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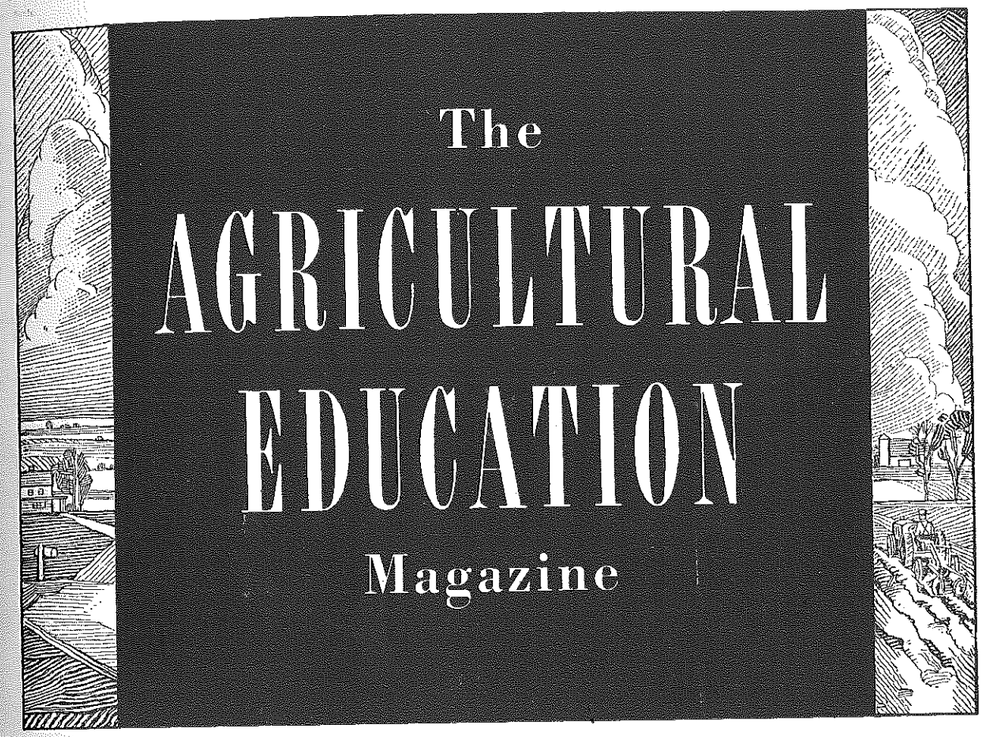

The AGRICULTURAL EDUCATION Magazine

Be practical as well as generous in your ideas. Keep your eyes on the stars, but remember to keep your feet on the ground.—*Theodore Roosevelt.*

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

The New Editor

H. M. Byram

WITH this issue of *The Agricultural Education Magazine* the present editor has completed a four-year period of service, having tendered his resignation at the annual meeting in St. Louis, Missouri, November 30, 1938. After careful deliberations by the Editing-Managing Board of the magazine, Mr. H. M. Byram of East Lansing, Michigan, was unanimously elected as the new editor.

Mr. Byram is engaged in teacher education work as associate professor of education at Michigan State College. After graduation from Iowa State College in 1924, he taught vocational agriculture at Northfield, Minnesota, for two years. From 1926 to 1930 he was again in Iowa and became critic teacher at Kelley, and was also an instructor in vocational education at Iowa State College. During this period he completed his Master's degree in 1928. After one year as part-time assistant in the department of higher education at Teachers' College, Columbia University, he returned to Iowa State College and served as instructor and assistant professor of vocational education from 1930 until he took up his present position at Michigan. Mr. Byram received his Doctor's degree from Columbia University in 1933.

Those who know Mr. Byram realize that the Board has made an excellent choice in selecting him as the new editor. Only those who have been closely associated with the work of editor fully know the time consumed and the extra energy required, in addition to the schedule of regular duties, to render this service to our vocational agriculture education program. The outgoing editor urges you to continue the fine co-operation which you have given him. The magazine is a tribute to each of you, and the new editor can continue it as such only by your loyal support in manuscripts and subscriptions. There is every reason to believe that the magazine will continue to improve under the guidance of the new editor.

In assisting Mr. Byram, let us remember that he has a wife and two young daughters. He also has several hobbies, but he will find that he may have to turn off the radio in the midst of some fine opera which he would like to hear, the golf clubs may have to rest in the bag, or the fishing tackle may remain carefully packed away, all because a "deadline" must be met for *The Agricultural Education Magazine.* These may well happen, but we must not expect him to entirely neglect his family. Do your part, and Mrs. Byram will have a good opinion of other workers in agricultural education.

Thru the annual report and by letter, the present editor has expressed his sincere appreciation to the state supervisors, teacher-trainers, and staff members for their excellent co-operation. This also applies to every teacher of vocational agriculture, as well as to Dr. W. F. Stewart, the business manager, for assistance and service rendered during the past four years.

We are fortunate in having the Meredith Publishing Company for our publishers. The present editor was much impressed by the interest shown in our magazine by employees in the composing room, art department, mailing room, business office, proof readers, editorial office, etc. We do appreciate their efforts. The editor especially appreciates the services of the following members of the editorial staff: Kirk Fox, Hugh E. Curtis, and Gladys J. Heise. It has been both pleasant and instructive to have made their acquaintance and to have worked with them.

Former and Present Staff Members

DURING the past 10 years, since the magazine was started in January 1929 and up to the time of the retirement of the present editor, March 1939, 51 different persons have contributed time

ress made. The editor desires to acknowledge the fine contributions made by listing the names, service rendered, and duration of service of each person who has been on the staff.

The editor appreciates the fact that many other workers in the field of vocational education in agriculture and other friends have responded faithfully, either at the request of these staff members or voluntarily. And only by this excellent co-operative effort has it been possible to make the magazine better and better. We should all look with pride on this accomplishment, especially when we realize that after a few years of backing by the Meredith Publishing Company, Des Moines, Iowa, we have been able to establish ourselves on a sound financial basis, without the help of commercial advertising in the magazine.

The names of the men who have served follow:

EDITORS

Doctor H. M. Hamlin, formerly at Ames, Iowa, now at Urbana, Illinois, was the first editor, January 1929 to March 1930.

Doctor Sherman Dickinson, Columbia, Missouri, April 1930 to March 1932.

Doctor Carsie Hammonds, Lexington, Kentucky, April 1932 to March 1935.

Doctor Roy A. Olney, formerly at Morgantown, West Virginia, now at Ithaca, New York, April 1935 to March 1939.

ASSOCIATE EDITORS

It has been customary for the retiring editor to serve as associate editor until his successor is elected.

CONSULTING EDITOR

Mr. F. E. Moore, Director of Vocational Education, Des Moines, Iowa, has been retained in this capacity since the beginning of the magazine.

BUSINESS MANAGER

Mr. Z. M. Smith, Lafayette, Indiana, January 1929 to June 1930.

Doctor W. F. Stewart, Columbus, Ohio, July 1931–

SPECIAL EDITORS

Professional Section:
- R. W. Gregory, Indiana and Washington, D. C., 1929–1930
- A. K. Getman, New York, 1930–1934
- A. W. Nolan, Illinois, 1934–1936
- A. W. Getman and R. W. Gregory, 1936–

Methods Section:
- A. M. Field, Minnesota, 1930–

Supervised Practice Section:
- G. A. Schmidt, Colorado, 1930–1936
- H. H. Gibson, Oregon, 1936–

Evening School Section:
- J. T. Wheeler, Georgia, 1930–1931
- C. L. Davis, Texas, 1931–1933
- V. G. Martin, Mississippi, 1933–

Part-Time Class Section:
- Roy H. Thomas, North Carolina, 1930–1933
- L. M. Sasman, Wisconsin, 1933–1935
- J. B. McClelland, Ohio and Iowa, 1936–

Farm Mechanics:
- W. A. Ross, Washington, D. C., 1929–1930
- M. A. Sharp, Iowa, 1930–1931
- L. B. Pollom, Kansas, 1931–

Research Section:
- E. C. Magill, Virginia, and C. R. Wiseman, South Dakota, 1931–1935
- E. C. Magill, Virginia, and E. R. Alexander, Texas, 1936–1937
- C. S. Anderson, Pennsylvania, 1938–

Future Farmers Section:
- H. C. Groseclose, Virginia, 1929–1930
- H. O. Sampson, New Jersey, 1930–1935
- L. R. Humpherys, Utah, 1936–

Book Reviews:
- F. W. Lathrop, Washington, D. C., 1929–1930
- A. P. Davidson, Kansas, 1931–

A. K. GETMAN **Professional** R. W. GREGORY

Contributions of Leading Americans to Agriculture—Milton Whitney, 1860-1927

J. A. LINKE, Chief, Agricultural Education Service, Office of Education, Washington, D. C.

MILTON WHITNEY, D. A., outstanding world authority on soil science, and chief of the Bureau of Soils, United States Department of Agriculture, 1894–1927, was born in Baltimore, Maryland, August 2, 1860. He received his early education in the Baltimore schools. Three years of special work in chemistry at Johns Hopkins University under the famous chemist, Doctor Ira Remsen, inspired him to give his attention to the study of soils and their relation to plant growth. Upon concluding his studies at Johns Hopkins in 1883 he was made assistant chemist at the Connecticut Agricultural Experiment Station. In 1886 he became superintendent of the experiment farm of the North Carolina Experiment Station, where he acquired much practical experience in the handling of soils which was of great value to him in his later scientific studies. It was in the report of his work at this station that he first called attention to the profound influence of the physical properties of soils upon crop production.

J. A. Linke

In 1888 Doctor Whitney became professor of agriculture at the University of South Carolina and vice director of the experiment station. In 1891 he went to the Maryland Experiment Station, and while there, the Weather Bureau of the United States Department of Agriculture placed certain funds at his disposal in order that he might complete a full report on soil investigations. This report was published as Weather Bureau Bulletin No. 4. The Department of Agriculture was so impressed with the necessity for further study of the great problems of the soil as set forth in Doctor Whitney's bulletin, that in 1894 it established a division of soils and selected him as its head. The work of this division grew until Congress set it up as a Bureau in 1901 with Doctor Whitney as chief, in which position he remained until June 1927. He died on November 11, 1927.

Under Doctor Whitney's direction the work of the Breau of Soils expanded greatly and covered many lines of investigation. One of his most notable accomplishments was the establishment of the soil survey, having for its objective the mapping of the soil types of his death more than one third of the arable lands of the United States had been painstakingly mapped to show the extent and location of the various types of soil.

Early in its history, the Bureau of Soils undertook a study of the alkali problem of the western lands, and a method was devised for the reclamation and handling of alkali soils. Under Doctor Whitney's direction the study was made of soils with reference to their suitability for tobacco growing, and it was he who was chiefly instrumental in the establishment of tobacco growing under shade in the Connecticut River Valley. He directed the government's work on the fixation of atmospheric nitrogen, and in 1911, when there arose

Milton Whitney

the threat of a German monopoly of the potash supply, he threw his organization into the field for the development of adequate domestic sources of potash and other fertilizer materials. He also made a systematic study of the phosphate fields of the country.

For many years Doctor Whitney recognized the necessity for the conversion of the fertilizer industry from the status of what he called a "scavenger industry" into the position of a true chemical industry. To this end, he pressed a vigorous study of concentrated fertilizers, from which gratifying results have been obtained both as to methods of manufacture and application. During the years 1919–1921 he assumed the responsibility of administering the fertilizer control features of the food control act. He approached this task with vigor and thru the trying fair treatment for both the farmer and industry.

Doctor Whitney was a man of strong convictions and one whose vision was never obscured by petty disturbances of the immediate present. He constantly urged the younger men who worked with him to have the courage of their convictions and not always be content to follow but to lead, and to realize that universal commendation is rare and that criticism should not be feared for work well done. Students of soil science generally have come to recognize that the courageous presentation of his views and conceptions has been of greatest influence in the furtherance of the scientific study of soils. The international respect with which his attainments were regarded was probably never more adequately recognized than when, at the opening of the first international congress of soil science held in Washington in June 1927, the congress paused at its opening to adopt a resolution of regret that Doctor Whitney was unable to attend the meeting because of illness, and to acknowledge his preeminence as a soil scientist. Dr. A. F. Woods, director of scientific work of the United States Department of Agriculture, at the same time paid tribute to the work that Doctor Whitney had accomplished as chief of the Bureau of Soils and his notable contributions to soil science. The work of Doctor Whitney is also recognized as a forerunner of the soil conservation program of today and acted as an inspiration to H. H. Bennett, present chief of the Soil Conservation Service, who was an early associate of Doctor Whitney.

Doctor Whitney's last book, *Soil and Civilization*, has attained a wide circulation and has been favorably commented on by many of the prominent soil scientists of the world. He is also the author of numerous bulletins, scientific articles, and papers published both within and without the United States Department of Agriculture. Some of these are as follows: (1) Soil Temperature; (2) Soil Moisture; (3) Soil Physics and Crop Production; (4) The Relation of Soils to Plant Growth; (5) Washed Soils, How to Prevent and Reclaim Them; (6) Conditions of Soils of the Arid Regions; (7) Climatology and Soils; (8) The Purpose of a Soil Survey; (9) Tobacco Soils; (10) Investigation of Soil Fertility; (11) Report on Statements of Dr. Cyril G. Hopkins relative to Bureau of Soils; (12) Commercial Fertilizers and Fertilizer Inspection; (13) The Composition of Commercial Manufacture of Fertilizers; (15) Emergency Use of Lime to Increase Crop Production; (16) The Yield of Wheat in England During Seven Centuries.

While Doctor Whitney's work consumed most of his time, he also was widely known as an expert stamp collector and was a founder, and later president, of the Washington (D. C.) Philatelic Society. He was a member of the Cosmos Club of Washington, the National Geological Society, the American Chemical Society, the Association of Agricultural Chemists, and the American Soil Survey Association.

Dr. A. S. Alexander, of the University of Wisconsin, writes of Doctor Whitney: "The late Milton Whitney, D. A., who was chief of the Bureau of Soils of the United States Department of Agriculture from the time of its organization in 1894 until June 1927, should be given credit and appreciation for devising and carrying into effect many of the plans and specifications upon which was founded and built the science to which he devoted his life with admirable enthusiasm, purpose, and industry."

Man is revealed thru his writings and his greatness is gauged by the things he says. The life and philosophy of Doctor Whitney stand out clearly in the following quotations taken from his works:

"It may at first sight seem peculiar to begin a book on a modern concept of the soil with a chapter dealing so largely with man and his qualifications. Upon second thought, however, such an introduction appears perfectly logical, for to supply the present needs of society, the soil without the man is like a horse without a rider or a ship without a navigator, 'useless each without the other'."

"A drop of water seems one of the most commonplace things in nature, but the lifetime study of many master minds has only begun to show us that it is one of the most complex and mysterious things that Nature has devised."

"The old philosophers had a remarkable knowledge of astronomy, they were well up in mathematical sciences, they were unexcelled in logic and in clearness of expression and they were well advanced in the engineering arts of construction and of irrigation. Their ideas as to the constitution of matter were very limited. They knew of only four metals, gold, silver, copper, and iron. They knew nothing of the remaining 92 elements, the knowledge of which came to us only a little more than 100 years ago."

"Our present concept of the soil is that it is dynamic, that it has functional parts and functional activities that give it many of the attributes of a living thing and that it functions internally in much the same way as the higher order of animals."

"The digestive system of the soil acts in the same general way as the digestive system of the animal. It is of much greater magnitude and in the end even the most resistant organic material is broken down and resolved into its simplest forms."

"The young man, when he leaves college, is only fitted to begin his education; his real education comes when he enters the world and is finished only when he lies down to die."

"Thru education, training, and special investigations the farmer may learn

Establishment of Young Men in Farming*

F. W. LATHROP, Specialist in Agricultural Education (Research)
Office of Education, Washington, D. C.

TWO important principles should serve as an introduction. First, the course in vocational agriculture does not or should not end when students leave high school. These students are more in need of training and advice during the years immediately after high school when they are becoming established in farming than at any other time. Unless young men are assisted in establishment in farming, vocational agriculture must be judged ineffective.

F. W. Lathrop

The second principle follows from the first. If we would evaluate vocational agriculture, the best one method is to study the occupational progress and achievement of former students.

Former Vocational Students in the North Atlantic Region

Some years ago the Office of Education requested state supervisors to select certain departments in their states in which a survey of the progress of the former students in vocational agriculture in the community would be subjected to a continuous check. I would like to call your attention particularly to the basis of classification which was used. You will find this in Table I.

This classification was based on studies of young men on farms and in other occupations. We think that it will fit nearly every community, especially if one more item is added, and that is, owner or renter of part-time farm.

Please note that 7,512 former students are included in this 1936-37 survey. A similar survey has been made in the other regions.

I would also like to call your attention to the percentages of former students in each of the 16 groups. Almost exactly 1/12 of these former students were at home with a definite or indefinite allowance. This situation, of course, is very frequently found during the first year after the boy has left high school. Some of these boys will eventually go into non-farming occupations. The status is

TABLE I: OCCUPATIONAL STATUS OF FORMER ALL-DAY STUDENTS, NORTH ATLANTIC REGION, 1936–1937

STATUS	Totals	Percent	Selected Communities							
			Ashfield, Mass.	Dartmouth, Mass.	Hadley, Mass.	Shelburne Falls, Mass.	Windham, Conn.	Presque Isle, Maine	Windham, Maine	Endicott, New York
At home with definite or indefinite allowance	624	8.3	10	4	29	16	25	14	28	20
Farm laborer with specific wages—at home	534	7.0	8	3	5	7	10	4	0	22
—away from home	631	8.4	9	11	26	30	22	16	20	12
At home with income from one or more enterprises	264	3.5	1	3	2	22	15	2	0	16
Partner in a farm business —at home	685	9.1	3	0	8	12	6	34	3	19
—away from home	149	2.0	0	0	5	0	0	4	0	6
Renter and operator of farm	267	3.5	1	1	1	1	2	1	0	11
Owner and operator of farm	404	5.4	10	0	14	14	4	28	13	15
Manager of farm of another party	87	1.2	1	1	4	6	0	0	0	4
Number in occupations related to farming	681	9.1	9	3	25	14	23	3	20	20
Number in occupations *not* related to farming	1794	23.9	23	9	2	10	78	8	27	19
Number deceased	123	1.6	2	1	7	4	2	2	3	4
Number moved out of community	475	6.3	14	2	3	9	8	10	23	8
Number *now* in agricultural college	226	3.0	1	0	1	0	3	8	0	27
Number *now* in all other colleges	116	1.5	0	3	1	3	2	0	0	2
Number impossible to account for	452	6.0	0	0	2	0	0	8	11	0
TOTAL former students	7512	100.	101	41	133	148	200	142	148	205

a temporary one, usually, altho I have observed cases where young men stay on at home for 12 to 15 years and then inherit the home farm. In Table I, Hadley is shown to have an unusual proportion of young men at home on an allowance. Windham, Maine, also has a portion of this class of young men.

More than 15% of the young men were farm laborers. Slightly more of these were away from home than were at home. In the case of Hadley, Dartmouth, and Shelburne Falls, the number of former students who are laborers away from home is larger than the average.

In a few communities young men seem to be getting established in farming by developing on the home farm an individual enterprise; this is usually an extension of their supervised farm practice. In Table I, Shelburne Falls offers a good example, having 22 young men in this class.

About 1/10 of the young men are partners in a farm business, usually at home. Notice the unusual number of such partners in the case of Presque Isle, Maine. It is possible that the activities of the teacher are responsible for this. Oftentimes the size of the farm has something to do with it.

A surprisingly small number of our former students are renting farms. Every community represented in the table, except Endicott, New York, is below average in this respect.

Persons who do not understand our program get the impression that our former students, on leaving school, become for the most part farm owners. On the contrary, between 5 or 6 percent of our former students own farms. The percentages are especially low in communities where a deparment has been in existence for less than 5 years. Dartmouth, Massachusetts, is a case in point. The fact that it does not seem to compare favorably with other communities is largely due to the short time since its establishment. It is more desirable to have a case like Dartmouth represented in the table because all the others are older departments. Notice that there were in 1936-1937 no former students in the Dartmouth community who were farm owners. On the contrary the number of farm owners in Hadley, Shelburne Falls, and Presque Isle areas is above the average.

The percentage of farm managers is very small in most communities. Slightly less than 1/10 of our former students were in occupations related to farming such as teaching agriculture, working in a creamery, and so forth.

Nearly a quarter of our former students were in occupations not related to farming. This percentage is probably higher in the industrial areas than in farm areas. A good example of this is shown in the comparison of the Presque Isle and Windham, Maine, communities. Presque Isle is in a farming area far removed from industry; Windham, Maine, is near several industrial areas and has about 3 times as great a proportion in occupations not related to farming. Note, also, the large proportion in occupations not related to farming in Windham, Connecticut, which is in the center of an industrial area. On the other hand Endicott, New York, which is in an industrial area, has a rather small propor-

Note the large proportion of former students in the Endicott area who are now in agricultural colleges. I think you can see that there is much variation between communities. I feel, altho I cannot prove, that the follow-up of former students by teachers is a big factor in this variation and that a teacher may do much to assist former students toward ownership, not making it necessary for them to go into non-agricultural occupations unless they prefer to do so.

Record forms for follow-up of former students

Certain teachers who have been in their communities for many years and have closely followed the progress of their former students, feel that they do not need records of the progress that these students are making. I feel, however, that for the benefit of other interested parties, and especially for the benefit of teachers who succeed them, that some record of the progress of each former student is essential. The Office of Education some time ago issued Form 8-745, which is designed to help teachers report the progress of former students. On one side of this form is the supervised practice record. This should, of course, be secured for vocational students now in school and wherever possible for former students. I understand that this is possible in many of the Massachusetts departments. If the supervised practice record is not available, it is still worth while to make the record suggested on page 1 of the record sheet. Each form is for an individual student and provides for a follow-up of that student for 19 years. Each line indicates a year, and each year the appropriate column may merely be checked for Columns 1 to 10; Columns 15 to 19 inclusive are easily filled in. It is suggested that while students are still in high school that page 2 of the supervised practice record be kept facing the front of the file; after the student leaves school then the form is moved to the former student file and the occupational record is faced toward the front of the file. Every year the record should be checked, and the form is constructed so that the keeping of the record is very easily accomplished.

At the end of each year, it is desirable to summarize the occupational records of students. Form 8-759 has been devised for this purpose. The forms for individual students, that is, the Form 8-745, are brought together and summarized on Form 8-759. This form provides for 11 years of summarization. This year I discovered that some teachers are merely adding the former students who have left during the year to their total group and are not checking the progress of the total group from year to year. In other words, they are assuming that there is no change in status since last year for the remaining body of their former students. This, of course, is a very lazy and unsatisfactory way to summarize; the entire former student group should be checked each year.

Former Student Cases In Massachusetts

In the summer of 1935 I visited 6 Massachusetts communities and made case studies of 17 former students engaged in farming. These cases need to be brought up to date and their number is too small to warrant sweeping conclu-

tions to you, I have read them thru and have noted whatever impressions that have occured and which I think will interest you.

Clifford Avery, Shelburne Falls—

"Clifford has kept close touch with the teacher of agriculture since graduation. Many improvements and improved practices have resulted. Some of these are:

1. Two barns remodeled into poultry houses
2. Several brooder houses constructed
3. Feeding practices improved
4. Trap-nesting
5. Culling
6. Blood testing
7. Identifying early feathering individuals
8. Crossing Barred Rocks and Rhode Island Reds"

This young man was in touch with the most recent technical developments in the poultry enterprise. This was because the teacher of agriculture kept in close touch, passed along to him the latest approved practices and assisted him in putting them into effect.

Ralph Brown, Brimfield—

1. "Ralph Brown thinks his training gave him a knowledge of farming he could not have obtained by working at home. Thru his training he developed an interest in poultry, now his major enterprise. When asked how his training might have been improved, he said that he felt he should have had more contact with the various farm enterprises during the first year so that he might have discovered his major interest earlier."

Several of the young men made comments of this kind. Such comments suggest to me the need for vocational guidance and particularly guidance within farming occupations. The reason for such statements by these young men is not altogether clear, for the reason that they were no doubt given in the first year a course which included both poultry raising and vegetable gardening. Because this course sampled the fields of animal husbandry and crop production, it has always seemed to me it might have much guidance value if taught with guidance in mind. I believe such a course should offer the best kind of vocational guidance within farming occupations.

2. "Ralph is not organization-minded. He takes little part in social affairs. He much prefers a hard day's work, six days a week, so that he can see his farm develop."

Other boys made statements of this sort. Some like Mr. Grey of the Essex County School are very distinctly "organization-minded." A question in which I am interested is this, "To what extent will the F. F. A. make boys like Ralph Brown 'organization-minded'?" Or are leadership ability and ability to co-operate merely personal characteristics?

Earl Blake, Essex County Agricultural School—

"Earl Blake is a city boy turned farmer—and a good one. After attending Essex County Agricultural School for four years he started a dairy farm in his back yard. His father owned 11 acres, enough to grow ten acres of hay and a family garden. During the last year of

financed 2 cows and Earl started a dairy farm and retail milk route. During July, 1930, just after graduation, he built a milk room. The next year he increased his herd to six cows and bought a new milk truck. He was married in April, 1931.

"The next year he remodeled the barn, installing a dairy barn. He increased the herd to 12 cows. In 1933 he remodeled his milk room and added 6 purebred Guernseys to the herd. Within three years after graduation he has developed a dairy herd and built up a profitable milk business."

This is one of the finest examples of a city boy farming successfully that I have ever seen. Earl did not even move to the country; he stayed right in town. I have not seen anywhere a better job of training city boys to farm than you do here in the county schools.

Theodore Carter, Norfolk Co. Agricultural School—

"When Theodore Carter finished grade school, he went to work in a factory and did not like it. He quit the factory and entered Brockton High School. Meanwhile, he developed unusual ability to grow vegetables in his back yard. Then he decided that he wished to enter the Norfolk County Agricultural School."

Harry Lear, Essex Co. Agricultural School—

"When Harry Lear was in high school he was discovered reading 'Farmers' bulletins' instead of the textbook assigned. He was told that these bulletins would never do him any good. In spite of the warning, he became more and more interested in farming and finally told his father that he would like to leave high school and enter the agricultural school. His father, a draftsman for the General Electric Company, gave his consent."

As I read these two statements, I note that one young man became interested in farming thru growing a garden and the other thru reading a farmers' bulletin. I wish I could find out how all the former students in Massachusetts became interested in farming. I would know more than I do about vocational guidance. In other words, we are in need of a study along these lines.

Ward Cromack, Shelburne Falls—

"He started his poultry enterprise during the first year of his training, altho he told his teacher when he first began high school that he would 'have nothing to do with a hen.' His father says the farm would have 'gone on the rocks,' if it had not been for Ward's hens. On the other hand, the father gave Ward every opportunity to use his initiative and also gave him fine moral and financial support."

This young man virtually saved the farm business thru the expansion of his poultry business. I have never seen more genuine gratitude of parents to vocational agriculture and the teacher.

Here, I yield to the temptation to make a generalization based on a small number of cases. With one possible exception every young man (of the 17) had unusually fine relationships with parents.

I believe the attitude of parents is a most important factor in establishing young men in farming. You teachers can

study and development of parental attitudes.

Royal Demers, Bristol Co. Agricultural School—

"The development of the poultry business was largely an outgrowth of Royal's vocational training. The following is a partial list of the equipment which has been added to the farm.

"1. A modern residence has been substituted for a small cabin of a very primitive character.
2. Royal built himself a separate residence after his marriage.
3. A truck.
4. A fine automobile.
5. Three incubators.
6. Fourteen 20x30 pens.
7. Thirty-one hundred laying hens.

Some of the practices for which his training is responsible are:

1. Vaccination of birds.
2. Scientific feeding.
3. Culling of unproductive birds.
4. Production records.
5. Farm accounts."

Supervised farm practice is frequently the basis for establishing a young man in farming. In this case the poultry business grew from zero to its present status, beginning when Royal began his second year poultry enterprise. The business in 1933 was almost exclusively an expansion of Royal's poultry project.

Rockwell Donelson, Shelburne Falls H. S.—

"He left Shelburne Falls High School in 1921 and continued with his father. The arrangement was that he should receive one half the profits from poultry. In 1921 he married; he has a very attractive home of his own not far from the main farm house. In 1923 at the age of 21 he became one-half owner of everything except the real estate."

The father evidently wanted his son as a partner. He made a thoro-going job of it. This very satisfactory arrangement resulted from the far-sightedness and liberality of the father, plus the long, effective, persistent service of the teacher.

Edward Dwyer, Weymouth—

"When Edward Dwyer graduated from Weymouth High School in 1922, he borrowed $2,500 from his father and bought 15 cows. He had already provided space for dairy cows in a barn back of his home in Weymouth. He started a milk route and at the end of the first year was able to repay $1,100 of the loan. During his last year of vocational training he owned 4 cows. From 1922 to 1927 the herd steadily increased in size until he had 55 cows. The next year a few of his cows reacted to a tuberculin test. The next year, 1929, he bought 20 acres of land a mile from his home. In 1930, he bought 20 more acres adjoining the first 20 acres. This year (1933) he bought 60 acres of land for summer pasture. He now has 75 cows. He has built up a very successful milk route and retails his eggs along with his milk. He runs three milk trucks."

Here is a case of a city boy expanding a 4-cow project into a 75-cow dairy enterprise. All I can say is, "It can be done."

Melville Grey, Essex Co. Agricultural School—

"1. The farm now consists of 26½

There are 10 acres in orchard, two acres in asparagus, one acre in potatoes, 3 acres in sweet corn, two-thirds of an acre in strawberries. He raises a wide variety of vegetables and fruits in smaller areas. All his crops are marketed at the roadside stand.

"The dairy herd consists of 12 Guernsey grades. Mr. Grey conducts a milk route and buys some milk in addition to what he produces. He has a laying flock of 1,000 Rhode Island Reds. This year he is raising 2,300 birds. The eggs are marketed on the milk route and dressed fowls are sold at the roadside stand. The diversity of his products may be illustrated by the fact that he recently gave a dinner to the Rotary Club, every item on the menu coming from his farm."

"2. Mr. Grey says he moved to his farm to lead a quiet life."

That is not my idea of a quiet life. However, Mr. Grey is an unusual example of a busy farmer plus a busy citizen.

E. W. Hibbard, Hadley—

"1. Mr. Hibbard began his vocational training before the home-project idea was established. During his fourth year he conducted an acre asparagus project and this was the beginning of his asparagus enterprise. However, his father always made an effort to keep him interested in the farm. At various times his father turned over to him calves, pigs, and colts to raise. Later he grew onions on shares with his father. These arrangements with his father had some of the advantages of a program of supervised farm practice."

"2. Mr. Hibbard says that a program of supervised farm practice would have improved his vocational training. More training in marketing and management would have been a great advantage."

Mr. Hibbard's father did a pretty good job of vocational guidance within a limited scope. Altho Mr. Hibbard had what resembled a supervised practice program in his relationship with his father, he thinks that a program similar to the one we now have would have improved his training. This seems complimentary to our supervised farm practice. His statement in regard to the need for more training in marketing and management is typical. Several of the young men made similar statements. This constructive suggestion illustrates the value of case studies and if the same suggestion were made by a considerable number of young men in Massachusetts, it should be the basis for greater emphasis on marketing and management in the course of study.

Franklin Scott, Shelburne Falls—

"Franklin finished four years of vocational training in 1928. At that time he owned 25 percent of the investment in poultry and brooding equipment. He worked for his father and had a share in the profits. This arrangement continued for two years. At that time Franklin took over the poultry business. In return for the use of poultry houses and land and board, he furnished poultry and eggs for the home, manure for the farm, and labor on enterprises other than poultry. This arrangement continues to the present time, 1935."

Franklin Scott developed his poultry project into a poultry business. He is a good example of a young man who lives

one or more farm enterprises. Incidentally, he would not have gone into farming if it had not been for vocational agriculture and the unusual services of the teacher.

Osborne West, Hadley—

"At the time Osborne graduated, he owned 4 cows and 5 heifers and a small poultry flock. This nucleus of a dairy herd has now increased to 30 head."

He has developed at home a herd of his own. He is well on the road to establishment either at home or as a dairyman on some other farm.

Elmer Wood, Bristol Co. Agricultural School—

"After a time, he decided that he did not want to go into dairying. A member of the faculty at the Bristol County Agricultural School suggested duck farming as a possibility and it appealed to him. It was also suggested that he get some experience on a duck farm before embarking in the business. He worked for wages with two different duck growers for a period of three years. In 1925 he bought the farm on which he is at present located."

Working with good farmers serves as an invaluable supplement to formal vocational training. The Bristol County School utilized the services of outstanding farmers to supplement the training of Elmer Wood. This appeals to me as very sound procedure, especially in connection with former students.

The cases from which I have made excerpts are part of a collection. I am hoping to enlarge greatly the number of case descriptions within the next few years. I am interested in these case descriptions primarily as a means of studying our program. However, they have other uses. For example, if a new local board of education should raise a question about the value of vocational agriculture in any of the older departments in Massachusetts and the teacher should submit case descriptions of former students farming in the community, I do not know of a better way to handle such a problem.

A New Function of the Teacher of Agriculture

If the teacher of agriculture is to assist his former students to become established in farming and thus make his preliminary results final, he should find farming opportunities in the local area for former students. These opportunities are of several types, as follows:

1. Opportunities to work for wages for a good farmer.

Elmer Wood worked for Mr. R. C. Wilbur, and eventually became a duck grower.

2. Opportunities at home.

Rockwell Donelson, Ralph Brown, Franklin Scott and others are examples. I think we have assumed that these are opportunities about which we need not concern ourselves. However, some of the 17 young men would not have become satisfactorily established at home had it not been for the good offices of the teacher of agriculture. The teacher of agriculture has a responsibility in connection with opportunities of young men to farm at home.

3. Opportunities to rent farms.

Many of our young men who are as a step toward ownership. If a teacher is in close touch with present and future renting opportunities, he can render much assistance.

4. Opportunities to buy farms.

Likewise, the teacher can be of service if he knows the farms that are, and will be, for sale.

If the teacher is to assist former students to become established in farming, he should know all four types of opportunities in his area. This means a survey of some kind, which is periodically checked and kept up to date.

I venture to say that thousands of young men have left the farm, who, if they had known of *existing* local opportunities, would still be farming.

Some attempts have been made to discover farming opportunities. Perhaps teachers of agriculture will be able to utilize future attempts along this line. However, it may be that outside agencies are interested primarily in finding jobs and opportunities in the community for young men who are not former students and who live outside the community. Sometimes these are young men from urban areas.

Does the teacher of agriculture have a responsibility to discover and check continuously the opportunities in farming in his patronage area? If you think so, you will be interested in a study made by Mr. J. W. Hatch, now assistant supervisor in New York. Hatch determined the farming opportunities in the patronage area where he formerly taught agriculture.

The discovery of farming opportunities seems to me a necessary element in any plan to assist young men to establish themselves in farming.

The Teacher and Research

I could give you several reasons why a teacher should study his job. Instead of reciting these reasons, I prefer to suggest certain studies teachers can make as a follow-up to a study similar to Hatch's:

1. No doubt, many refinements of this (Hatch's) method of discovering occupational opportunities should be made. If teachers and others are to make such surveys, the form used in gathering data may well be simplified and, if possible, abbreviated.

2. If the results of the study are to be used for the purpose of assisting young men to become established in farming, these data must be rechecked periodically. Probably a record card should be filed for each farm in a given area. In other words, this study must be continuous if it is to function.

3. If the assumption underlying this study is valid, the course of study must take cognizance of the occupational opportunities for which young men are preparing. A study of how a course of study is affected by a local survey of occupational opportunities is needed.

4. Many young men will find their best opportunities at home. A special study of the home farm situations and of parental relationships is very important. A case study of each farm to determine what changes, if any, are involved in making it possible for a son to be taken into the farm business, would be a distinct contribution.

5. A case history of each farm in a community has a bearing on rate of ownership of farms.

6. There is inadequate data in regard to how long farmers farm. A case study of retired farmers which would show the age at which each started to operate a farm and number of years in each farming status is needed.

7. A study of how present farm owners became established, how they obtained capital and credit, how they accumulated livestock and equipment, what their relationships were with parents, is needed.

*Paper presented at the 27th annual summer conference on agricultural education, Amherst, Massachusetts, July 25, 1938.

One Method of Filing Bulletins

R. C. MITCHELL, Teacher,
Crosbyton, Texas

"How may I file my bulletins so they will not get scattered and mixed?" "How can I arrange them neatly and make them easy to find?" These are common questions asked by teachers both new and old, who face this problem each year. So many haphazard methods of filing are used that a teacher often gets discouraged in trying to keep any bulletins at all. But we all know that they are one of our best methods of dispersing accurate and easily understood information, and when properly used can be valuable to both teacher and student.

Then the question again arises, "How am I going to do it?" The writer suggests a method which is easily used and which costs little.

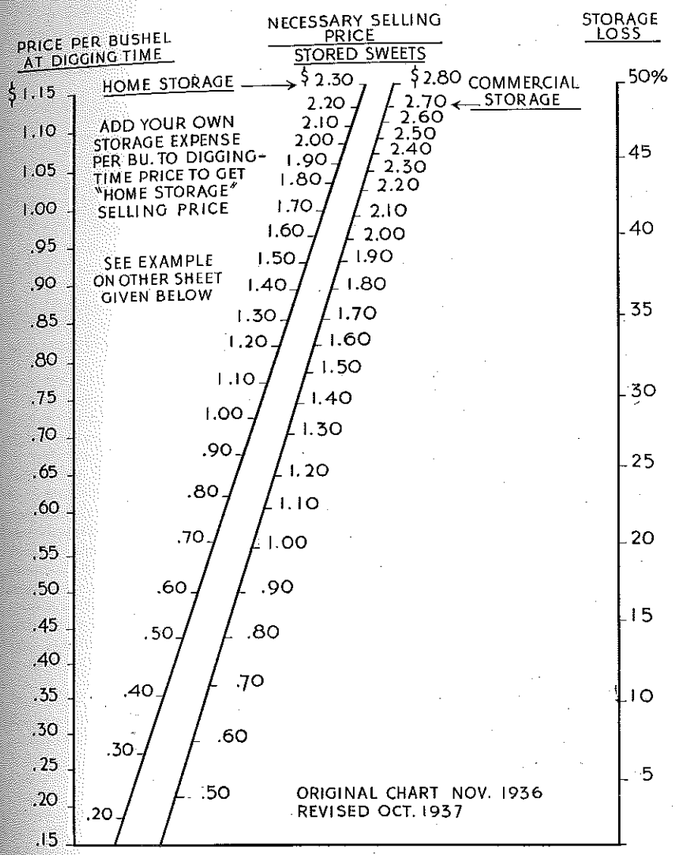
The method used is simply this: Go to the cafes, drug stores, and other cigar counters and collect the empty cigar boxes. This will not take long and the merchant will be glad to get rid of them; so the cost will be nothing, except a little effort. Pull out one end and one side of the box, and tack the lid to the other remaining end. You then have a neat box that stands on the one end and offers a quick, easy-to-use container for slipping the bulletins into the box thru the side which has been removed. After taking out the side and one end, get a small can of paint (black preferably), and paint the box. The black paint covers the names and labels on the box and leaves a small, light, attractive container for bulletins. Then with small slips of gummed paper glued on the remaining side of the upright box, the name or names of the bulletins appearing on the inside may be easily read.

Various methods of grouping the bulletins are used, but the method used by the writer has proved to be very satisfactory. On one side of the room there is a bookshelf. All bulletins pertaining to one enterprise, as dairy cattle, are grouped together, and the boxes containing all bulletins on this enterprise are arranged on the shelf together. Directly under the boxes on the edge of the shelf, another gummed label bearing "Dairy Cattle" is glued on. Thus, when a subject is assigned in that enterprise, the student first finds the group of boxes labeled "Dairy Cattle." He then looks on the labeled boxes until he finds the number and name of the bulletin which he desires. When the student finishes with the bulletin he puts it

A Rapid Calculator for Sweet Potato Prices

John W. Goodman, Instructor, Minotolo, New Jersey

Comparison between prices of sweet potatoes sold from field and those stored for later sale.



1. The "Calculator" may be used directly with the usual commercial storage charges or the grower may use it with his own storage figures by adding these figures to the "Digging-time price."

2. "Price at Digging-time" and "Necessary Selling Price" must both be figured at the same point—either both must be "at the Farm" or both "at the Market" for any one lot of sweet potatoes. "At the Farm" comparisons will be most accurate, as rot and shrinkage losses have a slight effect on shipping charges.

3. "Storage Losses" as listed on the chart include all shrinkage and rot.

Usual "Commercial Storage" expenses include:

1—$.10 per bushel. Storage charge
2—$.10 per bushel. Extra handling and grading on stored sweets.
3—$.05 per bushel. Extra hauling, loading and unloading.

If your expenses are different from these use "Home Storage" method.

Home Storage: Charges vary with different growers. USE YOUR OWN storage charges with this method. Add your charge per bushel to the price per bushel "at digging-time" and use the chart as directed below.

Examples

Let us say that sweet potatoes sell at digging-time for $.50 per bushel "at the farm." The grower decides to store half the crop in a commercial storage house. From past experience and from checking on the number of bushels being taken from storage he finds a "storage loss" of 20 percent.

The question is: How much must the price of sweet potatoes be "at the farm" to cover all expenses, shrinkage, etc., and return the grower at least as much as he would have realized at the $.50 digging-time price?

Use the chart in this way: Take a ruler or any straight-edge; put it on a $.50 at the left side of the chart and place the other end of the ruler on 20 (percent storage loss) on the right side of the chart. You will find that it passes thru the middle line (Commercial Storage) at the point marked $.94 per bushel. This figure of $.94 per bushel is then the selling price for stored sweet potatoes (Commercial Storage) that will be equal to the $.50 price at digging-time (figuring 20 percent loss on the stored

Use of the Chart for "Home Storage"

Let us say that a grower stores a portion of his sweet potato crop at "Home." He could have gotten $.50 per bushel "at the farm" at digging-time, but he decides to try for a better price by storing. Let us say he finds a 25 percent storage loss at the time of removal. This grower figures that his "Home Storage" costs have been $.15 per bushel. Add the storage cost of $.15 to the digging-time price of $.50, making a total of $.65. Place a ruler on $.65 at the left side of the chart and place the other end of the ruler on 25 (percent loss) on the right side of the chart. The ruler edge passes thru the center line marked "Home Storage" at the point of $.87, which is then the approximate selling price necessary on this stored crop to be equal to the $.50 per bushel field price. Over $.87 is storage profit.

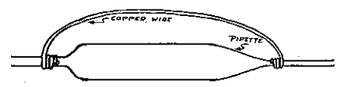
Protecting Pipettes

GEORGE H. SALISBURY, Teacher,
Ludlowville, New York

If YOU have trained many students to test milk for butterfat by the Babcock method, doubtless you have had pipettes broken. Probably some pipettes have slipped from the hands of the novices and others laid on a table have rolled off to smash on the floor.

As these pipettes usually cost 25 to 30 cents apiece, appreciable losses may ensue in the training of numbers of inept adults. With boys of the early 'teens, such as we are more often called on to teach, the breakage is usually greater than with adults.

A simple little device I thought of one day has practically eliminated such trouble in our department. First, merely snip off a foot of the light copper wire you use in your electrical work with door bells and dry cells. Starting at either end of the barrel of the pipette make three to five neat turns. Then make a bend two inches from the free end of the wire. Place this bend about the tube on the other side of the barrel of the pipette and about an inch from the expanded part. Run as many turns of wire as you can about the tube. Run them toward the middle. See accompanying figure.



Salisbury Pipette Saver

This arrangement has these five advantages: The wire loop prevents rolling of the pipette; it tends to prevent the pipette slipping from the hand; as the looped wire is springy and the coils will move, pipettes wearing the device will slip into any of the wooden or cardboard individual containers usually seen; the friction of the wire against the side of the container is sufficient to hold the glass pipette in place even tho the container be violently shaken; the device facilitates discharge of contents in those cases in which an air seal would form between mouth of test bottle and expanded part of pipette.

Supervised Practice

H. H. GIBSON

Adjusting Class Schedule to Provide for More Effective Supervision of Home Projects

WARREN GIBSON,* Instructor,
Oregon City, Oregon

"As a generalized statement, the broad task of the public school is taking each individual pupil as he is, guiding him in defining and in achieving the purpose or goal which will enable him to live as effectively as possible in his behavioral environment."

With this attitude prevailing in the Oregon City high school, it has been possible for the vocational agriculture department to initiate a plan whereby Monday of each week is given over mainly to home project visitation or other matters which may require the attention of the instructor and students outside the classroom. The regular classes in agriculture are not scheduled on Monday. Under this plan, any student or group of students may be called from school for the purpose of a project tour or other forms of project study and field work. All students not engaged in project visitation, farm, or field work, report for study or library work.

This plan has several distinct advantages over the old system of confining project visits entirely to out-of-school hours and Saturdays. It sets aside a definite time for project visitation which nothing else may interrupt. With a given amount of time and money, one can spend more time on one project, and visit more projects. On some of these Monday tours, I have visited as many as seven projects, spent at least an hour at each place, and yet traveled about a fourth as far as I would have been forced to travel had I visited these projects individually after school hours.

Students included on these tours are given a chance to observe just what the other members of the class are doing in the way of project work, and also to compare their problems and practices with those of others having similar projects. I have found that problems one boy may have can easily be solved by observing how another boy has solved his. For example, several of the boys were having difficulty getting clean eggs. On one of the recent tours taken to poultry projects, this problem was immediately solved when it was discovered that Bill Jones was getting clean eggs by using rice hulls in the nests rather than straw. Altho these boys had this information in their notebooks, they had not used it until they had seen that this practice produced results. On the same tour, it was very definitely demonstrated to the boys that ventilation and condition of the litter are very closely related. Most of the houses were well ventilated, and a dry litter was the result. One of the houses was very poorly ventilated, and a wet litter was observed, altho the boy had changed it recently. A discussion of ventilation and its effect upon the flock occured on the spot, and on the following day, an extensive review was held on the subject of house ventilation. The boy whose house was poorly ventilated made the necessary changes before the week was up.

From this discussion, it can be seen how this plan of project supervision makes possible very effective teaching on the job. The boys may observe and discover real problems on these project tours, and immediately connect the facts brought out in discussion of their problems and practices in such a way that the facts can be understood and remembered. Also, all students having projects in similar enterprises can be given a common background of each student's project problems and practices as discovered on these tours. These can be followed up and carried over into subsequent classroom discussions. Boys can now see and make close connections between school work and project work.

Usually boys having projects in a particular enterprise are taken as a group on these project tours. In this way they acquire a competitive spirit, and are quick to discover the good and poor points and practices in a project. They try to improve their projects so that by the next time the tour is taken, approval rather than fault-finding will be in order. However, instructors trying out this plan are cautioned at this point to see that such project tours do not degenerate into mere fault-finding. Boys must be encouraged and inspired to improve their conditions and practices, and not be discouraged. It should be stressed here, also, that group project tours cannot take the place of individual project visits by the instructor alone. These are necessary if he is to discuss intimately with both the parents and the boy the problems and practices pertaining to each individual situation.

These tours make it possible to include freshmen or beginning boys who are contemplating a project similar to that which older boys have been carrying for one or more years. Such boys have an excellent chance to see at first enterprise as a project, and also to discover many problems which will arise in their projects. Some beginners are afraid to start with a good-sized project. These tours help boys to see the size and scope of projects actually being carried out. Having a beginning boy out a half-day or all day, with an older group that is asking and discussing questions about the kind of project which he may undertake, gives him a good approach and background for raising the questions which must be considered in selecting and managing his individual projects.

Project tours made to farms or projects, either by selected groups or the entire class, afford an excellent means of introducing boys to problems which they will need to consider later on in analyzing and planning their individual project enterprises. This provides a concrete and interesting approach and has advantages over the more conventional classroom types of procedure in project job analysis and planning. For instance, problems in poultry house construction and management, which are to come up in project planning, may best be discovered on a field trip rather than thru class discussion with nothing but a blackboard for a background.

Following these Monday field and project tours, I have found that the next day, and sometimes the rest of the week, may be spent in the study of problems growing directly out of our field and project visits.

This approach and procedure makes for an informal type of instruction, but it need not be unsystematic. Information and study developed by this approach are connected with real, live problems. Supervised project practice and project planning are closely connected. The gap is closed between teaching on the job and teaching in the classroom.

Provision for one full day for project work and visitation is a privilege which could easily be abused. The work for this day needs to be planned more carefully, if possible, than that for the other days. It will be subject to some criticism anyhow. For instance, other teachers may object to dismissing students, or to helping them make up the work they have missed. Some students may object to reporting to the library during the usual agriculture period.

The following advantages may be claimed for this flexible schedule for agricultural instruction and project supervision:

1. It sets aside a definite time for project visitation when instructor and students can be together.
2. Boys are able to get the background of each other's farm and project, so necessary for the classroom phase of project instruction.
3. Boys learn much from each other's projects by contrast and comparison. Students with like projects raise and solve problems by observing the practices of others.
4. It makes possible individual, group, or class teaching on the job, where problems are best discovered and observed and where facts and information can be connected immediately with project problems and practices.
5. Interest may be stimulated in prospective and beginning students by including them in a tour to visit established projects.
6. It furnishes problems for group and class instruction, and hence bridges the gap between inside and outside instruction.
7. More time may be spent on each project, yet more projects may be visited with less time and money spent.

* Mr. Gibson is now located in Hawaii.

Comments on Supervised Farm Practice for All-Day Classes as Observed in the Field

K. W. KILTZ, Teacher Education,
Purdue University, Lafayette, Indiana

The operation of farm business involves the use of management, labor, and capital. In education in vocational agriculture, an attempt is being made to develop the information, abilities, and attitudes which contribute to efficient management, including the sound use of capital and labor in farming and the skills which are necessary for efficient job accomplishment.

Supervised farm practice is one means toward these desired results. It is a teaching device which relies upon specific objectives—some of which are tangible—the opportunity for participation and practice, and repetition and responsibility in experience, to bring the learner to the point of vocational efficiency in the various abilities and skills that are essential to proficiency in farming.

Supervised farm practice, as usually organized, breaks into two parts: viz., the keeping and use of records, and the study and accomplishment of farmer jobs. These in turn have several implications. For example, the farmer jobs may involve the use of management ability and skills. The management ability needed may be for a specific job or for the farm as a unit. The information necessary for management decisions relative to skilled jobs may be found in records but is usually not necessary for the actual performance of such jobs. These involve direction by the teacher and practice by the learner, rather than records.

Supervised farm practice, as organized in Indiana, may also be classified into enterprise study and complete farm study, each involving records. Observations of programs of supervised farm practice in various departments of vocational agriculture in the state lead one to wonder whether the place of each of these classifications of supervised farm practice and its possible contributions to the learner are clearly recognized by all teachers. Let us consider each, and some of its possible contributions.

I. *The Supervised Farm Practice Enterprise*
   - A. Provides opportunity for:
     1. Focusing teaching and learning upon a comparatively *small area* for which the teaching and learning procedures can be more easily organized and adjusted to the ability, capacity, experience, and opportunity of the learner than can a larger area of study and activity such as the entire farm.
     2. Introducing new elements of learning and experience in a more highly-organized manner.
     3. Providing for desirable repetition of learning in an organized manner.
     4. Exercising learning outcomes such as:
        - a. Planning and achieving jobs in an organized way. This may involve such teacher and learner activities as:
          - (1) Recognizing the job.
          - (2) Analyzing the job to determine difficulties, needed information, and required skills.
          - (3) Assembling and selecting the needed information and developing the required skills.
          - (4) Interpreting the needed information.
          - (5) Using the information and skills.
          - (6) Checking accomplishment.
        - b. Making management decisions relative to the job or as to the enterprise as a unit.
     5. Satisfying individual pupil desires and interests thru partial ownership and personal achievement. This, in turn, may lead to desirable attitudes.

This enterprise procedure, then, should provide the learner with training in:

- A. *Management*
  1. Development of ability to make management decisions thru information gained from organized experience, specific records, and other related organized study materials.
  2. Practice and experience in making management decisions because:
     - a. The pupil will probably have some authority to make management decisions for a *small area* of activity.
     - b. Needed decisions and the factors influencing them will be recognized and more carefully considered because of the smaller and more highly-organized area of activity.
- B. *Skills* (Labor)
  1. Practice—directed, organized, and focused experience.
  2. Information—such as is necessary to work skillfully and efficiently, or necessary for management decisions

II. *The Complete Farm Study and Records*
   - A. Provides opportunity for:
     1. A study of the farm as a unit to discover such facts as:
        - a. Relative efficiency of enterprises.
        - b. Efficiency in the management of a particular enterprise.
        - c. Efficiency in the use of labor.
        - d. Efficiency of the cropping system.
        - e. Efficiency in livestock management, et cetera.

The complete farm study procedure will provide the learner with training in:

- A. *Management*
  1. Assembling and interpreting information essential to management decisions dealing with the farm as a unit.
  2. Little or no practice in making such management decisions because:
     - a. The pupil will have little authority to make such decisions for the farm as a unit.
     - b. Experience of this type gained will be more thru well-defined and organized observation and study of the father's management activities than thru direct participation responsibility such as may pertain for the smaller area of study in enterprise activities.

We may conclude, then, that the enterprise study and the complete farm study are supplementary to each other in contributing to the boy's training for proficiency in farming, but that the complete farm study will assume added value as the individual progresses toward establishment in farming, with its accompanying added authority and responsibility for making important management decisions.

III. *Some Important Points to Consider When Helping the Boy in Vocational Agriculture Organize for the Attainment of Training thru Supervised Farm Practice.*
   - A. Important principles to observe:
     1. The enterprise activity should function thruout the entire training period with the boy in the all-day class.
     2. Major enterprises should appear early in the program:
        - a. Paralleled by course of study outline.
        - b. Permit skills and information development, application, and improvement over a period of time.
     3. Enterprises or phases of enterprises showing probable weaknesses should appear early in the program.
     4. The program should give opportunity for *pupil farming activity* in an organized way at regular and frequent intervals.
     5. The program should have a job and labor distribution thru each of the twelve months.

Studies and Investigations

C. S. ANDERSON

The Organization of Techniques for Evaluating Programs of Vocational Education in Agriculture

DR. GEORGE F. EKSTROM, Teacher Education,
St. Paul, Minnesota

G. F. Ekstrom

THE purpose of this study was to organize some techniques which may be helpful to supervisors of vocational agriculture, superintendents, schoolboard members, and teachers, in evaluating programs of vocational agriculture conducted under their direction.

In 1937–38 there were approximately 7,000 departments of vocational agriculture in the United States. Evaluations of the program in these departments are needed to determine the effectiveness of the instruction and to serve as a basis for making improvements in the work. Other evaluation studies in the field appraise specific phases of the program such as the occupational status of former students, farming practices of instructed versus non-instructed groups, the results obtained from the instruction of adult farmer classes and the program of Future Farmers of America chapters. However, these studies do not evaluate programs of vocational agriculture in their entirety.

This study was limited to a survey of the criteria being employed in other states in appraising local programs of vocational agriculture and the organization of general techniques and standards for the evaluation of community programs of vocational agriculture. The data showing the types of evaluations used in the different states were secured from state supervisors and from professors of agricultural education in colleges which train teachers for the service.

The programs of five Iowa departments—Chariton, Denison, Jesup, Mingo, and Radcliffe—were used as the basis for organizing evaluation techniques. In this procedure, committees were designated by the instructors and superintendents in the five schools to advise with them in planning programs for 1937–38 and in evaluating the results of the work for the year. In addition to the teacher and superintendent, the committees ordinarily included a member of the board of education, an evening-school member, a part-time student, and the president of the F. F. A. chapter.

Measurement in education is in the process of steady revision, always toward the more objective. Measurement in agricultural education is in the first stages of improvement over the traditional "examination" inherited from academic education.

It is, therefore, a pleasure to offer to the readers of "Agricultural Education" the result of an attempt to apply some of the techniques of measurement which have been found to be more comprehensive and more reliable in educational measurement.

Dr. George F. Ekstrom has made this application in the field of vocational agriculture in his measurement of programs of departments of vocational agriculture. The procedure and findings are recommended to workers in agricultural education for wider application and further refinement. Dr. Ekstrom's dissertation is available in the library of the Ohio State University.—W. F. Stewart.

Following the first conferences with the committees which were held at the beginning of the year, the instructors prepared definite objectives and a program of activities related to the objectives for the year. Farm management surveys were taken on the farms of the students of agriculture in these high schools. The data obtained from these surveys were used by the instructors in the refinement of their programs. Preliminary part-time surveys were also taken in four of the departments to determine the need for conducting classes for young farmers who were out of school and to obtain data about the prospective personnel of such classes. The reactions of all-day pupils, their parents, part-time students, and evening school members to the work of the departments were obtained thru surveys at the close of the year.

Evaluation Procedures Used in Other States

Data as to evaluation procedures being used were obtained from 44 states and the Territory of Puerto Rico. They make use of one or more definite devices for evaluation purposes. In 13 states the evaluations apply to departmental programs, in nine cases to vocational agriculture teachers, one to F. F. A. chapters, and four to supervised practice. Three other states make general evaluations of annual programs of work prepared by instructors.

Four states—Florida, Mississippi, Louisiana, and South Carolina—participated in the Master Teacher award for the Southern Region in 1937. The award is being discontinued on the regional basis but some of the states in the region are continuing the award on the state basis.

In California, the schools maintaining departments of vocational agriculture have the privilege of accepting a plan of reimbursement based on ratings of the departments by the state supervisors. Salaries of all teachers are reimbursed on the 50 percent basis up to $1,800. The reimbursement beyond this amount is computed by multiplying the salary times the total percent obtained from the ratings.

Programs of the Five Iowa Departments

Two agricultural courses were offered in the high schools at Denison, Jesup, and Mingo, and three each at Chariton and Radcliffe, during the year. In addition to the part-time classes taught at Chariton, Jesup, and Radcliffe, evening classes for adult farmers were conducted at Chariton, Denison, and Mingo. F. F. A. chapters were maintained in all the departments, the one at Mingo being organized in May 1938. The titles and enrollment for the high-school courses and the enrollment in the part-time and evening classes and the F. F. A. chapters are shown in the accompanying table.

Interest Responses in the Five Communities

Of 185 all-day pupils who filled out interest blanks, 51 were graduating or had otherwise completed the vocational agriculture course in the high school. Of the remaining group, 123 expected to re-enroll the following year. Ninety-six of the 185 boys now anticipate that they will farm or enter an occupation related to farming. Only 45 of the 185 boys expressed an interest in attending college, 22 of whom propose to enroll in agriculture.

Returns were obtained from 77 parents, 59 of whom thought the best vocational opportunity for their sons was in farming. Fifty-eight of the students were eligible to continue in vocational agriculture the following year. The parents of 56 of these boys would like to see their sons re-enroll.

The data obtained from 73 members of the three evening classes at Chariton, Denison, and Mingo indicated that 67 were interested in attending a similar

Department	All-Day Classes					Part-Time Class	Evening Class	F. F. A. Chapter
	Crops	Animal Husbandry	Shop	Farm Management	Different Persons			
Chariton	16	27	..	21	51	16	83	52
Denison	..	19	16	..	35	..	50	40
Jesup	..	25	22	..	47	53	..	41
Mingo	14	..	10	..	24	..	58	26
Radcliffe	20	12	..	16	54	24	..	40

members of the three part-time classes conducted at Chariton, Jesup, and Radcliffe all indicated an interest in continuing their instruction.

Evaluation of Programs of the Five Departments

A second series of conferences was held with the committees in the five departments at the close of the 1937–38 school year. At these meetings the instructors presented a summary of their work in terms of the objectives and activities set up at the beginning of the year, and the writer reported upon the reactions of class members and parents of the high-school students as obtained from the interest surveys. The committees were then asked to evaluate the programs of their departments on a form prepared by the writer for this purpose.

The form which was used for making the evaluations includes many of the items which appear on the devices used in other states for evaluating different aspects of the programs of vocational agriculture.

Members of the committees were asked to rate each item on the form as it applied to their departments as "superior," "average," "poor," or "inferior." The instructors rated their own programs as members of the committees except for the items which concerned them personally. Sections of the form not applicable to the local situations, such as the division on adult work where an evening class had not been conducted, were left blank. The evaluations were made by six committee members at Chariton, eight at Denison, six at Jesup, five at Mingo, and five at Radcliffe.

Conclusions

It is apparent from the review of related studies and the information received from supervisors and teacher-trainers in the different states, that little is being done to evaluate programs of vocational agriculture. Such appraisals as are being made deal with specific phases of the work. Thus, attempts to evaluate programs on a comprehensive basis, as was the case in this study, are justified.

This study differed from other evaluation studies in agricultural education to the extent that: (1) it attempted to make general evaluation of the entire programs in case situations, (2) it made use of local committees to help instructors set up programs and to evaluate outcomes, and (3) it took into account the reactions of persons served by the departments studied. It was not within the scope of the study to check the procedure used against other possible techniques. However, the plan followed in this study was found practical for application to the case situations where it was employed.

The five departments in which the evaluations were conducted represented different conditions as to years of existence, tenure of teachers, extent of programs offered, and size and types of schools. No difficulties due to these variations in conditions were encountered in using the procedure in the different departments.

In setting up the programs which were to be evaluated, local committees consisting of both lay and professional persons working together were found very helpful. They understood the purposes for which the departments were established and maintained, were familiar with different aspects of the work, and could sense the general effectiveness of the program in their respective communities. Therefore, they were in a position to give advice as to the agricultural needs of the community which the courses in vocational agriculture sought to serve.

Weaknesses

Some weaknesses and difficulties were encountered in making the evaluations. To begin with, studies of this sort do not have the objectivity found in investigations of a statistical nature. Consequently the study did not yield the kind of factual evidence frequently sought in other types of studies. In order to offset this difficulty, specific objectives were organized for each department and the outcomes obtained from these objectives were appraised by committee judgments.

A second problem had to do with the degree to which the objectives should be defined as activities for purposes of analysis. No attempt was made to analyze in complete detail the results obtained from the activities of the departments. Such an analysis would have called for an increased number of judgments and for appraisals of less significant outcomes which would have made the study more subjective. Consequently the objectives were analyzed and appraised only to the extent to which it was thought necessary to make the proposed evaluations of the departments.

A third difficulty resulted from the lack of instruments available for evaluation purposes. This required the development and use of several blanks for obtaining information about the local situations, and appraisal forms which were used by the committees in the five departments.

The final problem of significance to the writer pertains to the personnel of the appraisal committees. It was evident that all members of the committees employed in the five departments were in a position to offer some advice helpful to the teachers in the organization of their programs. Some of the committee members, however, seemed uncertain of their ability to evaluate results obtained from certain aspects of the programs. It is possible, therefore, that the appraisals should be made by a limited number of persons who are quite familiar with the philosophy and nature of the work in vocational agriculture.

Contributions

The evaluation of programs of vocational agriculture similar to that employed in this study is of most importance to the department in which the appraisal is made. It is also quite helpful to state boards for vocational education and should be of assistance to college departments which train teachers for this type of work.

From the standpoint of the local department the teacher is stimulated and challenged by his participation in the undertaking. The systematic organization of departmental objectives and activities to serve as a basis for the evaluations makes for a more effective program. In this case the recommendations of the committees were responsible for the addition of certain types of work in some of the departments, such as the organization of a part-time class and the starting of an F. F. A. chapter. The evaluation also assists the teacher in checking upon the effectiveness of his instruction and serves as a basis for making improvements in his work from year to year.

The procedure gives the principal of the high school and the superintendent of schools information relative to the contribution which the department is making toward the objectives of the school, and assists them in their supervisory relationships with the agriculture department. Some suggestions for the improvement of the programs resulting from the evaluations in the five schools co-operating in this study with which the principals and superintendents are concerned were: (1) the requests of students for additional agriculture courses in the high school, (2) the interest of patrons in having the part-time and evening-school programs extended, (3) the advisability of enlarging the reference libraries, (4) the possibility of using visual aids more extensively, and (5) the need for providing improved facilities for shop work.

The evaluation of a program of vocational agriculture is of value to the board of education. Such an appraisal should assist the board in making decisions in the employment of an instructor and in providing suitable physical facilities and equipment for the work.

Community support for the program is encouraged by the evaluation process. The committee members who serve as advisers in planning the program are placed in a position to promote its execution. Likewise, the taking of surveys among patrons in the community encourages the support of the people who thus participate in the project.

Under the provisions of the vocational education acts, state boards for vocational education are charged with the responsibility of co-operating with local schools in the organization and development of programs of vocational agri-

culture. Thus, evaluations of this type are helpful to representatives of these agencies in their supervisory work. In general, the procedures involved in this study for organizing objectives and setting up programs might well be encouraged by supervisors on the part of all teachers. The use of an appraisal form by supervisors, similar to that used in making the evaluations, should be helpful in checking upon the work being done by agricultural departments and in making suggestions for the improvement of the programs.

Since the application of vocational agriculture to local situations differs as to needs and apportunities, the writer believes the departments in the state should not be rated against one another. Rather, it seems desirable to use the evaluations for the purpose of improving programs in terms of immediate local needs.

College departments which train teachers of vocational agriculture must prepare students for situations which will confront them as instructors. Thus, the prospective teacher should become acquainted with appraisals made of programs observed and with a technique for evaluating the results of the work for which he will be responsible. The use of a procedure similar to that employed in this study should be helpful to teacher-trainers in evaluating the work of their training schools and in directing research studies involving the evaluation of programs of vocational agriculture. It should also enable the college departments to become familiar with the essentials of programs which are considered effective in local communities.

Procedure Recommended for Evaluating Community Programs

This study demonstrated a method of evaluating community programs of vocational agriculture which was found to be practical in the case situations where it was employed. The writer believes that similar approaches to the evaluation of such programs could be used to advantage quite generally. A suggested procedure for making the evaluations is presented herewith:

1. Determine the major objectives for the program.

The major objectives may be drawn from various sources insofar as they express the philosophy upon which the school and the agricultural department operate. Such objectives will, for the most part, constitute the long-time objectives of the department.

2. Make surveys to determine the instructional needs.

All available data directly applicable to the work of the department such as that contained in assessors' reports, materials prepared by planning boards, and state yearbooks of agriculture, should be reviewed. Such information needs to be supplemented by a knowledge of the farming practices followed in the community, and by a study of the needs, interests, and activities of present and prospective class members.

3. Set up specific objectives for the year and activities relating to these objectives.

The annual objectives, and the activities selected to realize them, might well constitute the program of work of the department for the year. The objectives need to be broken down as activities to the extent to which they are to be evaluated. Insofar as possible the activities should be expressed in terms of the learner.

It is recommended that an advisory committee which is well informed concerning the department's activities and possibilities be used in setting up the departmental program. The committee should include such persons as the superintendent of schools, a member of the board of education, a parent, a part-time student, an evening-school member, the president of the F. F. A. chapter, and a representative of the community not directly connected with the school.

4. Keep an accurate record of the outcomes from the activities.

This record must be quite complete if the subsequent evaluation is to be significant. The record, however, must not be involved and difficult to administer.

5. Obtain reactions to the program on the part of the people served.

The responses of high-school students, parents, part-time students, and evening-school members are essential for evaluation purposes. Thus evidences as to the reactions of these people to the program should supplement the other types of data made available to the evaluation committee. In securing this information, precautions should be taken to obtain unprejudiced responses insofar as possible.

6. Appraise the results obtained from the activities.

The persons who make this appraisal must be familiar with the program conducted, including the reactions to the work on the part of the people served by the department. The device used for this purpose must be as objective as possible, must evaluate in terms of accepted standards, and must contain a scale of values for each of the factors included.

A Study of the High-School Vocational Agriculture Department as a Factor in Educational Guidance

LEIGH H. HARDEN, Assistant to the Dean, College of Agriculture, St. Paul, Minnesota

A COLLEGE of agriculture is concerned with the type of student that enrolls in its courses, and for the following reasons it is also interested in the guidance agencies which direct the student toward an agricultural college education. First, the college will be better able to provide the maximum opportunity in the use of its facilities if the student enrolling has made thoughtful vocational and educational preparation. Second, it is desirable to have co-ordination of guidance activities between high school and college. Third, thoughtful guidance in the secondary school should make for better adjustment and more rapid progress, and thus lessens the problems of the college freshman.

Leigh H. Harden

It would seem desirable for a college of agriculture to make a study of the guidance activities in the secondary schools and the various agencies contributing to this program. The college will then be able to set up a better planned program which will assist these agencies and help to integrate the high-school guidance program with the student personnel agencies in the college.

The ground work of student personnel should be laid in the high school.[1] This is especially true with students from farms. The secondary school usually provides a major portion of the educational and vocational guidance a farm boy receives. This agency is supplemented by organizations such as 4-H Clubs and Future Farmers, and by the personnel in the Extension Service, such as county agents and extension specialists. These various agencies should be studied to determine the effectiveness of their guidance activities. That much improvement can be made in provisions for aiding farm boys to make satisfactory educational and vocational adjustment is apparent.[2]

This brief study will deal with a comparison of the effectiveness of the guidance programs carried on by schools having vocational agriculture departments and schools not having agriculture departments.

A large proportion of sudents enrolling in the College of Agriculture are from relatively small high schools in rural communities. What guidance is given is usually administered thru the office of the superintendent or principal, or by an interested teacher. A number of these schools, however, have departments of agriculture, headed by vocationally trained men. The influence of these men, who by the nature of their work and training and by a direct contact with school and home problems thru the student's farm practice activities, may be an important factor in the vocational and educational guidance of farm boys. If such is the case, there should be a closer relationship between the student personnel agencies of the college and the teacher of agriculture.

Is the high-school department of agriculture a significant factor in vocational or educational guidance for farm boys? Are these departments guiding more students to the College of Agriculture? Is there a significant difference between the scholastic abilities of students they are counselling to further their formal education and those students going into farming with no further educational plans?

Programs of colleges and universities are intended for the more scholastically able of the students. Koos and Kefauver state that "decision to attend a college should be based on assurance of capacity to succeed there." It might be said then, that an effective guidance program in a high school will be significantly selective relative to pupils that are counselled to enter college. One cannot say with assurance what criterion should be used in this selection process. However, the most valid predictive measure of college success at present appears to be that of high-school scholastic achievement. Can it be assumed then that an effective guidance program will be selective on the basis of scholastic ability?

If so, a significant difference between the high-school scholastic record of those students planning to enter college and of those indicating a desire to discontinue their formal education with an intention for farming may be interpreted as one measure of the effectiveness of the guidance program as far as selection is concerned. Likewise, a significant difference in scholastic ranking of those students planning to enter an agricultural college from schools with agriculture departments and students from high schools without agriculture departments would indicate more discriminating selection on the part of one or the other. These criteria should be recognized, however, as being limited in scope and as not providing a complete basis for evaluation. The success a program has in creating college intentions in its scholastically ablest students is but one measure.

Included in this study are 122 schools with agriculture departments in Minnesota, and the same number of schools without agriculture departments. The latter were selected at random, with approximately the same number of graduating pupils as in the former group.

The source of the data used in the study is the summary of the state-wide testing program for high-school pupils, sponsored by the Association of Minnesota Colleges. This includes the pupil's percentile rank in scholastic achievement during his three and one-half years of high school, and the percentile rank on the American Council on Education college ability test. Indication is also made by the pupil relative to his educational and vocational plans. If he plans to enter college, he indicates what course he will choose. If he plans to enter farming and discontinue further formal education, he so indicates.

The following table summarizes the findings in the study of 244 schools:

Students Planning to Enter Agricultural Colleges

	Number Planning to Enter Agriculture College	Mean H. S. Percentile Rank	Mean A. C. E. Percentile Rank
Schools with agriculture departments	58	54.0	27.0
Schools without agriculture departments.....	19	43.0	22.0

Students Planning to Enter Farming Without Further Educational Plans

	Number Planning to Farm	Mean H. S. Percentile Rank	Mean A. C. E. Percentile Rank
Schools with agriculture departments	62	40.0	16.0
Schools without agriculture departments.....	28	40.0	20.0

The data of the above table indicates that schools with agriculture departments send more students to the College of Agriculture than do schools not having agriculture departments. This could be explained by the assumption that the former have more pupils from outside the school district. All of these schools, however, are classified as being in agricultural communities and, if more farm boys indicate a desire for agricultural college training from districts with agriculture departments than from those not having agriculture departments, one must recognize the agriculture department as a factor in the student's choice.

A study of the data also shows that the mean high-school scholastic percentile rank of pupils planning to enter an agricultural college from schools with agricultural departments is 54.0, and that of those students from schools without agriculture departments is 43.0. The difference between these means is not satistically significant. Fisher's test gives a "t" of 1.5 which, however, indicates there are about 94 chances in 100 that schools with agriculture departments make a better selection of pupils than do schools without agriculture departments, on the basis of the high-school scholastic records.

A study of the above data also shows that the mean percentile rank on the A. C. E. college ability test of pupils planning to go to an agricultural college from schools with agriculture departments is 27.0; that of pupils planning to enter farming without further educational plans is 16. This difference is above the one percent level of significance as given by Fisher's "t" test.

Pupils planning to enter an agricultural college from high schools with agriculture departments are significantly higher in scholastic rank than those planning to enter farming without further educational plans.

On the other hand, in schools without agriculture departments, pupils planning to enter an agricultural college do not rank significantly higher than those pupils planning to discontinue their formal education and enter farming.

This indicates that there is little selection taking place, relative to farm boys, in schools which do not have an agriculture teacher.

In summary, the present study indicates the following:

1. That rural high schools in Minnesota with agriculture departments succeed in creating agricultural college intentions in more students than do rural high schools not having agriculture departments.

2. That there is no statistically significant difference in the scholastic abilities of students planning to enter an agricultural college from schools with agriculture departments and students from schools without agriculture departments. However, this difference does approach significance in that in 94 chances in 100 there is a difference in favor of the schools with agriculture departments.

3. That pupils planning to enter an agricultural college from high schools with agriculture departments show evidence of a more discriminating selection on a scholastic basis than do those pupils from schools without agriculture departments.

If the agriculture teacher is a factor in guidance, as the above study indicates, how can integration of his program with the college personnel agencies be improved? In what ways can the College of Agriculture assist the teacher of agriculture in the educational and vocational guidance of the farm boy in the high school? In what ways can the teacher of agriculture assist the college in the continuance of this personnel program begun in high school?

These questions may well be the bases for further study.

1 Byram, H. M., Opportunities for the Farm-Reared Boy. Occupations, November, 1938.

2 Youth Tell Their Story. American Council on Education, Washington, D. C., 1938.

Former and Present Staff Members

(Continued from page 163)

EDITING-MANAGING BOARD AND REGIONAL REPRESENTATIVES

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NOT failure, but low aim, is crime.

Future Farmers of America

L. R. HUMPHERYS

The Installation of Chapter Officers

LESLIE NELSON, Instructor,
Brigham City, Utah

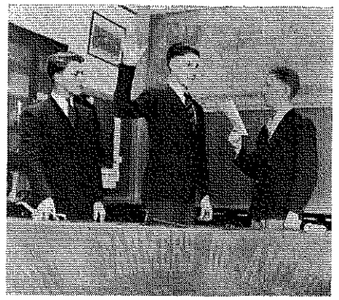
Leslie Nelson

IN THE preceding articles of this series, emphasis was given to the importance of making adequate preparation for the annual election of the officers of the local chapter of Future Farmers. It was pointed out that the election should be held at a time well ahead of the date set for changing administrations in order to provide an opportunity for leadership training, study, and chapter program planning. The observation was also made that the chapter membership should be given opportunity and encouragement in taking an active part in the selection of potential leaders for the several types of leadership needed in the local chapter. Such procedures are important and necessary if the local chapter is to accomplish one of its major objectives, "to develop competent, aggressive rural and agricultural leadership."

Assuming now that the chapter has selected a set of competent officers, has provided leadership and an opportunity to see the inner workings of the chapter organization, what preparations shall be made for the installation of the new officers? How formal shall the installation be? Shall the officers take a formal "oath of office"? Shall the retiring president simply announce at the appointed time "that from now on the new officers shall be in charge," or shall he plan for an eventful day in the lives of these inexperienced officers and members?

In answering these questions we may get some help and suggestions from the practices of other organizations. So far as public officials are concerned, a definite date is set for the transfer of responsibility from one officer to another and the law prescribes the taking of a formal "oath" by the incoming officer to faithfully perform the duties required by the office. Except for the oath no set regulation exists concerning the nature of the ceremony and other details. Tradition plays an important part in the nature and order of events. Generally speaking, public officials and citizens are impressed as on no other occasion with the seriousness and responsibility of the office at the time the "oath of office" is administered by the proper individual. Boys, by nature, believe in ceremonials. If an "oath of office" serves as an instrument of efficiency in public service it should have equal effectiveness in an organization of farm boys who voluntarily take membership and subscribe to a set of governing principles. The administering of an "oath" is not without precedent in organizations for boys. The Boy Scouts of America take the "Scout Oath" and it constitutes a very effective and important part of the scout ceremony.

The greatest accomplishment of any member of the Future Farmers of America is to develop a keen sense of duty, honor, and responsibility. In order to provide a program in keeping with this fundamental principle, every effort should be made to impress the officers and the members of the Future Farmer chapter with the dignity and the responsibility of the service to be rendered. In this connection there is much to be said in favor of a simple chapter ceremony at the time of installation which includes the taking of an "oath of office" administered by the proper individual. Boys, by nature, believe in ceremonials.



Administering the oath

A formal installation ceremony will provide one of a few opportunities in their lives where they can reflect seriously on the more important matters of group organization. In short, an appropriate oath will impress officers and members alike with the dignity and opportunities in the organization.

Every chapter must answer this question: Is the administration of an "oath of office" to the incoming officers a desirable instrument in this youthful farm organization? If the answer is "no," it means that our new officers must assume their position in a "hit-or-miss" fashion on the spur of the occasion possibly without a full realization of what the duties are. If the answer is "yes," it means that a definite prescribed oath should be formulated and used for the installation of new officers.

The chief arguments the writer has observed against the formal installation of officers are few and when summed up are pretty well stated in the following quotations from three different advisers, time," "Too serious for these youngsters." These objections are very insignificant when compared to the arguments which are set up in favor of an installation ceremony. Chief among the advantages of an installation ceremony are: (1) the educational values to the boy, (2) training for citizenship, (3) a statement of the duties of office, (4) the development of a sense of responsibility, (5) an urge to those who are inclined to regard their offices too lightly, and (6) dignity and importance of the office.

The following ceremony with minor changes was used in the installation of the incoming president of the Box Elder Chapter Future Farmers, Brigham City, Utah, and is herewith presented not as a model but simply as one type of procedure. At the chapter installation meeting, the outgoing president has been in charge of the meeting and has supervised the installation of the other officers. Each officer has been installed by his predecessor, much in the same manner as the president is about to be installed.

The Retiring President (raps three times with gavel): "Fellow members, the time has arrived for the installation of our new officers. Will the sergeant-at-arms please escort our new president and present him at the president's station."

The president-elect comes forward and is presented to the president.

Retiring President: "Mr.——, you have been duly elected to the office of president of this chapter of Future Farmers. It now becomes my duty to administer the oath of office to you as the incoming presiding official of this organization. Before doing so, I must acquaint you with the significance of the emblem of your station and also tell you what your duties will be as president of the Busy Bee Chapter of Future Farmers. The rising sun at my station is symbolic of the new era in agriculture; if we follow its light we will be led from the darkness of selfishness into the glorious light of co-operation. As president, it will be your duty to call and conduct meetings, to appoint committees, delegate authority, and indeed to be responsible for all the activities of our chapter. To be efficient you must possess initiative and exhibit a willingness to work. Are you ready to take the oath of office?"

President-elect: "I am." (Raises his right hand to the square.)

Retiring President: "Mr.——, do you, on your word of honor, and in the presence of all assembled here, pledge yourself to discharge the duties of president to the best of your ability?"

President-elect: "I do."

Past-President: "I will now relinquish to you this station, and I also hand to you the president's gavel. Remember that the solution to your problems depends upon the co-operation you receive from those around you. It is my sincere hope that you will have the happiness that comes from doing a job well. I will stand by to advise and to help you, and if I can be of service, I hope you will feel free to call me!"

President-elect: "I accept this station and gavel. To you, my fellow members, I pledge my wholehearted efforts. With the advice of all officers and the co-operation of all members we will have a successful year. As my first official act, on behalf of this organization, I extend to the outgoing president our appreciation for his very fine leadership during the past year."

The oath of office can be administered to other new officers by each of the retiring officers, under the direction of the new president or the retiring president. No effort is made here to formulate the exact wording of the "oath of office"; in time this may be desirable, but rather to emphasize the need for a setting which will be impressive, to influence the service to be rendered, and to promote a type of co-operation that is so much needed. Possibly it is well that the chapter members be given initiative in working out the details of the ceremony. Tradition will come to play an important part in preventing undesirable departures from what might be considered good form. This whole procedure is in keeping with the fundamental principle expressed in the Future Farmer motto, "Learning to do," and "Living to serve."

Donald Ray Fulkerson, Trenton, Missouri, and his Hereford steer which was Grand Champion at the 12th annual Midwest Vocational Agricultural Fat Stock Show held in Kansas City, Missouri, August, 1938

Two thousand F. F. A. boys and their teachers, representing 227 high schools, took part in the state contests at State College, Pennsylvania. They represented 50 percent of the total

F. F. A. HIGHLIGHTS

Conservation

The *Denison Friendly City Chapter* of Iowa made application to the Resettlement Administration office, obtained the sound moving picture, "The Plow That Broke the Plains," and showed it locally to more than 1,000 people. The picture was run thru the high-school projector and shown to local school students. Arrangements were also made to show the film at two neighboring schools. In addition, a farmer's evening class meeting was arranged where F. F. A., parents, and other farm people were invited to see the picture in connection with a conservation meeting where the local CCC camp and county conservation committee had a part in the program.

The following evening the same program was presented to an audience of town people. The local Kiwanis club attended this meeting in a group. The Denison Chapter presented the show as a community service activity. The boys were very well pleased with the attendance at the show and the favorable reaction received toward the program. Mr. Rex Ruch is the local chapter adviser.

Glee Club Organized

The Future Farmers of the New York State Association have been spending considerable effort in organizing a State Glee Club—something new in the accomplishments of Future Farmer activities. All boys of the State with ability in singing were invited to meet at the State Fair for tryout and for assignment of parts. A regular instructor was assigned and the possibilities seem to be very promising for a new venture in Future Farmer activities.

Rural Electrification Projects

The West Lampeter Chapter of Future Farmers of West Lampeter Township High School, Pennsylvania, under the direction and with the assistance of the Agricultural Engineering Department of the State College, has launched into an extensive set of experimental projects in the use of electricity for farm purposes. The rural electrification tests include the gathering of cost data on the use of the electric range, water heater, household refrigerator, milk-cooling device, milking machine, electric water system, washing machine, poultry-house lighting, and electric hotbed.

An effort is being made in these experiments to determine the practicability and economy of electric power in the rural communities. This project is giving the boys at West Lampeter a dip into real "research."

Heavy Membership Increase

The membership in the National Association of Future Farmers of America for this last year hovers around the 160,000 mark. This is a phenomenal growth for an organization of farm boys; it is but one of the symptoms of growing pains which has characterized this child during the decade since its birth. Many of the states including North Carolina, California, Ohio, Iowa, Tennessee, and Georgia made material increases in their membership for the past year. Texas went over the top with a membership of over 20,000 for the year. This group alone is a real army of farm boys organized for better farming. Minnesota has raised her membership from 1,600 to 2,600 this year. This unusual growth will be received with public approval.

Classroom Notebooks

A uniform classroom notebook for vocational agriculture in Florida has been adopted in keeping with the recommendations of the committee at the State conference. This is a three-ring, heavy-back notebook, with the F. F. A. emblem stamped on the front cover. The notebook is complete with dividers and paper.

Where Are American Farmers?

Where are our American farmers and what are they doing? An attempt is being made to answer these questions and others in a survey of over 500 American farmers by the national officers, co-operating with the U. S. Office of Education. The information secured from this survey will reveal much concerning the effectiveness of the Future Farmer program and supervised practice work in vocational agriculture.

Educational Exhibits

The New York State Association has selected the F. F. A. Chapters of Albion, Edwards, Holland Patent, North Rose, South Onondaga, Waterville, and Williamson to construct and erect educational exhibits illustrating particular activities at the 1938 State Fair in August. This prodecure is a deliberate effort to get before State Fair visitors definite features of the Future Farmer work. Responsibility is definitely placed and results are quite sure to be effective.

The average man must earn his own livelihood. He should be trained to do so, and he should be trained to feel that he occupies a contemptible position if he

BOOK REVIEWS

Elements of Farm Management, by John A. Hopkins, published by Prentice-Hall, Inc., 70 Fifth Ave., New York, N. Y., 390 pp., 67 illustrations, 49 tables, 7 forms, list price $2.20. This book treats the farm as a going concern and as it appears to the student who is living on a farm while he is studying farm management. It covers the organization and current management of the farm with particular emphasis on the use of records in control of the farm business, selection of enterprises, leasing versus buying a farm, budgeting for the farm, requirements in crop and livestock production, and with a brief consideration of marketing and financing the farm. An interesting feature of this book is the manner in which the subject of farm records is presented. Instead of treating farm records in a separate chapter, appropriate records are introduced in connection with whatever part of the farm may be under consideration. Considerable attention is given to the method of budgeting as a means of choosing enterprises and to obtaining balance within the farm business. This book should prove helpful to both vocational agriculture teachers and students in dealing with the many problems involved in the management of farms or farm enterprises. —A. P. D.

Practical Methods in Teaching Farm Mechanics, by G. C. Cook and Clyde Walker, Interstate Printing Company, Danville, Illinois, pp. 201, illustrated, price $2.22. Importance of farm mechanics work and the part it plays in the economic life of every farmer are stressed. Aims, objectives, and methods of organizing and conducting day-school farm mechanic courses are clearly set forth. Attention is given to the organization and conduct of part-time and evening-school classes in farm mechanics. The appendix carries a suggested four-year course in farm mechanics for vocational agricultural high schools, lists of important books and bulletins, some sources of illustrative materials, and suggested minimum tool list. This book should prove valuable in methods courses in teaching farm mechanics and should prove helpful to vocational agriculture teachers in planning and conducting their farm mechanics courses.—A. P. D.

Handbook on Meats for Future Farmers, by A. J. Spangler, et al., 92 pp., illustrated, paper-covered, published by Von Boeckmann-Jones Company, Austin, Texas, price 50 cents. Procedures in butchering and cutting the carcass; identification of cuts; methods of curing; method of conducting a meat identification and judging contest, together with nomenclature and score card. A glossary of meat terms, a chapter on tanning, and a chapter listing important references concludes this interesting and worth-while handbook. This booklet should prove of value to teachers of vocational agriculture and to students of vocational agriculture interested in the subject of meats.—A. P. D.

Workbook in Farm Management, by H. C. M. Case, R. C. Ross, and J. W. Green, 134 pp., comprising 26 exercises, published by Interstate Printing Co., Danville, Ill., price $1.00.

Designed for use in secondary schools and developed primarily for use in the Cornbelt. Whether farm management is taught as a correlated subject or as a departmentalized subject, the materials of this workbook are applicable. The technique of segregating and presenting the management problems makes the list of exercises easily adapted to local needs. This publication should prove of value to vocational agriculture teachers and students interested in farm management.—A. P. D.

Programs for Future Farmer Chapter Meetings, by A. W. Tenney, 310 pages, published by Interstate Printing Company, Danville, Illinois, list price $2.30.

This book is designed to aid in building successful programs for F.F.A. chapter meetings. The wide range of suggestions offered is indicated by the fact that the book contains 45 chapters. While the programs may be given as listed, it is recommended that they be adapted and adjusted so that they will harmonize with the local program of work. This book should prove helpful to all F.F.A. members, and especially helpful to F. F. A. officers and advisers.—A. P. D.

Farm Management and Marketing, by M. H. Overton and L. S. Robertson, revised edition, pp. 431, J. B. Lippincott Company, price $2. This test was written for use in secondary schools of the corn-producing regions. The job analysis basis of organization is used in presenting both marketing and management principles. Part I lists 19 jobs under the caption of Profitable Farm Management, and Part II lists six jobs in Marketing Farm Products.—A. P. D.

Milton Whitney

(Continued from page 165)

the reasons for doing things which will prepare him for doing things better and more intelligently, but the responsibility for the care and efficient conduct of the soil is on the man."

Acknowledgement is due the Official Record of the United States Department of Agriculture, November 16, 1927, for information on the life of Doctor Whitney.

Comments on Supervised Farm Practice

(Continued from page 171)

6. Livestock enterprises and complete farm accounts should form a major part of the supervised farm practice program of a senior.
7. The enterprise usually should be of farm scope and should be a unit adapted to efficiency and ease in keeping records.
8. Enterprises, in most cases, should be continued for more than one year to permit more complete learning, the discovery or confirmation of weaknesses, and the improvement of practices.

B. Important factors to consider:
1. *The Farm*—crops, livestock, soil, tenure, practices.
2. *The Parents*—attitude, age,
3. *The Boy*—previous experience and training, maturity, mental and physical ability, interests, placement opportunities.
4. *Farm Trends*—and future development possibilities and needs of the farm.

IV. *Some Probable Deficiencies in Supervised Farm Practice as Observed in the Field*

A. Failure of the teacher to recognize clearly the objectives of vocational education in agriculture and the manner in which supervised farm practice can contribute to the attainment of these objectives.

B. Omitting the enterprise study, as conceived of in this discussion, entirely.

C. Starting enterprise study the last month or two of the school year, thereby necessitating more or less academic treatment of content during the preceding months.

D. Failing to parallel class teaching thruout the school year with jobs, difficulties, skills, needs, and management decision needs of the boys in their supervised farm practice activities.

E. Failing to develop instructional units in supervised farm practice which involve individual, small-group, and class instruction.

F. Failing to utilize complete records as sources of teaching problems, information, and as indicators of needed new or improved practices.

G. Leaving the individual's current records in hibernation without diagnosis or comparison to discover specific results, weaknesses, standard of achievement, et cetera.

H. Failing to organize intensively with the pupil during the spring months for the efficient functioning of supervised farm practice thru the summer months.

I. Failing to organize teaching procedures for effective summer teaching.

J. Failing to make an intimate contact with the farm and the parents.

K. Failing to organize enterprise study of farm scope.

L. Failing to organize enterprise study with a twelve months' distribution of farming activity as a source of problems and a medium of farming participation for the pupil.

M. Permitting a complete breakdown of supervised farm practice in the senior year.

N. Lacking a carefully organized development thru the four-year period with individuals; i. e., lack of continuation of enterprises, catering to whims, focusing on minor enterprises only, et cetera.

O. Lack of study and consideration of the problem of *establishment in farming* and not enough regard for the part that supervised farm practice might play

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