans end to end and cut a slot. Around this container they attached a label bearing the various shortcomings and the amount of the fines. This they hung on the wall in the front of the room. In a little paper box nearby was placed a supply of mimeographed slips which have a space for name, violation, and the fine. When caught in a violation the offender must fill in a slip and drop it into the slotted container. Collection day was the end of each six-weeks period.

Fines included the following:

Borrowing a pencil	.05
Failure to return pencil	.05
Going back to the other building for books, supplies, etc.	.05
Tipping over in a chair	.10
Leaving chair out of place	.05
Leaving books, bulletins, papers, references, etc., on tables	.05
Unexcused absence	.15
Eating peanuts in class	.10
Going to sleep in class	.10
Putting wastepaper in drawers	.05
Profanity	.25
Passing notes, etc.	.05
Not putting tools away	.05
Not cleaning up mess	.05

One year's operation of the plan reflects its merits. Students were anxious to start the program again last fall. Apparently they like this system which keeps them "on their toes." Silenced is the instructor's perpetual preaching, and so—a reprieve from nagging.

Job Simplification

(Continued from page 226)

Integrating Job Simplification With All Instruction

In a recent study of current methods of teaching farm job operations in vocational agriculture, a lack of attention to efficiency was apparent. Lessons were found to be built around fundamental skills in the customary fashion with no consideration of labor efficiency. Since it is common practice to divide enterprises into jobs for the purpose of instruction, a definite procedure may be adopted to determine specific ways to make improvements in work methods. An analysis of each job as it is done will reveal possible plans for improvement. The general principles of job analysis may be applied in three stages:

Stage I. *Break a job down into its elements.*

Every walking step to and from a job as well as every element in the operation should be recorded and the entire operation timed.

Stage II. *Compare methods and accomplishments.*

Every farmer should compare his time, travel, and technique in performing a given operation with that of his neighbors to discover quicker and easier methods to do the job.

Stage III. *Question the details of work methods.*

In order to find likely spots for improvement, an outline of the job just as it is done should be made. The farmer should ask himself this question—Is there an easier, quicker, simpler, or less-expensive way to do an equally good job?

Checking each job and each element of a job against such questions as the following may point out weaknesses.

1. *Can the number of elements be reduced, leaving out some of the details?*

Example: Using individual fountains in the dairy barn is an example of how the number of elements in the job of providing water for the herd may be reduced.

2. *Can some of the details or elements of a job be combined?*

Example: Filling the silage cart directly from the silo is an example of how the elements in the feeding operation may be combined.

3. *Can the order of doing jobs or elements of jobs be changed?*

Example: A fixed procedure in feeding, stabling, and milking the herd is responded to by a more rapid flow of milk, thus reducing milking time.

4. *Are feeds, supplies, and equipment conveniently located to reduce travel to a minimum?*

Example: A convenient location for each broom, shovel, and fork used in cleaning the stable will save many steps.

5. *Can buildings, lots, doors, or gates be rearranged or relocated for greater convenience?*

Example: A conveniently located milkhouse may save miles of travel annually in performing the milking operation.

6. *Is the equipment adequate and suitable for the job?*

Example: Rapid milking with mechanical milkers can reduce milking time 50 percent.

7. *Can hand jobs be made less tiring?*

Example: Hand tools such as forks and shovels should be carefully selected for the job.

As each job within an enterprise is

Education and Individual Success

THAT national wealth and industry are dependent primarily on education and must in the nature of things become more and more dependent thereupon as civilization advances is now so obvious that further illustration is unnecessary. That individual education is an equally vital factor in individual efficiency and success in the varied walks of practical life is a matter about which the facts are not so obvious, as the occasional large successes of comparatively unschooled men and the not infrequent failures of men of much schooling have attracted disproportionate attention and obscured the more significant facts. But in recent years several studies have been made which show the influence of education upon individual success.

Who's Who in America

An investigation of the educational advantages enjoyed by the 8,000 persons mentioned in "Who's Who in America," brought out the following facts: Out of the nearly 5 million uneducated men and women in America, only 31 have been sufficiently successful in any kind of work to obtain a place among the 8,000 leaders cataloged in this book. Out of 33 million people with as much as a common-school education, 808 were able to win a place in the list, while out of only 2 million with high-school training, 1,245 have manifested this marked efficiency, and out of 1 million with college or university training, 5,768 have merited this distinction. That is to say, only 1 child in 150,000 has been able in America, with-

analyzed by the teacher with the class or with an individual, the seven preceding questions will suggest possible changes in work routines—the addition of labor-saving devices, the remodeling of buildings, or perhaps the relocation of movable structures such as chutes, fences, gates, or doors. The possible improvements discovered thru the analysis of each job may be combined to indicate improvements for the enterprise as a whole. An example showing how this may be done is supplied in the following analysis of the dairy enterprise.

The results of a teacher's effort to promote a "simplification" approach to routine farm operations will be reflected in the following ways:

1. Teaching aims will place new emphasis on efficiency.
2. Reference material will be chosen with a view to improving work techniques and reducing unnecessary motion.
3. Discussion will be directed toward finding easier and simpler ways of doing work.
4. Demonstrations will be based upon the techniques discovered by investigators in the field of this study.
5. Group activity will be so directed as to familiarize the student with established standards of work.
6. Major emphasis will be given to training students to analyze and simplify their own farm operations.
7. More time will be devoted to studying labor-saving devices and equipment.

out education, to become a notable factor in the progress of his state, while the children with common-school education have, in proportion to numbers, accomplished this 4 times as often, those with high-school education 87 times as often, and those with college training 800 times as often. If this list had been selected by the universities or school teachers, or if literary leaders only were chosen, it might easily be claimed that the apparently greater success of the educated was due to the line of work from which the leaders were selected. But the selection of the men and women in this book was not in the hands of professors, but in the hands of a firm of businessmen. They selected leaders in all lines of industry, commerce, agriculture, and other fields of practical endeavor besides the professions, and still this enormously increased efficiency and productivity of those with education was found.

In interpreting the results of this study, as in the interpretation of all of the following comparative studies of those who have education with those who do not have it, let it be understood that the remarkable superiority of the educated must not be attributed entirely to their education. Those who receive education are a selected lot to begin with. Their parents were, as a rule, persons of more than average efficiency, and hence were able to keep their children in school; they were more intelligent than the average, and therefore induced or required their children to remain in school. The child himself probably had more than average ability, else he would have wearied of the intellectual labor of the school and would have left it early. Then, too, the child of educated and well-to-do parents has more opportunity offered him to enter lucrative positions. Other influences also doubtless modify the result; but after due allowance for all these factors is made there remains still a large margin of superior efficiency on the part of the educated that one must credit to education or do violence to common sense in interpretation of the undisputed facts.

Problems Ahead

(Continued from page 225)

training, increased state and federal aid, better training for agriculture in colleges and institutes, more scholarships, and a general recognition of the importance of the best possible education—as well as experience—in training for life work.

For 1946, the following program is recommended to farmers: (1) continue over-all farm operations at about the level of recent years; (2) increase efficiency of farm production; (3) get debts in shape and keep them conservative; (4) study needs carefully before buying new machinery; (5) be prepared for a decline in farm prices from present levels during the next two or three years; (6) support sound cooperatives and other farm organizations to assist in solving the problems of marketing and production.

There is a good prospect of reaching high levels of employment and production after reconversion to a peacetime economy, and "there is a great opportunity for service for educational agencies in promoting the long-time welfare of rural people and the nation."

Farming Programs

C. L. ANGERER

The Need for Developing the Proper Incentive Toward Farming Programs

LESTER B. POLLOM, State Supervisor, Topeka, Kansas

WE LIVE in a nation generally recognized as the most progressive and most capable of accomplishment of any in the world. Proof of this is abundant as we survey the part played by the United States in the world struggle just ended. One has yet to hear a high military authority discuss the reasons for American military superiority without mentioning first the superior quality of the American soldier, sailor, and marine. There is no reason for anyone to believe they are indulging in mere platitudes.



L. B. Pollom

How can such superiority be accounted for? How much of it is inherent? How much is acquired? Attempting to answer such questions would be delving into the realm of speculation. Nevertheless, there must be reasons. In the first place the American soldier could not be superior without superior motives and incentives. They are doubtless a chief source of his superiority.

Motives Are Important

Doubtless this is true of outstanding farming programs. Seldom are they developed without motive and incentive. Probably some highly successful farming programs had modest starts, prompted by mild incentive and feeble motives. But as progress developed, the enthusiasm and interest of the boy grew to the point where thru the momentum of the incentive he was able to ride to success over difficulties, obstacles, and occasional failures.

Any experienced teacher knows boys differ in their attitudes toward farming programs. Some become interested and enthusiastic with little effort on the part of the teacher. Others would not begin a farming program were it not required. In attitude, the bulk of the enrollment is scattered along between these extremes.

The average high-school boy has no burning desires to develop initiative, resourcefulness, self-reliance, dependability, leadership ability, etc. Indeed, he is much more likely to harbor a consuming desire to be able to tackle, block, and throw forward passes on the football field, or throw a sharp-breaking curve and bat .350 on the baseball team, or run the hundred in 10 seconds on the track team. Such desires are natural and wholesome. But what has this to do with farming programs? The teacher knows that, if in some manner he can

develop in his boys a desire to build a farming program comparable to their desire to excel in athletic prowess, accomplishment is inevitable.

The desire to excel in athletics seems inherent. The desire for an outstanding farming program usually must be instilled and developed in the boy. This means the job of the teacher of agriculture is cut out for him. Teachers have been heard bemoaning the fact their boys show a high degree of interest in athletics but are indifferent to farming programs. Is this an indictment of the boy or a challenge to the teacher? The boy has demonstrated he is capable of interests. Is the teacher capable of widening his range?

Some Are "Naturals"

Occasionally one hears an athletic coach say of one of his players, "He's a natural." By that, he means he is one player in dozens or hundreds. He is one of those rare individuals who thru sheer natural ability can hit the ball over the fence. He can run, block, tackle, and throw passes on the football field superbly. He can handle the ball and shoot baskets on the basketball court with uncanny skill. He never gives a thought as to how he does it. He doesn't concern himself with the fundamentals of these skills. He doesn't need to.

Any experienced coach knows that for each "natural" he uncovers, he will have dozens, perhaps a hundred or more who, lacking such natural ability, must be patiently and laboriously taught and drilled day after day to perform the skills the "natural" does superbly without a thought of how he does them.

Occasionally a "natural" is found teaching vocational agriculture. He seems to enjoy a generous response and a high degree of success in everything he undertakes. He always has interest in his class, his shop, on field trips, in farming programs, in young farmer and adult classes, in his Future Farmer chapter and in community work. If one were to ask him how he does it, he would probably answer "I just do it."

Fortunately, or unfortunately, most of us are not "naturals." If we are to enjoy favorable response to the things we undertake, we must plan an approach. We must plan a method or technique. Such methods and techniques must be backed by a philosophy. Probably some of the best farming programs are developed by boys who do not know it is a requirement. This is due to the fact that the teacher, in presenting farming programs as a part of a course in vocational agriculture, has followed a technique that resulted in his boys looking upon a farming program as an opportunity—a

privilege rather than a requirement. It is human nature to take advantage of opportunities and privileges with more enthusiasm and vigor than one displays in fulfilling a requirement. One is inclined to exploit an opportunity to its full extent while, in meeting a requirement, one is tempted to think in terms of minimum fulfillment.

Whether the teacher enjoys wholehearted support from parents or is obliged to get along with their passive, even reluctant acquiescence, usually depends upon how he approaches them concerning a farming program for their boy. If parents have been made to look upon it as a requirement, they, too, will likely think in terms of minimum requirements.

Approach to Parents Important

On the other hand, if the teacher has caused them to look upon it as an opportunity for their boy to develop skill, initiative, confidence, self-reliance, responsibility, leadership ability, business ability, etc., all the while gaining a net worth that will constitute a start in whatever he chooses to do following graduation from high school, their generous support is almost certain. Such accomplishments are not likely without a plan of approach backed by a sound philosophy.

Probably some of the most effective farm-youth development has been brought about by teachers of vocational agriculture who, thru skillful technique, have maneuvered their boys into circumstances and situations that bring such development without the boys being conscious of it.

In farming programs, together with the F.F.A., teachers of vocational agriculture have at their disposal a pair of teaching devices that probably are not surpassed or equaled in any educational area. Unless a teacher is a "natural" these devices cannot function up to their possibilities without much thoughtful planning. Good work can be done with good tools only when they are in the hands of a skilled craftsman. One wonders if we in the field of vocational education in agriculture have yet used the farming programs and the F.F.A. to the full extent of their possibilities.

I Ought to Love My Country

I ought to love my country,
The land in which I live;
Yes, I am very sure my heart
Its truest love should give.

For if I love my country,
I'll try to be a man
My country may be proud of;
And if I try, I can.

She wants brave men and noble,
She needs men brave and kind,
My country needs that I should be
The best man she can find.

W. HOWARD MARTIN

Farmer Classes

WATSON ARMSTRONG

Techniques for Community Canning Classes

ARTHUR M. AHALT, Teacher-Trainer, University of Maryland, College Park

DURING the war, food scarcity and rationing stimulated the processing of fruits and vegetables for home use. Many families increased production in home gardens and made supplemental purchases for preservation and canning. In addition, nutritional experts emphasized, as never before, the importance of fruits and vegetables in maintaining healthful diets. While home-economics instructors, home demonstration agents, and extension specialists have advocated and taught home canning for many years, this increased interest created a demand for special classes in this field, particularly for housewives with little or no experience.



Arthur M. Ahalt

The scope of the Food Production War Training program enabled it to establish these classes. Because of the large volume of food involved and the nature of the equipment, teachers of vocational agriculture were called upon to assist in the management of such classes in cooperation with teachers of home economics.

Classes were established in many communities. Some operated more efficiently than others. Due to the limited amount of experience of instructors, difficulties were common. This summary presents techniques discovered thru a survey of successful methods of operation, as well as practical and efficient procedures that may be used in special classes of this type. These suggestions may be helpful to officials continuing this work on a permanent basis during peacetime. It also may aid those interested in a special canning program to provide food for the relief of starving Europeans.

Locating Classes and Instructors

Two groups of people are interested in canning. They are: families of full-time farmers and farm laborers who have some knowledge of canning but who need further information on up-to-date methods; part-time farming groups and others who have had little experience in canning and who need much help in planning and getting started. The advisability and possibility of establishing a class for either group in any community can be determined by a survey.

One class serving both types of groups can be operated most efficiently. It can be open in the day to part-time groups and in the evening to farm families and those otherwise occupied during the day. This permits the equipment to be used by more people and reduces overhead costs. Any space large enough to accommo-

date the maximum number of persons likely to attend at any one time, and which lends itself to an efficient organization of equipment, can be used to house a class. Vacant buildings or rooms owned by the boards of education, or others available for rent, are often found to be satisfactory. Floor space in the agricultural laboratory, if available during the canning season, may be excellent. A special building may be constructed if local conditions warrant. A start may be made quickly and with little expense by using the home-economics room or cafeteria of a public school. These rooms are not organized for this purpose and usually serve only temporarily for the instruction of large groups.

Selecting Instructors

The success of a class depends largely on the instructors selected. For the actual canning instruction teachers of home economics are excellent. Women or men with much canning experience, however, are also well suited for the job, if closely supervised by teachers of agriculture or home economics. If a woman does the instructing it may be necessary to have male help for the heavier work. In every case the instructor selected should be acceptable to the prospective trainees.

In addition to a thorough knowledge of canning, an instructor should have the following qualifications: First, and most important, he should have a pleasing personality that will enable him to work with all types of patrons; second, he must be interested and have the time needed to carry on the work; third, he must have a keen appreciation of the importance of canning for home consumption on a community basis; and fourth, he must have the managerial ability to keep the school operating smoothly.

A course of instruction on home vegetable production, taught by the

teacher of agriculture or other qualified instructor, should be the initial part of a food-production program and should precede a class in canning. This course may be held in the late winter or early spring months. Discussions or lessons should include such topics as: varieties adapted to the region and to canning; planning the home garden to produce the vegetables needed for a balanced family food budget; planting dates; up-to-date fertilization practices; insect and disease control; and proper harvesting time to obtain a maximum yield and a high-quality product.

The first meeting of the canning class is very important to the success of the program. It should be held where the canning is to be done in order to explain the classroom organization. A demonstration of actual canning is highly desirable to emphasize important procedures to be used and to point out the dangers of using improper methods.

Organization of Classroom Equipment

For the greatest satisfaction and efficiency the equipment in a community canning laboratory must be organized so that operations follow one another in an orderly routine. Tables, stoves, and other equipment should be placed so that friction between workers is reduced to a minimum. Two types of arrangements are suggested. A skeleton outline of each type is found in Exhibits A and B.

Exhibit A illustrates an organization designed primarily for large classrooms. Pressure cookers of 33- and 106-quart sizes and other large equipment are used. The large pressure cookers are operated most efficiently with steam produced by a boiler and furnace hook-up. This also makes it easy to supply heat and hot water for exhausting, blanching, pre-cooking, and washing utensils.

Washing is carried on in the sinks at the end of a table used for preparation. Filling is carried on near the exhaust box as is the sealing of cans. It is desirable to have several small pressure cookers and hot plates available for customers with small amounts of produce. Much heavy

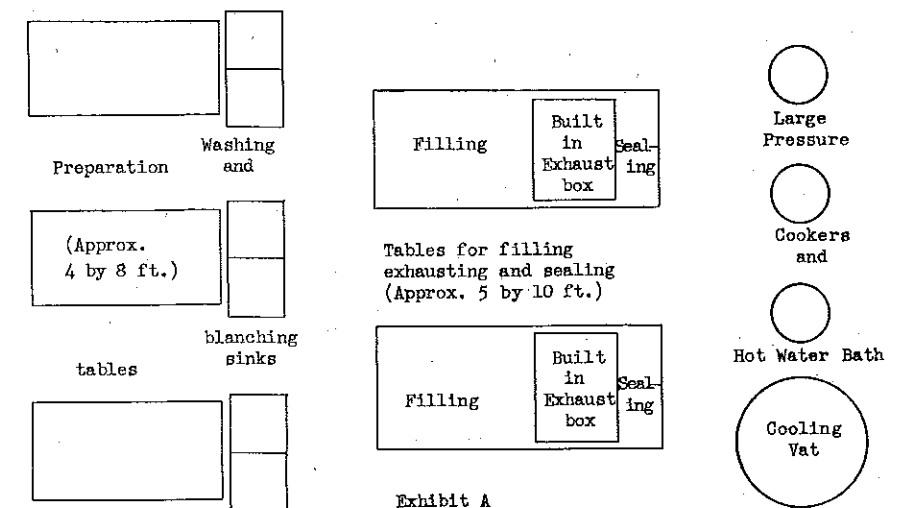


Exhibit A

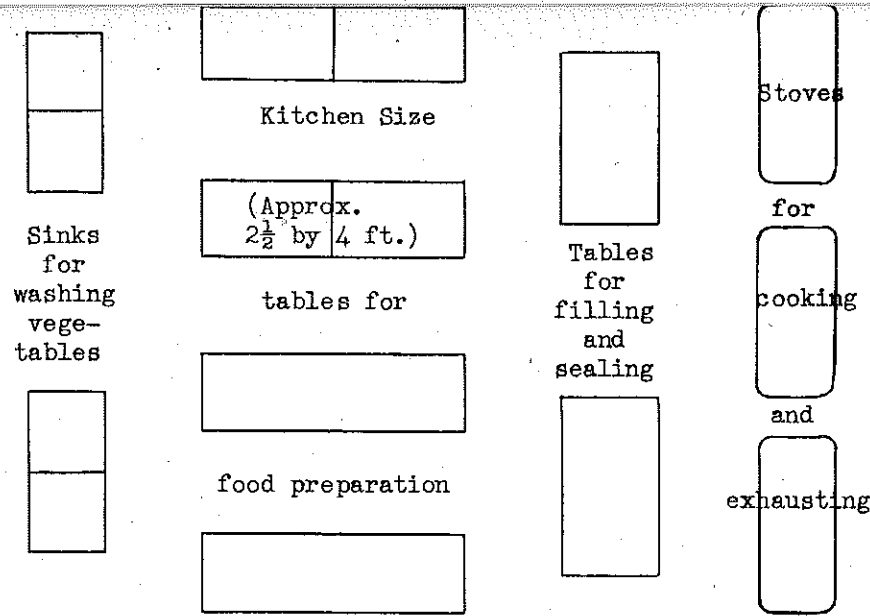


Exhibit B

lifting can be saved by having a hoist and overhead track for handling filled can racks. A ratio of 3 preparation tables to 2 filling tables is considered most desirable. A ratio of 2 to 1 can also be used. This organization is more or less permanent in nature.

Exhibit B illustrates an organization designed for small-sized pressure cookers (7 and 14 quart) and equipment for small classes. It is not permanent in nature, but may be used in getting a school started at little expense with a view to converting to a more elaborate organization at a later date if interest develops and conditions warrant. Sinks for washing can be those already in a cafeteria. Small tables, generally found in a cafeteria, can be utilized. Stoves may be electric, kerosene, or others already available. Electric hot plates or small gas stoves are excellent and can be purchased at a low cost, if additional heating space is needed. Exhausting is done on the stoves in a pan especially built for the purpose. Cooling of cans is done in the sinks or in outside water containers.

The type of organization used is dependent upon the local situation. In effecting a classroom organization an exact duplication of either type may not be possible because existing finances and facilities will not permit. Variations can be worked out, however, which give a smooth working laboratory with a minimum amount of confusion to the workers.

In addition to the main pieces of equipment, each laboratory should be provided with the necessary smaller equipment such as ladles, colanders, wire baskets, and pans. These should be stored as near as possible to the station where they are used.

Class Management

An able instructor and class will work out an efficient system almost regardless of the physical facilities. Cleanliness, safety, and the proper care of equipment should be emphasized at all times. A routine should be established whereby each patron goes thru the following distinct steps:

1. *Selecting and grading* the products to be canned.

2. *Washing* thoroly.
3. *Preparation*—peeling, snapping, cutting, hulling, etc.
4. *Blanching* or precooking.
5. *Filling* the jars or cans.
6. *Exhausting* at proper temperatures.
7. *Sealing* tightly.
8. *Marking* or labeling.
9. *Placing* cans or jars in insert baskets correctly.
10. *Processing* at proper time and temperature.
11. *Cooling* promptly.
12. *Storing* under proper conditions—neither too damp nor too dry.

Charts and signs placed conspicuously and near the place operations are performed are helpful educational devices. An example is a chart listing the cooking time of the main fruits and vegetables. Errors in cooking time may be avoided by placing a card on each pressure cooker designating the time for removal. A homemade cardboard clockface with movable hands may also be used for timing. Such charts can save much confusion, time of the instructor, and errors in operation.

Crowded conditions in classes can be avoided by preparing a schedule of starting times for the various trainees. A simple time sheet for listing enrollees' names is all that is necessary. Once established, this practice will work well. However, it is always wise to allow free time on the schedule for emergencies.

Class Instruction

Practically all instruction is of the individual, informal type. In fact, self-instruction takes place as a matter of course with trainees if the equipment is properly organized with appropriate charts or signs at the different stations. The instructor's job, then, is mainly one of checking to see that the various steps are being carried out correctly, and aiding patrons when special difficulties arise.

Group instruction can be used effectively under certain circumstances: first, and most important, to explain the use of equipment and the methods to be used in canning when a class opens; second, when a new group of patrons begin work in a class; third, in the clean-

ing and caring for equipment, and fourth, when a group of patrons are having difficulty or need help with a problem.

Improving Instruction

The learning which takes place in a class depends upon the instructor, the interest of the enrollees, and the equipment, with the greatest emphasis on the first two. Good equipment alone does not make a good course. On the other hand, good instruction and enthusiastic trainees can obtain excellent results even if the equipment is mediocre or poor.

To improve, instructors need suggestions and guidance. Local supervisors can give personal aid along these lines while visiting classes. The most forceful improvement, however, can come thru technical conferences of experienced instructors, and in workshops where new and experienced instructors actually can food in a well-organized laboratory.

In the final analysis, improvement will take place only to the extent that the instructor and trainees have the ambition to do the best with the equipment available, work enthusiastically, use ingenuity in working out methods to suit the situation, and devote the necessary time to do a good job.

Producing High-Quality Products

Several precautions must be taken to produce the best products possible. First, the goods to be canned must be of high quality. Second, only fresh products should be used and they should be canned immediately. Third, cleanliness and sanitation must be practiced with vigilance to avoid contaminating otherwise high-quality goods. Fourth, the steps outlined under class management should be carefully executed.

When patrons buy fruits and vegetables for canning classes, purchases should be supervised by a person with experience. Commercially produced goods must be examined carefully in the market to avoid those of low quality.

If the product is of high quality when canning begins, a high-quality canned product should result if the proper procedures are followed carefully. A slogan for all classes should be a *Grade A product in every can*.

Records are an essential part of the work and largely tell the story of any community canning class. Therefore, they should be kept carefully and accurately. The more simple the arrangement for keeping them, the easier they are to keep. Many instructors use large wall charts on which are recorded the name of each enrollee and the amount of goods canned each day. Others use a daybook with a duplicate slip; one to be given to the trainee and the other to be kept on file for future entry into a ledger. The records can be summarized from this ledger at a later date.

Education is the primary aim of all community canning classes. They should, therefore, be set up in such a way that learning takes place easily. Any enrollee using the facilities provided should gain a method of organization and a set of procedures that can be used effectively and efficiently in canning at home.

The continuance and expansion of a canning program for rural areas during peacetimes can well serve as a means of improving the standards of diet and nutrition of our people.

Procedure and Content of a Soils Course for Adults

HARRY AMMEN, Teacher, Hammonton, New Jersey

TEN men recently completed a 30-hour course in soils at Hammonton, N. J., given by the instructor of vocational agriculture. They included nine prominent farmers who owned a total of 1,500 acres of fruit and vegetable land in Atlantic County, and the high-school principal who was interested in farming and had a large garden. The farmers attended the 10 three-hour meetings with a 100 percent attendance, a number of the men even staying beyond the three-hour sessions to discuss further problems and to do extra work.

Two methods were emphasized in the course: the laboratory method in which each man actually carried out the work under study, and the discussion method in which problems were presented by the instructor and by the members and thought out under the guidance of the instructor.

The course included two main topics: the testing of soils for pH, phosphorus, potash, calcium, and magnesium; and the determination on this basis of lime and fertilizer requirements for particular crops which the farmers planned to grow. Each man collected soil samples from 10 representative areas on his own farm, and then tested each sample for pH, phosphorus, potash, calcium, and magnesium. Each man thus made 50 tests. In addition, the amount and kind of lime and fertilizer were determined for each representative area and numerous related practical problems discussed. At the last meeting a written examination consisting of practical problems was given and certificates awarded to the men.

The success of the course was clearly evidenced both during its progress thru the regular attendance and sustained interest of the men, and afterwards, by their enthusiastic comments and request that the course be given a second time so that a number of other farmers might have the opportunity to receive the training. This repeat class has been

organized and will be held according to the same plan.

The instructor attributes the success of the course largely to the following factors:

1. The course was clearly outlined in advance by the instructor. This outline was prepared in detail with time allotments for the various phases of the instruction worked out carefully.

2. Laboratory materials were assembled by the instructor in advance of the classes. This material was arranged so that each man was able to begin work promptly after the collection and drying of the samples.

3. Each man worked on his own samples. In this way the results which he obtained were of immediate value to him and did not represent merely a laboratory exercise. In this way, also, the essentially practical nature of the course was clearly apparent.

4. The instructor set the pace of the course at a steady, rather intensive speed. There was no time, therefore, for lagging of interest. At the same time, the men were given sufficient time for thorough and carefully performed work.

5. The instructor gave close and constant supervision to the laboratory performance of each member. This was the primary reason for limiting enrollment to 10 members.

6. The discussions were kept within the bounds of the topics under study. In no other way would it have been possible to cover the amount of work planned within the period of time available.

A program of supervised practice following the training acquired in the course is planned and in operation at the present time. A report on the results of this program will be given at a later time.

To some readers the impressive feature of this course no doubt will be the amount of laboratory work or soil testing carried on by the farmer members themselves. If you have been shying away from such practices, try it. The farmers like it.

Fourteen Years of Young Farmer Classes

R. H. HOBERG, Teacher, Ortonville, Minnesota

SINCE the department of vocational agriculture was introduced into the Ortonville High School in 1932, one or two part-time classes have been part of the yearly offerings of the department. During that time 260 young men have enrolled in the program. The first enrollees in the part-time classes did not have agriculture in high school. Only 9 percent were high-school graduates. This year, 1945-46, 20 men—all high-school graduates—are enrolled in the part-time class. Of these, 18 have had four years of agriculture as part of their high-school training. In classes held outside of the Ortonville area, the percentage of non-high-school graduates is 72, while only three boys in the group had some training in agriculture.

The following table lists the membership of the enrollees by consecutive years:

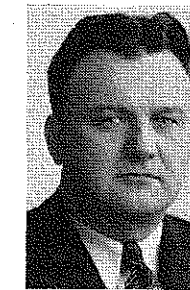
Record of Consecutive Attendance

Number of Years of Consecutive Attendance	Number in Attendance
1	75
2	60
3	24
4	15
5	14
6	12
7	10
8	1

Methods Used in Planning the Courses

The outline below gives the methods and procedures used in organizing and carrying on the courses for these young men.

- I. Planning the organization of young farmer classes.
 - A. Present the need of an out-of-school program of education to the superintendent and the school board.
 - B. Secure from the superintendent of county schools a list of graduates of the past few years within the trade area and nearby community as prospective enrollees.
 - C. Hold personal interviews with prospective enrollees.
 - D. Meet with Farm Bureau, Farmer's Union, local or other clubs and explain the program.
 - E. Write stories for local newspapers.
 - F. Send letters to farmers explaining the purpose of the course.
 1. Self-addressed, stamped membership cards that just need to be checked and returned should be enclosed.
 - a. On card set date and place of first meeting.
 - b. Ask for any suggestions.
 - G. Use key high-school graduates in agriculture as co-workers.



R. H. Hoberg



HAMMONTON ADULT SOILS CLASS

Left to right: Back row—Harry Ammen, Instructor (standing), Edward Wuillermin, Hubbard Parkhurst, Angelo Ordille, David Rizzotte, Jack Eckhardt, Paul Gillespie. Front row—Dominic Amendolia, Thomas Presti, Jr., Anthony D'Agostino, James Doyle

- H. Have F.F.A. boys help sponsor part-time classes.
- II. Place of meetings.
- High school agriculture room.
 - Rural school.
 - Farm home.
 - Town hall.
- E. Summarization of places of meetings.
- All of the above places have been used, two of which seem best. First, the high school agriculture room. Here one has all the equipment needed, the use of reference materials and film-strip machines, and many other materials which are teaching devices. Second, the farm home. This place has been used several times and is an excellent place to meet.

- At the farm home there are all the boys' problems and these can be used during the class periods. Meeting at a different home each evening covers the problems of each member. Since no two communities are alike, the place of meeting should be decided by the instructor.
- III. Class attendance.
- If there are more than 20 in one class, divide the enrollees into two groups.
 - Enables more classroom discussion to be held.
 - Obtains a better understanding of individual problems.
- IV. Selection of subject matter.
- Investigate the needs of the community.

- B. Survey interests of the young farmers.
- C. Select timely subjects.
- Current interest.
 - Fit material to coincide with other farm programs—A.A.A., F.S.A., county extension.
 - Make a list of topics and have the young farmers choose those in which they are most interested.
- V. Presentation.
- First meeting.
 - Select a council of five young farmers.
 - Select a chairman and a secretary.
 - Keep attendance records.
 - Give plenty of publicity.
 - Keep contact with all members.
 - Have young farmers select time

- of meeting and emphasize that meetings will start and end on time. (Important)
- Present a tentative plan of the meetings.
 - Methods.
 - Lecture—limit to one-half hour.
 - Discussion—have young farmers take active part.
 - Questions and answers promote group action. This is an excellent method since lectures may become too dry and uninteresting.
 - Visual aids.
 - Movies—pertaining to subject.
 - Film strips and slides made locally are preferred—obtain list from state and federal departments.
 - Charts—use only a limited amount and then only those which bring out points clearly.
 - At close of each meeting discuss briefly the material to be presented at the following meeting. Members will think about the next meeting and secure some material that they may not have, if topic had not been brought up.
 - Guest speakers.
 - Outstanding F.F.A. members.
 - Prominent farmers in community.
 - County agent.
 - F.S.A. supervisor.
 - Extension specialist.
 - Outstanding farm-company fieldmen.

- VI. Follow-up program.
- Farm practice.
 - Keep past students now in young-farmer classes increasing their farming programs.
 - Visit each farm several times during the course of the meetings and as many times afterward as needed.
 - See that each member has a long-time farm-practice program.
 - List production, supplementary, and improvement projects under each course.
 - Farm tours with class members.
 - Visit all farming programs of each member of the class, if possible.
 - Check management factors.
 - Look over new equipment and check new practices.
 - Have several follow-up meetings at the close of regular session.
 - Social functions.
 - Have summer picnic of all members and friends.
 - Serve lunch after one or two meetings. If lunch is served at all meetings they will become social functions only.

The preceding table is a tabulation giving a summary of these classes from 1932 thru 1945. Since the part-time classes for this year, as explained in Footnote 6, have been organized recently and since it is an experiment only, no final information can be given as to subject matter included. It is interesting to add that many of the part-time members also enrolled in the evening-school classes.

As a final statement in regard to the 14 years of part-time classes in the Ortonville area, there have been 19 young-farmer classes with an average attendance of 13 members. There have been 16 townships served. The total of young farmers enrolled in the 14 years is 260 farm boys.

A Rural Fair Sponsored by an Adult Class

WILLIAM H. DREIER, Teacher,
Orange Township High School,
Waterloo, Iowa

THE close of summer usually brings the display as well as harvest of farm products. Farmers and their families drive miles to visit the state and national livestock shows. They help the son and daughter prepare exhibits for the county fair and make several trips during the week to that exposition.

People in many communities believe that the average farmer and his family have little chance to actually participate in these fairs. To make it possible for a farmer to see how his corn, soybeans, and vegetables, and his wife's canning compare with his neighbor's, many communities have sponsored their own community fair or institute.

Typical of these fairs is the Orange Township Community Fair, which is being held this year as in the past, at the consolidated school, located four miles south of Waterloo. This fair is held annually in September, several weeks before the Dairy Cattle Congress and after the opening of school.

Adult Classes Plan and Conduct the Fair Each Year

The Orange fair is planned, prepared, and attended by both classes of the adult evening school. The day classes of the department of vocational agriculture are also given a chance to display their projects and to develop leadership ability in the community fair program. The fair is managed by a board which includes nine members of the evening school, the superintendent, the home economics teacher, and the teacher of vocational agriculture. The seven men and two women of the night school hold office for three years and live in different parts of the township.

In April of this year a premium list was drawn up by the fair board and sent out as a preliminary announcement of the fall fair. This catalog listed the rules and regulations of the fair, the 119 different classes in which premiums were offered, and a list of the cash prizes to be awarded.

Since the fair included livestock, fruits, vegetables, corn, grain, home-baked goods, exhibits of domestic arts and a baby contest, it was believed the people would plan their work so that as many classes as possible could be entered by each family.

Many community fairs secure the help and cooperation of the local merchants and businessmen thru the council of the evening school. A large number of the businessmen of the city of Waterloo have contributed annually either cash or merchandise for the Orange fair. An auction of this merchandise makes cash available for the premiums, which are paid during the second afternoon of the fair program. Additional funds are also available from the state department of agriculture for use as premiums.

Program of Fair Is Both Practical and Entertaining

The program of the fair is plain and practical. On the afternoon and evening

Education Essential for World Peace

The world is presently striving to build an organization that will prevent another world war from desolating civilization. It is becoming conscious that this procedure is one of sweat and tears if not of blood. It is also becoming conscious of the desperate need for haste while as yet our own scientists and engineers hold the secrets of life and death. But the building and the maintaining of the world organization calls not only for law but for education, for conditioning the mind and heart of the human race itself. We have reached a position where there is no alternative to peace, and yet we know what the wrong kind of education for young people can mean. We have seen with our own eyes what happens when the civilized code by which we live as a world order is flouted and flung aside and when youth are trained to cherish a quite different sense of values. It is not accidental that universities are among the first victims of the enemies of civilization. Their task of freeing men's minds makes them by their very nature mentally hostile to tyranny and oppression.

They are, therefore, among the potent instruments for which world cooperation must be evoked if an ordered peace is to be maintained in this new world. They and what they produce are as essential as the delegates, the conferences, the headquarters, and the common planning. There is not a university in the land that is not or will not be an instrument to help in the achievement of the peace. We should do well to remember that, while out of our scientific laboratories came the atomic bomb, out of them came, as well, instrumentalities to raise living standards to make for prosperity among mankind. It is time that we had done with the theory that higher education is a luxury and came to see it as a process essential for peace and for the broader civilization ahead.—Chancellor Harry Woodburn Chase, New York University.

of the first day of the fair the vegetables, small grains, fruits, corn, hay, eggs, and canned goods are entered and displayed. In the evening the community hears an educational address and the merchandise is auctioned by a local auctioneer. This often provides entertainment.

Early on the next day the livestock and baked goods are entered, and judging of the many different classes is begun. Ribbons are placed on the exhibits by the judges, with the help of adult and student superintendents so that all may see how their products rank with those of their neighbors. On the second afternoon the program is given to entertainment. Free acts are presented first, and are followed by the giving of the premium money, and later by a baseball game. The exhibits remain on display until four o'clock when they are claimed by owners.

The rural people like their community fair. They appreciate the opportunity given to them by the planning of members of the adult classes to display the products of their own farm. They can determine for themselves the quality of the products which the township produces and they enjoy another chance to get together to talk, and to learn more about their neighbors and the school.

YOUNG FARMER CLASSES, 1932-1946

Year	No. of Members	Number Farming in 1946				Subject	No. who had Ag. in H.S.	No. of H.S. graduates	Average age	Average attending (percent)	Members from previous year	Members entering service
		Farm Owners	Renters	Partnership	Total							
1932-1933	17	1	5	4	10	Poultry—12 lessons	0	4	25	90		
1933-1934	16	2	5	4	11	Swine—12 lessons	0	5	23	84	8	
1934-1935	24 (2 classes)	4	10	4	18	Bccf & Poultry—12 lessons each	13	10	24	89	9	
1935-1936	25 (2 classes)	3	10	6	19	Swine & Dairy—12 lessons each	5	4	22	89	6	
1936-1937	15	2	5	4	11	Sheep	9	9	25	90	7	
1937-1938 (1)	26 (2 classes)	3	12	7	22	Poultry and Swine—12 lessons each	14	12	22	91	7	
1938-1939	31 (2 classes)	3	8	10	21	Farm Mgt. & Swine—12 lessons each	16	14	24	93	7	
1939-1940	16	3	8	3	14	Grain Crops	9	8	24	94	8	
1940-1941	20 (2 classes)	1	5	5	11	Gov't. Programs & Poultry—12 lessons each	10	9	21	93	9	7
1941-1942	12	1	3	2	6	Livestock Management	6	6	24	95	4	
1942-1943	14	1	3	3	7	Course of Study for Prod. Courses & Fed. Programs (2)	9	8	24	93	4	16
1943-1944	11	1	1	3	5	Course of Study for O.S.Y.A. & Gov't. Programs (3)	7	7	24	98	6	10
1944-1945	13	1	3	4	8	Course of Study for O.S.Y.A. & Gov't. Programs (4)	10	9	23	97	9	9
1945-1946 (5)	20	2	10	8	20	(6)	20	20	25	96	3	8

- One class was held 20 miles from Ortonville in a new section.
- Four members of 1941-1942 class took charge of O.S.Y.A. courses in their community.
- Six members of 1942-1943 class were instructors of 10 O.S.Y.A. courses.
- This course consisted of 12 lessons. Five members of 1943-1944 class were instructors in 10 O.S.Y.A. classes.
- Four are returned servicemen. Information is incomplete for this year.
- This part-time class is being carried on as more of an experiment. The men consist of some of the outstanding boys who have graduated from my department in the past 14 years. We are meeting once a week at school to discuss many of the current and future problems of agriculture. I hope to gain several new ideas from this group to be carried thru to my future classes of young farmers. Following our meeting in the agricultural department we will meet at the homes of several of the boys, who have established outstanding herds of livestock as a result of their farming programs carried on in high school. We shall also have tours of each farm-practice setup. We are going to try to build up the following programs: better pastures, weed control, fertilizer, livestock, and small grains. We hope to induce more young farmers to become members of the Minnesota Crop Improvement Association.

Future Farmers of America

A. W. TENNEY

F. F. A. Butchering Program

W. MURPHY BYRD, Teacher,
Whitharral, Texas

THE butchering program has netted this chapter treasury an average of about \$100 per season since its inauguration. The butchering season lasts about four months during the winter, beginning about the 15th of November. The F.F.A. boys kill for the farmers on Tuesdays of each week and cut up the carcasses on Wednesdays. Those farmers who wish to do their own work and those that the boys cannot accommodate kill their hogs on Thursdays of each week. The fee for the use of the equipment is 50 cents per head.

During the first killing season a charge of \$1.50 per hog was charged each farmer who brought a hog to be killed, cleaned, and cut up into the proper cuts for curing purposes. If the farmer wanted to do his own meat cutting, the fee remained the same for that work. A charge of \$3 per beef animal was made for killing, skinning, sawing the carcass into halves, and letting it hang in the shop overnight for chilling purposes. One thing that came out of the fee charge for butchering hogs was that the farmers would bring in all of the larger hogs for the F.F.A. boys to butcher, and they would save the smaller ones for themselves to butcher on the farm. So, after the first season, the boys changed the fee for butchering hogs to 1 cent per pound of live weight; and that included everything from killing to applying the dry cure. If he wanted the hogs killed and cleaned the fee remained the same.

Our equipment consists of a vat that is 6½ feet long, 2½ feet wide at the top, and 1 foot 4 inches deep. It was made from two 50-gallon drums. It sits into a pit constructed in the concrete floor of the farm shop. The dimensions of the pit are 9 feet long, 3 feet wide, and 2 feet deep. In the bottom there is a drain to carry out the excess water. The vat is heated by a shop-made three-pronged gas burner. Fastened to the ceiling, we have an oblong circular trailway on which are seven rollers. A chain hoist and six hooks are fastened to the rollers. Thus the carcasses can be moved easily around the shop. The track equipment was made by a local blacksmith. Other equipment, including a thermometer, skinning knives, butcher knives, boning knives, steel, sharpening stones, and meat saws, were purchased at the local hardware store.

I shall list some of the advantages, to the farmers and to the F.F.A. boys, of our butchering program:

1. It serves as an aid in teaching the farmers and the F.F.A. boys the newer methods of butchering and curing meats.
2. It is an excellent way of raising money for the F.F.A. treasury.
3. Since there are no butchering businesses in this community, it is a service to the community.
4. The boys easily tire of butchering and having to clean up after the farmers.

Some of the disadvantages of the hog-

Future Farmers Grow Into Farming

WALTER LABAY, Teacher, Spur, Texas

THE ultimate goal of every teacher of vocational agriculture is actually to produce Future Farmers. This, I think, is and should be the main objective of not only our program in vocational agriculture, but also the boys' farming programs. There are, as I see it, four main factors that determine largely how much a student of vocational agriculture can grow into the business of farming—personal interest, size of family, size of farm, and cooperation of his parents. These factors, primarily, will determine the boy's net worth at the end of three or four years of instruction in vocational agriculture.

This teacher, in checking the progress of his advanced Future Farmers, found that several of them are actually growing into farming or some other phase of agriculture. Some of these Spur Future Farmers started from "scratch" and some had large programs to begin with, but these boys are increasing in size and number their productive projects, despite the high price of feed and other costs. These boys realize that, in order to be successful in their business venture, they must reinvest their earnings and keep growing. Here is a brief summary of a few of the Spur Future Farmers that have made outstanding progress in their programs:

Elmo Beadle, who, during his first year of vocational agriculture in 1943-44, had 5 acres of milo, 1 pig for pork, and 2 ewes. Last year he farmed 15 acres of land and had 1 gilt and 17 head of sheep. This year he is farming 20 acres of land and has 17 head of sheep, 3 calves for beef, and 1 Hereford heifer. His labor income so far is \$457.41. He also has 30 acres of sheep pasture.

Graden Bass, who also started in 1943-44, had 1 pig for pork, 1 beef calf, and 10 acres of milo. Last year he had 1 beef calf, 2 pigs for pork, 1 gilt, and rented 36 acres of land. This year he has 2 beef calves, 1 pig, and will rent 70 acres of land. His labor income for the first two years was \$484.67.

Haden Moore, a Future Farmer who lives in town, has developed a good program and for the past two summers has done most of the farming on his father's farm and has also helped him on the ranch. The first year his projects were as follows: 2 beef calves, 5 acres of milo and 5 acres of forage. Last year he had 5 calves, 1 Hereford cow, and farmed 10

killing program are as follows:

1. It takes too much time from class and other shop work.
2. It interferes with the handling and proper care of the other shop tools.
3. There are more farmers who want to use the shop than it can accommodate.
4. The boys easily tire of butchering and having to clean up after the farmers.

acres of land. This year he has 5 calves, 2 Hereford cows, and will farm 15 acres of land. His labor income so far is \$240.54.

Morris Denson, president of our chapter, started with 1 beef calf, 2 Hereford heifers, 3 pigs, and 5 acres of forage. Last year he had 2 calves, 3 Hereford cows, and 1 gilt. This year he has 1 gilt, 3 Hereford cows, 3 Hereford steers, 1 Hereford heifer. His labor income so far is \$406.60.

Carl Gragson started with 5 acres of milo, 5 acres of forage, 10 acres of cotton, and 3 beef calves. Last year he rented 75 acres of land and had 6 calves and 1 gilt. This year he has 5 calves, 3 gilts, and will rent 50 acres of land. Carl's labor income for the first two years was \$786.79.

Tommy Conway, who is only in his second year of vocational agriculture, has a creditable program in operation. Last year he had 3 pigs and 5 acres of milo and used his earnings to buy a Hereford cow. He also won a registered Duroc Jersey gilt for doing outstanding work in Vocational Agriculture I. This year his program is 5 calves, 3 pigs, 1 gilt, 1 Hereford cow, and 10 acres of milo. His labor income for his first year was \$181.56.

This year there are 43 Future Farmers enrolled in the Spur department. These boys will actually own and operate 101 productive projects. These Future Farmers, in addition to the money they make, are getting plenty of actual farming experience which truly is a great teacher.

F. F. A. Cooperative Association

C. M. GREGG, Teacher,
Jacksonville, Texas

THE Cherokee County F.F.A. Purchasing and Marketing Association is the organization of the Cherokee County district of Future Farmers. This organization was chartered by the State of Texas in 1942. By being a chartered organization, the members are eligible to transact business in a cooperative way that they could not do otherwise. This cooperative has no capital stock and is a nonprofit organization passing profits on to the membership according to their individual participation. Directors in this cooperative are the teachers of vocational agriculture in the district and one farmer from each school represented. He is usually the father of an F.F.A. member. Each director is given membership privileges, in fact, he is usually already an honorary member of the local chapter he represents. The district F.F.A. officers are the acting officers in the cooperative. Purchases to date have been confined chiefly to feed, fertilizer, and seed.

The organization as a district chapter of Future Farmers has accepted three grants from the Sears Roebuck loan plan, and by combining and supplementing this from the cooperative treasury, now has two loan funds of \$175 each rotating among local chapters in the district. At

present, the schools using the funds are using them for the purchase of purebred Jersey heifers. One of these funds has already passed one year of use, being used the first year in Milking Shorthorns. By using two funds in the rotation the money gets around to every chapter in three years, there being but six chapters in the district.

In cooperation with the 4-H Club of the county, a Junior Pig Show was held October 20, 1945. This was the first of what is planned to be an annual affair. Only purebred stock were shown, and there were nice exhibitions of Duroc Jersey, Poland China, and O.I.C. hogs. It is planned for this to branch out as a Junior Livestock and Project show.

An annual affair with this organization is the all-county Future Farmer-Future Homemaker social held on December 14 in the Jacksonville High-School gymnasium. At the last party there was fun for all, dancing, ring plays, square dances, table tennis, table games, and contests. In a contest election, Miss Joy Bess Averyt, of Jacksonville, was elected F.F.A. Sweetheart of Cherokee County. Candidates were sweethearts of local chapters in the district. This year's party was attended by about 200 Future Farmers and Future Homemakers.

Another unusual part of the program in this district is to have a Forestry Field Day. Since Cherokee County is in the forest belt of East Texas and has the largest state forest in Texas besides the Indian Mound Forest Nursery, there are rich opportunities for this event. It is hoped this part of the program may be expanded now that the war is over.

In planning the program of work for a year, this district has hit upon the plan of printing the program on a large chart, which has a column for accomplishments and one for suggestions. For the next year the old program is just revised as needed. This program follows the plan of the state program as closely as is practical, and the local programs follow this one even more closely. The organization and activities are designed to try to give the needed training in farm leadership.

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THE AGRICULTURAL EDUCATION MAGAZINE June, 1946

F. F. A. Builds Interest in Country Life

WINTER carnivals have proved to be a popular feature in the program of Vermont Future Farmers. Since they were initiated some five years ago, the interest and participation have increased consistently.

In the 1946 carnival of the Northwest District, over 80 percent of the Future Farmers in the district took part. Chapters represented were Enosburg, Highgate, Essex Junction, and Richford. An entire day was given over to the carnival held in Richford. Events scheduled included races on skates, skis, and snowshoes. Agriculture was not neglected as there was a log-chopping and log-sawing contest to try the wind and skill of willing farm youth. A banquet and a basketball tournament concluded a day of fun and frolic for the 100 Future Farmers in attendance.

Learning to take advantage of life in the country was a primary purpose in planning the event. Under the leadership of F.F.A. Adviser Donald C. Pierce, the Richford chapter has in the past four years developed a community skating rink and improved ski runs. Practically every F.F.A. member has learned to participate in winter sports. They, too, have learned to value the fun and glamor of country winters which is so much appreciated by city folks.

Richford Future Farmers have contributed much to the community thru their winter carnival and that may be one reason for the fine community support received for the winter carnival. A man-sized lunch and dinner—total cost 90 cents—were served to the Future Farmers by girls of the Richford classes in Home Economics. Much equipment was provided or loaned. "Old-time" woodsmen were on hand to supervise log contests, school-board members spoke at the banquet, and an enthusiastic crowd of spectators was on hand to witness the events.

The winter carnival has become an annual event. All leaders concede that it has helped youth to develop new recreational interests, fostered love of country life, and encouraged the cooperative as well as competitive spirit of Vermont Future Farmers.—W. Howard Martin.

Groups of skiers and snowshoe racers are shown ready for their big events in the district carnival held in Richford, Vermont. Four Future Farmer chapters were represented in this new recreational feature

A Forestry Project

THE Adrian, Georgia, chapter of Future Farmers under the supervision of the adviser, O. L. Hayden, has pioneered in operating a school forestry project. The forestry work of the chapter dates back to 1930 when an area of 18 acres of land was leased for demonstration purposes. In 1935 the chapter decided the demonstration should be moved to an area nearer the school and on the highway. This area was leased for a 10-year period from H. C. Williams, a timber and turpentine operator.

In 1935, the first year the chapter had access to the new project, 15,000 seedlings were planted in rows. This tree planting project, being the first in the community, proved interesting to the old-timers. Mr. Hayden tells about persons passing along the highway laughing and teasing the boys about planting trees. This did not dampen his spirit or slacken his interest. He led the F.F.A. members in gathering pine seed, making seed beds, and producing thousands of seedlings, which were planted mostly by chapter members on school projects, and on their home farms. The boys also built fire lanes to protect the forest from fires. In 10 years only one forest fire was started on the project by a careless person. The fire was put out quickly, burning only a small area.

Mr. Hayden states that before the demonstration was started, the practice was to burn the forest each year. A ride thru the Adrian community is evidence enough to prove that this is not the practice now. Mr. Hayden says the farmers have changed their minds about woods burning, and the Adrian community is distinguished by green, rapid-growing pine trees.

Largely as a result of the work started by Mr. Hayden, over 1½ million seedlings have been planted in the Adrian community since 1930. Even before the Triple A recognized the planting of trees as a conservation practice, the Adrian chapter and 50 evening class members planted 300,000 pine seedlings.

This year our chapter sponsored a rural safety week. We gave demonstrations and placed posters, in store windows.—Grant, Nebraska.

The 6' x 12' "Rising Sun" painting by Gillis, valued at \$500, was used for the first time at the Eighth National Convention of the national organization of F.F.A. in 1935.



THE AGRICULTURAL EDUCATION MAGAZINE June, 1946

J.A. Guitteau Scholarship in Agriculture

A SCHOLARSHIP fund sufficient to produce annually not less than \$500 for the use of Seniors and graduate students in agriculture and agricultural education at the State College of Washington is provided in a program launched by friends of the late J. A. Guitteau. The fund will be established thru individual subscription.

To be known as the J. A. Guitteau Scholarship Fund, it will be a living and permanent memorial to Mr. Guitteau, who for more than 25 years was State Supervisor of Vocational Agriculture in Washington and who in that time built up one of the leading agricultural education programs in the United States. Under his inspiration and guidance, the movement expanded even during the depth of the depression until 123 high schools were giving practical and basic agricultural training in regular four-year courses to between 4,000 and 5,000 farm boys each year.

The scholarship program has been worked out by a state-wide committee and is under the direction of a central committee headed by W. W. Pierson, instructor of agriculture for more than two decades in Cheney High School. Also on the central committee are: Lennes Hall, Sunnyside; Harry B. Carroll, Seattle; Earl Bailey, Snohomish; and M. C. Knox, Olympia.

First contributions to the fund were made by W. W. Pierson, who taught vocational agriculture under Jud Guitteau's supervision for over 20 years, and who gave \$100, and by the Longview Chapter Future Farmers who contributed \$50. Funds are being received by the Bursar, State College of Washington, Pullman.

"The far-reaching value the work of Jud Guitteau did for the youth and agriculture of Washington during his years of untiring service cannot be overestimated," said Bert L. Brown, who succeeded Mr. Guitteau as state supervisor, after having served under him as an instructor of agriculture, assistant supervisor, and teacher-trainer at the state college. "Inspiration and practical training of farm boys for better farming and better living were his obsession. It is to memorialize that kind of service and help perpetuate it thru the years that his fellow workers and friends are establishing this agricultural scholarship to train young men to follow in the paths he blazed."

Reference Materials File

THIS year I am using a device that enables me to find course plans and other reference materials instantly. It is an ordinary heavy cardboard letter file with complete index. I keep it on my desk at all times, and have important letters, lesson plans, examinations, charts, programs, survey reports, and similar materials filed alphabetically.

From time to time I take out papers that are used only infrequently and place them in the four-drawer metal filing cabinet. Without such a system one is apt to let reference materials accumulate in a top desk drawer until it is impossible to find needed papers quickly.—Marshall F. Richards, teacher, Chelsea, Michigan.

Leadership Needs

FOLLOWING every war the depletion of manpower is acutely felt. This is the situation very definitely at the present time, not only in the field of vocational education but in agricultural education. The war may not be the direct cause but the condition prevails nevertheless. Our losses in agricultural education have been in part due to retirements, already effected or those rapidly approaching; also to calls to service in other fields, usually attended by increased economic returns. The former can only be met philosophically and expected; the latter is cause for congratulations to those so honored and a hearty wish for their continued success. We would not be so selfish as to ask to retain them. But, what of their replacements? It is to this area that we need to give attention. Many young men who would undoubtedly exert influence in leadership have also been called to better positions in commercial fields. Those who have remained and who are giving every evidence of sound thinking and competent leadership are respected and are given encouragement to move forward in agricultural education. The challenge to those who are in positions of leadership in the respective states is to give further encouragement to other young men, to search carefully that none may be overlooked who might assume responsibility in the years immediately ahead.

It is well for our program-chairman of national, regional, and state meetings to give recognition to all young men who seem to offer possibilities in the field of leadership in agricultural education. We appreciate all the assistance and encouragement that our young men now offer and we purposefully search for others.

The Farm Home

Molder of human destiny am I,
Lowly I sit uncrowned,
Unheralded, amidst the
Glories of the open fields,
Where growing leaves and friendly beasts,
Soft sunrise hues, clear meadow brooks,
Rare vistas long, and blossoms sweet,
Aid me in my mission to our race.

I raise and feed and clothe,
And bring to man's estate
Five sons and daughters,
And teach them noble traits
Of right and wrong and Galilean love.
Four keep I home to till the acres broad,
And give unto the world that common
need

Of all—the nation's food supply for man
And beast. One send I forth unto the
city's gates
To help in mart and trade, to build
Great towers, legislate,
And give virility to urban family life.

Thus has it ever been and ever more
shall be.
I build the open road of country life
And also keep the city vigor great.
My sons and daughters must be just,
They must wisely plan the future of
The nation of the free.
Thus shall it come to pass
That time will make it so,
The nation is dependent on my child.
I am the rural home.
I mold the nation's destiny.

—Author Unknown.

About Indexes

READERS are advised that the index of each volume of the magazine is printed and bound into a regular number of the magazine, usually the July or August issue following the close of any volume. No reprints of an index is made; therefore, it is impossible for our publishers, the Meredith Publishing Company, to fill orders for single copies of an index. Since each year there are requests made to our publishers for copies, it is hoped that this notice will stop further requests from our readers.—W. F. S.

BANQUET BANTER

Toastmaster: Ladies and gentlemen, as you have noticed, our program at our banquet this year has given special recognition to our former members returning from the armed services. We have been genuinely sincere in trying to make them realize how much we appreciated their services and how glad we are to welcome them home and have them with us at this banquet. We would like to hear from all of them but realize that, if they got started telling their experiences from Alaska to Cairo, from Berlin to Tokyo, it would be an all-night venture, altho most interesting, no doubt. We have decided to ask our past-president and toastmaster of four years ago to represent the group. He has seen many days and nights of active service—yes, very active, as any who have heard his experiences will admit. I didn't get it from him but they tell me that, as they were starting out on the now famous D-Day invasion, the skipper called the crew together and delivered a lecture in which he said among other things, that "fear is a very healthy thing." This, I am told, touched a responsive chord in our speaker so that he replied, "Captain, you are looking at the healthiest sailor in the United States Navy." Welcome home, Frank Potter.

Speaker: Ladies and gentlemen, for me there was a note of truth in that statement altho it didn't bother me quite that badly. It is a genuine pleasure to be back and an appreciated honor for me to represent the class of returning servicemen on the banquet program tonight. It has certainly reminded each of us of old times as we have heard the boys do their stuff here tonight. They certainly have been in the groove. I am particularly surprised at our toastmaster and the development he has made since I last visited the chapter when he was a verdant freshman. One night at the chapter meeting they were passing jokes around. I remember one on our toastmaster to the effect that he got a bit brave and told his teacher that all she said went in one ear and out the other. Her reply was, "Well, what is there to prevent it?" But he has changed. The way the waitress hovered around him this evening made me wonder if I would get anything to eat. I don't know what church she attends but she must believe in the song "Let Me Lean Harder on Thee." I want to advise him to watch his step in that direction, at any rate in his attempting to drive with one hand. You know they say that fellows who drive with one hand are usually headed for the church aisle—some will walk, some will be carried.

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ds—Geo. P. Couper, San Luis Obispo
ds—J. L. Thompson, San Luis Obispo

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ds—A. R. Bunger, Denver
t—G. A. Schmidt, Fort Collins

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

DELAWARE
d—R. W. Hoim, Newark
ds—P. M. Hodgson, Dover

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ds—Harry Wood, Tallahassee
t—E. W. Garrio, Gainesville
it—W. T. Loftin, Gainesville
ct—L. A. Marshall, Tallahassee
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ds—T. G. Walters, Atlanta
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ds—J. N. Baker, Swainsboro
ds—J. H. Mitchell, Athens
t—John T. Wheeler, Athens
t—O. C. Aderhold, Athens
sm—A. O. Duncan, Athens
t—R. H. Tolbert, Athens
ct—Alva Tabor, Fort Valley
ct—Benj. Anderson, Industrial College

HAWAII
ds—W. W. Beers, Honolulu, T. H.
t—Warren Gibson, Honolulu, T. H.
t—F. E. Armstrong, Honolulu, T. H.

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

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

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d—Clement T. Malan, Indianapolis
ds—Harry F. Ainsworth, Indianapolis
t—B. C. Lawson, Lafayette
ds—S. S. Cromer, Lafayette
it—K. W. Kiltz, Lafayette
it—H. W. Leonard, Lafayette
it—H. B. Taylor, Lafayette
it—R. E. Clavin, Lafayette

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

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

KENTUCKY
ds—R. H. Woods, Frankfort
ds—E. P. Hilton, Frankfort
t—Carse Hammonds, Lexington
it—Watson Armstrong, Lexington
it—W. R. Tabb, Lexington
ct—F. J. Manly, Frankfort

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d—John E. Coxo, Baton Rouge
ds—D. C. Lavergne, Act., Baton Rouge
ds—A. Lariviere, Baton Rouge
ds—C. P. McVea, Baton Rouge
sm—Roy L. Davenport
t—C. L. Mondart, Baton Rouge
t—J. C. Floyd, Baton Rouge
ct—M. J. Clark, Baton Rouge
ct—D. B. Matthews, Baton Rouge
ct—E. C. Wright, Baton Rouge

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

MARYLAND
d—John J. Seidel, Baltimore
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ds—John G. Galvin, Boston
t—F. E. Heald, Amherst

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ds—Raymond M. Clark, Lansing
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ds—Carl F. Albrecht, St. Paul
t—A. M. Field, St. Paul
t—G. F. Ekstrom, St. Paul

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ds—A. P. Fatherree, Jackson
ds—R. H. Frazier, Jackson
ds—E. B. 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
sm—A. E. Strain, State College
ct—A. D. Fobbs, Alcorn
ct—Robert Ross, Alcorn

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ds—J. H. Ford, Jefferson City
ds—Joe Duck, Springfield
ds—C. V. Rodrick, Jefferson City
t—G. J. Dippold, Columbia

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ds—A. W. Johnson, Bozeman
ds—H. E. Rodeberg, Bozeman

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ds—L. D. Clements, Lincoln
ds—H. W. Deems, Lincoln
t—H. E. Bradford, Lincoln
t—C. C. Mintecr, Lincoln

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ds—J. W. Hatch, Buffalo
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t—E. R. Hoskins, Ithaca
t—W. A. Smith, Ithaca
t—Roy A. Olney, Ithaca

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ds—H. G. Kenestrick, Columbus
ds—F. J. Ruble, Columbus
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ds—W. R. Felton, Stillwater
ds—S. M. Croane, Stillwater
ds—Bert Killian, Stillwater
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ct—D. C. Jones, Langston

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

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

PUERTO RICO
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ds—Nicholas Mendez, San Juan
ds—Samuel Molinary, San Juan

ds—Frederick A. Rodriguez, San Juan
ds—Juan Acosta Henriquez, Arceibo
ds—Juan Robles, Cayey
ds—Andres Ramirez, Mayaguez
t—Lorenzo G. Hernandez, Mayaguez

RHODE ISLAND
ds—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. Yen, Loris
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t—B. H. Stribling, Clemson
t—J. B. Monroe, Clemson
t—T. F. Duncan, Clemson
t—F. E. Kirkley, Clemson
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ds—R. Lano Barron, Austin
ds—George H. Hurt, Austin
ds—B. C. Davis, Austin
ds—O. T. Ryan, Lubbock
ds—C. B. Barclay, Commerce
ds—C. D. Parker, Kingsville
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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
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it—G. H. Morrison, Huntsville
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ct—O. J. Thomas, Prairie View
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d—John E. Nelson, Montpelier
ds—W. Howard Martin, Burlington
t—C. D. Watson, Burlington

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ds—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. B. Thomas, Ettrick
ct—A. J. Miller, Ettrick

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ds—Bert L. Brown, Pullman
ds—M. C. Knox, Olympia
t—E. M. Webb, Pullman
t—H. M. Olson, Pullman

WEST VIRGINIA
ds—John M. Lowe, Charleston
ds—H. N. Hanscock, Charleston
t—D. W. Parsons, Morgantown
t—M. C. Gaar, Morgantown

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

WYOMING
ds—Sam Hitchcock, Cheyenne
ds—Jack Ruoh, Cheyenne