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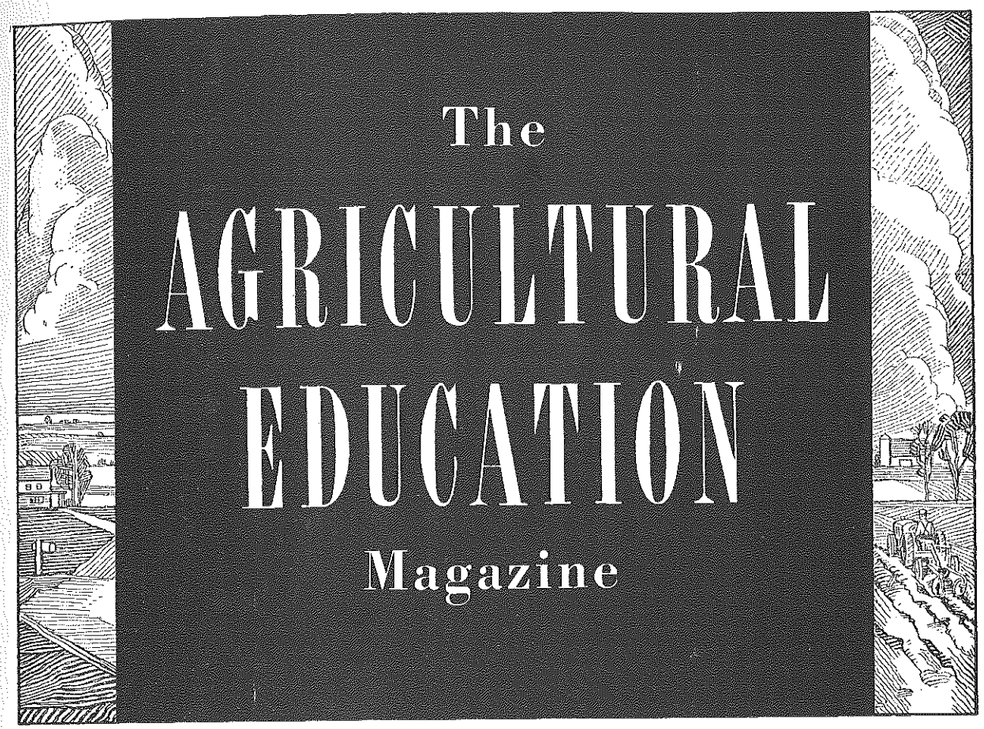

The AGRICULTURAL EDUCATION Magazine

American Vocational Association
November 30—December 3, 1938
Agricultural Education Headquarters
Hotel Jefferson, St. Louis, Missouri

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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CONTENTS

Agricultural Education Section Program..... 83
Contributions of Leading Americans to Agriculture, Eli Whitney (1765–1825).....John T. Wheeler..... 84
"Open House" Program is Effective.....E. E. Reinmiller..... 86
Working on Grass Plot (picture).....George R. Isaman..... 86
Developing a Large Milk-Testing Program.....Howard Dosch..... 86
Learning to Read Agricultural Material.....Peder E. Pedersen..... 87
Ten-Year Teacher-Trainers to Celebrate Tenth Anniversary of Their Organization..... 87
The Place of Continuing Projects in a Long-Time Program...John G. Glavin..... 88
Evening Class Work for Operating Farmers.....W. E. Fowle..... 90
Increasing Adult Enrollments.....S. D. Mitchell..... 90
Charts Indispensable for Evening Schools.....E. A. Templeton..... 90
Evening School Helped Develop Poultry Co-operative....Donald C. Tobler..... 91
Adult Evening Courses.....H. B. Drake..... 91
My Experiences as a Pioneer in Young Farmer Education...Russel M. Adams..... 92
Procedures Used and Results.....H. H. Radke..... 93
Fears About Evening Class Work.....L. C. Schank..... 93
Tests in Agricultural Education.....G. P. Deyoe..... 94
A Feeder of Grand Champions.....LeRoy Bunnell..... 96
Leslie Standlea (picture)..... 96
Lamb Feeding Project.....Bob Lorimor..... 96
First Honorary State Farmers, Missouri (picture)..... 97
Does Your Chapter Need Money?.....Ivan Jett..... 97
F. F. A. Highlights..... 98
Vocational Agriculture Education Directory..... 99

American Vocational Association Meeting

St. Louis, Missouri—November 30-December 3, 1938

AGRICULTURAL EDUCATION PROGRAM
AGRICULTURE RESEARCH SUB-SECTION

Wednesday November 30 1:30 p. m.
Hotel Jefferson Crystal Room

Chairman: R. M. Stewart, Professor of Rural Education, Cornell University, Ithaca, New York.

1. Report of the Research Committee, Agriculture Section, American Vocational Association.
2. A Study of Attendance at Evening Schools, H. M. Hamlin, Professor of Agricultural Education, University of Illinois, Urbana, Illinois.
3. (Two other studies to be included)
4.
5. Progress in State Programs of Research in Vocational Education in Agriculture.
   General Statement—F. W. Lathrop, Specialist in Agricultural Education (Research), Office of Education, Washington, D. C.
   Progress in:
   The North Central Region:
   Michigan Iowa
   Indiana Wisconsin

Tours and Trips

Thursday December 1 9:30 a. m.

Purina Mills and Laboratories—This trip will be under special guidance provided by this large producer of stock feeds. Taxis will be supplied thru the courtesy of Purina Mills, leaving the Hotel Jefferson at 9:30 a. m. and returning about 11:30.

Missouri (Shaw's) Botanical Garden—Famous over the world for its rare and beautiful flora. Take street car, bus, or taxi. No admission charge.

Forest Park and Zoo—The finest collection of wild animals, birds, and reptiles in the Middle West. The Lindbergh Trophies are displayed in the Jefferson Memorial Building at the DeBaliviere entrance to the Park. Accessible by street car, bus, and taxi. No admission charge.

The above trips are suggested only, and of course are entirely optional. Shaw's Gardens and Forest Park may be visited at any time, and no special arrangements are made for personally conducted tours.

AGRICULTURAL EDUCATION SECTION

Friday December 2 9:00 a. m.
Hotel Jefferson Crystal Room

Chairman: H. T. Hall, State Supervisor of Agricultural Education, State Department of Education, Des Moines, Iowa.

(40) *Current Objectives in Vocational Agriculture: V. G. Martin, Professor of Agricultural Education, Mississippi State College, State College, Mississippi.

Discussion on Objectives:

(25) R. A. Howard, State Supervisor of Agricultural Education, State Department of Education, Columbus, Ohio.
(25) William Kerr, State Director of Vocational Education, State Department of Education, Boise, Idaho.
(25) John A. Linke, Chief, Agricultural Education Service, Office of Education, Washington, D. C.
(40) National Standards for Vocational Agriculture: Ray Fife, Research Specialist, Ohio State University, Columbus, Ohio.
(25) General Discussion.

Friday December 2 1:30 p. m.
Hotel Jefferson Crystal Room

Chairman: G. E. Freeman, State Supervisor of Agricultural Education, State Department of Education, Nashville, Tennessee.

(45) *Changes in European Agriculture and Their Affect Upon American Farmers: D. W. Christy, Senior Agricultural Agronomist, United States Department of Agriculture, Washington, D. C.
(45) Evaluating Local Vocational-Agriculture Programs: A Symposium.
(30) George Ekstrom, Assistant Professor of Agricultural Education, Department of Agricultural Education, University of Minnesota, University Farm, St. Paul, Minnesota.
(30) C. L. Angerer, Department of Agricultural Education, Oklahoma State College, Stillwater, Oklahoma.
(30) L. R. Humpherys, Professor of Agricultural Education, Department of Agricultural Education, Utah State College, Logan, Utah.
(30) General Discussion.

Saturday December 3 9:00 a. m.
Hotel Jefferson Crystal Room

Chairman: Keith L. Holloway, Professor of Agricultural Education, Department of Agricultural Education, University of Arkansas, Fayetteville, Arkansas.

(40) *Vocational Technical Instruction in Agriculture for the Post-High School Group: Arthur K. Getman, Chief, Agricultural Education Bureau, State Department of Education, Albany, New York.
(40) Methods in Vocational Guidance for Rural Youth: Paul W. Chapman, Dean, College of Agriculture, Athens, Georgia.
(40) Open Forum: A period for the informal presentation and discussion of problems in agricultural education. Speakers limited to five minutes.
(30) The Agricultural Education Magazine:
   Roy A. Olney, Editor, Assistant Professor of Agricultural Education, Cornell University, Ithaca, New York.
   W. F. Stewart, Business Manager, Professor of Agricultural Education, Ohio State University, Columbus, Ohio.
(30) Business Meeting:
   Chairman: Ralph H. Woods, Director of Vocational Education, Frankfort, Kentucky.

VOCATIONAL-AGRICULTURE TEACHERS' SUB-SECTION

Saturday December 3 9:00 a. m.
Hotel Jefferson .....Room

Chairman: G. K. Arney, President Missouri Vocational-Agriculture Teachers' Association, Princeton, Missouri.
Co-Chairman: J. B. Adams, President Illinois Vocational-Agriculture Teachers' Association, Harvard, Illinois.

(40) *The Cross-Section Plan of Course Organization and Its Application in Missouri: Joe Duck, Vocational-Agriculture Teacher, Neosho, Missouri.
(30) The Cross-Section Plan in Kentucky, John W. Koon, Vocational-Agriculture Teacher, Heath High School, Rt. 2, Paducah, Kentucky.
(40) Teaching the Principles and Practices Involved in Price Outlook Determination: G. J. Dippold, Assistant Professor of Agricultural Education, Department of Agricultural Education, University of Missouri, Columbia, Missouri.
(30) Individualization of Instruction in Vocational-Agriculture: Walter Baysinger, Vocational-Agriculture Teacher, Streator, Illinois.
(30) The Minnesota Plan of Individualized Learning: Thomas Raine, Graduate Student in Agricultural Education, University of Minnesota, University Farm, St. Paul, Minnesota.

SPECIAL AGRICULTURE SECTION MEETINGS

The Agricultural Education Magazine

Wednesday November 30 6:00 p. m.
Hotel Jefferson Private Dining Room No. 6

Business Meeting: Editing-Managing Board of The Agricultural Education Magazine.

Ten-Year Teacher-Trainers in Agriculture

Thursday December 1 7:00 a. m.
Hotel Jefferson .....Room

President: C. S. Anderson, Professor of Agricultural Education, Department of Rural Education, Pennsylvania State College, State College, Pennsylvania.
Secretary: G. A. Schmidt, Professor of Agricultural Education, Department of Agricultural Education, Colorado Agricultural College, Ft. Collins, Colo.
According to custom, the program for this meeting is not announced in advance (See page 87).

Alpha Tau Alpha

Friday December 2 6:00 p. m.
Hotel Jefferson .....Room

Annual National Conclave and Dinner: Officers, Officia Delegates, and all members are eligible and urged to attend.

*Number of minutes which has been allotted for the presentation of the talk

A. K. GETMAN

Professional

R. W. GREGORY

Contributions of Leading Americans to Agriculture—Eli Whitney—1765-1825

JOHN T. WHEELER, Professor of Vocational Education,
University of Georgia, Athens, Georgia

John T. Wheeler

EVERYBODY knows Eli Whitney as the man who invented the cotton gin. He was born on a farm in Westboro, Massachusetts, December 8, 1765. As a farm boy, he exhibited unusual skill and dexterity with tools.

Young Whitney attended Yale College and while there continued to exhibit a high degree of ability in the various aspects of employment to which he devoted his out-of-college time as a means of defraying his college expenses. He was graduated from Yale in 1792. Upon graduation, young Whitney made his way to Savannah and found his college chum, Phineas Miller, had married the widow of General Nathaniel Greene of Revolutionary fame. As a guest on the old Greene plantation, known as Mulberry Grove, near Savannah, he found the inspiration and insight that led to the invention of the cotton gin.

The ingenuity of the Yankee visitor was discovered by Mrs. Miller. One day when Mrs. Miller's watch was out of order Mr. Whitney volunteered to repair it, inasmuch as there was no watchmaker in reach. He dispatched this job with great skill, and thruout his visit at Mulberry Grove he devised many accessories and appliances to facilitate the work on the plantation. These exhibits of mechanical skill led Mrs. Miller to remark one day, "There is a fortune in store for someone who has the ability to devise a machine for separating the lint from seed cotton," and she remarked, "I believe you are the very man, Mr. Whitney, to make such a machine." She explained that southern farmers could raise cotton in great quantities, but one man could separate less than one pound of lint from the seed in a day. "This," she said, "is the farmer's greatest problem."

Of course, the time was ripe for such an inventive effort. For we know Hargreaves had, at that time, recently invented the "spinning jenney" (1764); and Arkwright had, in 1769, perfected the spinning frame; and Watt, in 1780, had developed the steam engine. The first cotton mill (a small unit) had been established at Beverly, Massachusetts, in 1787. Many mills in England were not be separated from the seed without the consumption of much time and labor.

When Whitney saw the problem, he immediately acquired a basket of seed cotton and, in a room furnished by Mrs. Miller, set himself to work to devise a mechanical means of taking the lint from the cotton seed. He worked for some time making his design, then he made the necessary tools with which to construct the machine itself. For weeks he labored at making the machine parts, testing, and assembling them. One day he emerged from his workshop (which was an upstairs bedroom in the Miller home) and announced the fact that his machine was ready for inspection. "It was constructed with wire teeth on revolving wooden cylinders running in one direction; and with another cylinder running in reverse motion and with increased velocity with short, stiff hog's bristles which separated on contacting the wire teeth. Thus the cotton was thrown off the teeth to a considerable distance and fell in small, downy flakes revealing, in whiteness and beauty of descent, the purest snow or gossamer."

Eli Whitney

The records show that: "Towards the close of the winter of 1792–93, the machine was so nearly completed as to leave no doubt of its success. Therefore, Mrs. Miller was eager to communicate to her numerous friends the knowledge of this important invention. She

parts of South Carolina and Georgia, and on the first day after they had arrived, she conducted them to a temporary building, which had been erected for the machine, and they saw with astonishment and delight that more cotton could be separated from the seed in one day, by the labor of a single hand, than could be done in the usual manner in the space of many months."

The machine was an immediate success mechanically, but Whitney's troubles were just in the making. The news of this much-needed invention kindled high enthusiasm and great excitement. As the news spread thru the south, men set out afoot, on horseback, by wagon, and by boat to inspect this "cotton engine," as the machine was called. So many people came to Mulberry Grove that the machine had to be protected from the throng. It was deemed unwise to have the invention exposed to handling by the multitude, since patents had not yet been granted. Some were so determined that the building was broken into by night and the machine removed.

By this time, however, Whitney had another model to replace the one stolen, and his work went on. On March 14, 1794, he received a patent approved by President George Washington.

To finance the building of cotton gins and protect his patent rights, Whitney sold to his friend, Phineas Miller, half-interest in his gin enterprise. This was done in June, 1794. During the two years (1793 and 1794) only 38 gins (the word engine was contracted to gin) were sold. This slow process of manufacturing gins was largely due to Whitney's difficulties. He devoted much of his time in the courts attempting to protect his patent. This was costly in time and money.

The State of South Carolina, however, donated $50,000 toward increasing the facilities of Whitney's production. The states of North Carolina and Tennessee also offered their assistance. Nevertheless, he could not grasp the fortune which Mrs. Miller had pointed out to him and which he justly deserved. Their metal foundry in New Haven burned almost as soon as operations were started there. This, together with endless trouble with patent infringements, caused the Whitney and Miller gin enterprise to be abandoned in 1798. Whitney successfully turned his genius to the manufacture of firearms with standardized interchangeable parts; but Miller, on October 17,1798, sold Mulberry Grove at "private sale" to meet obligations deriving from his business reverses.

Altho Whitney was unable to control the manufacture of his gin, it was a success from the beginning and rapidly found its way into every cotton-growing community. There are now more than 15,000 ginneries in the south devoted entirely to the separating of the lint from the seed cotton. The cotton gin of today is the same in principle as Whitney's, but of course it has been many times improved and enlarged.

Whitney's gin had an electrical affect on cotton production in the United States, and the development of the cotton-textiles industry both in this country and abroad. The year the gin was invented there were fewer than 5,000 bales of cotton grown in America, in spite of the fact that cotton had been cultivated in this country since the experiment at Jamestown, Va., in 1607. However, a few years after the invention of the gin (1820) there were 320,000 bales of cotton produced and sold. By 1840, more than 1,700,000 bales were produced, and by 1860 we were producing 4,500,000 bales.

During the 20-year period, 1880–1900, cotton production had more than doubled! The two largest crops in the history of cotton-growing were produced in the crop years of 1926 and 1937. These crops were each above 18,000,000 bales.

From the beginning, the expansion of cotton-production was supported by export trade with European countries. More than 60 percent of America's cotton was sold abroad and early became the principal commodity of international trade. The war between the States, 1861 to 1865, cut off Europe's supply of cotton from the United States. They immediately bought and installed American-made gins and began the production of cotton in various parts of the world. Whitney's gin, therefore, has stimulated cotton-growing the world over. In fact, at the present time, there is more cotton ginned outside the United States than within its borders.

With this rapid development of cotton-production in the United States came great movements of people and the settlement of new lands. The impetus of Whitney's invention at first pushed the lines of movement along the navigable rivers of the Coastal Plains and the lower parts of the Piedmont Plateau from Virginia westward to Louisiana. The coming of railroads made extensive new ares available for cotton-growing. Streams were no longer the principal means of transportation, and cotton-growing was pushed westward into Texas and Oklahoma, as well as over the fertile lands in all sections lying back from the rivers and streams. The most recent acquisition to the cotton-production areas in this country are those irrigated lands of Texas, New Mexico, Arizona, and the San Joaquin Valley of California.

At the present time the vast farming area commonly termed the cotton belt comprises a continous tract of about 200,000,000 acres of land extending from Norfolk, Virginia to western Texas and up the Mississippi to Memphis. It is the area of specialized cotton-production and mixed farming extending thru North Carolina, South Carolina, Georgia, parts of northern Florida, Alabama, Mississippi, Arkansas, the Limestone Valleys of western Tennessee, most of Louisiana, and across much of Texas and southern Oklahoma.

This constitutes the largest farming-type area or belt in this country, and is still the most important cotton-growing region in the world. More than 85 percent of the farms of this region produce cotton, and there are more than 2,300,000 farmers in this area designated as cotton farmers.

As we have noted, the year Whitney's gin was invented there was only one small cotton mill in this country. It was located at Beverly, Massachusetts, and capable of producing only a few hundred yards of cloth per year. When cotton lint became available in large quantities and at low prices, the number of cotton mills increased rapidly both here and abroad. The size of the resultant cotton-textile industry can be measured in two ways: (1) by the number of spindles in operation, and (2) by the number of persons employed.

From the little mill in Beverly, Massachusetts, in 1787, with approximately 500 spindles in operation, to the present New England textile industry composed of scores of large plants with 18,930,000 spindles in operation, is a vast development. But the textile industry in New England is overshadowed in part by the more recent development of cotton-textile mills in other parts of the country, particularly the south. The present national capacity is about 40,000,000 spindles with about 18,000,000 of these located in the southern states.

The number of persons employed in the cotton-textile industry (1930) is in round numbers as follows: cotton manufacturing: 450,000; "cutting up" industries: 300,000; and dyeing and finishing: 15,000. This makes a total of 765,000 persons gainfully employed in the cotton-textile industries[1]. These textile mills are capable of producing up to one trillion square yards of cloth annually. In 1927, more than 8,980,000,000 square yards of cotton cloth were made. In pounds this is more than 87 percent of all textile goods made in America that year.

So we see that Whitney's cotton gin brought into being not only the most extensive farming type in America, but also great industrial expansions as well. The following table summarizes the present situation in terms of persons who are supported from the developments growing out of Whitney's gin.

These developments, as extensive and significant as they are in American life, are only a part of the contributions Eli Whitney made to the welfare of the American people thru his invention of the cotton gin. The development and expansion of cotton-farming, and its attendant industries, have gone on to the place where it seems that no product of the soil or of man's ingenuity comes more frequently or more closely in touch with his daily life than cotton. It is in use on all sides in contributing to his welfare, in providing food, clothing, and shelter. Approximately 200,000,000 gallons of edible vegetable oil are produced each year from cotton seed. This oil has many uses but the principal ones are for food—salad oil, frying fats, shortening, and synthetic stearin or spreads. There are also 2,000,000 tons of cotton-seed meal or cake produced each year. While some of this meal is used for fertilizer, most of it is used for cattle, especially for dairy-cattle feeds.

The "linters" go to make photographic film, celluloid, rayon, new skin, and the like. Many nitro-cellulose products also come from this source—gun cotton, smokeless powder, varnishes, and so on—and of course cotton fiber, or lint, goes into cloth to clothe us all.

Whether we go about our duties during the day or are tucked snugly in our beds at night we are always surrounded by something of cotton. If we can afford an automobile we sit comfortably on cushions covered with cotton cloth and possibly stuffed with cotton fiber; and our ride is rendered more pleasant by resilient tires made of rubber and cotton. Should we be unfortunate enough to meet with an accident, an ambulance comes to our rescue and we are greeted by an intern in a white cotton suit who proceeds to treat us by binding our wounds with absorbent cotton and cotton gauze. Our moving pictures are rendered possible by films in which cotton is one of the important ingredients. Turn on the radio and you are probably not aware that the cotton farmer is helping to contribute to your pleasure by furnishing cotton for the screen and the insulating material for the radio.

Eli Whitney has therefore made large and lasting contributions to the development of American agriculture, commerce, industry, and the art of living for all American people. I think

(Continued on page 98)

PERSONS EMPLOYED IN OCCUPATIONS DIRECTLY DEPENDENT UPON THE COTTON GIN[1]

OCCUPATION	NUMBER	INDIVIDUALS[2] SUPPORTED
1. Cotton farming	2,200,000	11,000,000
2. Cotton manufacturing	450,000	1,800,000 [3]
3. Cutting-up industries (making clothing)	300,000	1,200,000 [3]
4. Dyeing and finishing industry	15,000	60,000 [3]
5. In ginneries in season	90,000	360,000 [3]
6. In compresses and warehouses	20,000	80,000 [3]
7. Raw-cotton trade	20,000	80,000 [3]
8. Seed crushing	20,000	80,000 [3]
9. Oil refining	10,000	40,000 [3]
TOTAL [4]	3,125,000	14,700,000

[1] U. S. D. A.: C. P. A. 22 (1935).
[2] Assuming five persons per farm.
[3] Assuming each employee represents four persons.
[4] Persons engaged in transportation of cotton not included.

Methods

"Open House" Program Is Effective

E. E. REINMILLER, Teacher,
Scribner, Nebraska

THE "Open House" program of the Scribner public schools was an unqualified success, if the number of people who attended and the interest they displayed in the work of the school was a measure.

A record was kept of those registering at the door, and it showed that almost 400 families were present, making a crowd of over 500 people. This crowd passed thru the various departments in small groups led by high-school students.

From the time the first group began its journey thru the classrooms promptly at seven o'clock until two hours later when classes were finally dismissed, the halls and classrooms thruout the entire school building were thronged with interested visitors eager to see the work each department was doing. And there was plenty to see, too—from the simple projects of the kiddies in the kindergarten to the involved demonstrations in the vocational agriculture department; from the first graders downstairs to the senior class above, all were made available to the spectators together with condensed explanations of each project.

You are all acquainted with the recitation type "Open House," where regular classes are conducted. In this type meeting many patrons visit only one or two departments and are not familiar with the work of the others.

In our recent "Open House" we found the demonstration type meetings most successful. Each group, numbering from 15 to 20, led by student guides, was allowed to spend from 10 to 15 minutes in each of the departments.

There are several basic points which go toward making such a program successful:

1. Advertising: a. Local paper. b. Hand bills (mimeographed). c. Motion picture slides at local theater. d. By students.
2. Time: a. Evening. b. This is considered regular school hours so both students and teachers are required to be present.
3. Organizing groups: a. Students can take part in only one department. b. Guides are chosen from the student body.
4. Display of work: a. Neat and orderly rooms. b. Exhibits. c. Demonstrations.
5. Planning a department's work: a. Instructor sees that each student has an assigned job. b. Instructor stands in the background and the students take the responsibility.

In the agriculture department the visitors saw exhibits of various kinds and demonstrations conducted by members of the agriculture classes. Milk testing, egg grading, seed-corn testing, grain grading, corn judging, forge work, feed mixing, concrete work, harness oiling, saw filing, glazing, electric wiring, farm plumbing, rope work, threading bolts, tool sharpening, farm carpentry, and completed shop projects were among the activities observed by the interested patrons in the vocational agriculture department. An F.F.A. exhibit and a display of bulletins, reference books, and project records also attracted much favorable attention.

This type of program is a very good advertisement for the agriculture department. Mr. H. A. Schroeder, Superintendent of Scribner public school states that, "At least three students per year have been added to the agriculture enrollment as the result of 'Open House.' "

When the complete circuit of departments had been made, each group, which had been in charge of a guide all evening, was conducted to the home economics kitchen where girls gave their guests a very practical demonstration of their ability in the cooking line by serving hot coffee and cookies.

Then the evening was brought to a close with the entire assemblage crowded into the school auditorium for a musical program by students in the music departments. First the school band gave a brief program and then the high-school chorus rendered several numbers.

All those who availed themselves of the opportunity to attend expressed favorable comment and could not have failed to go away without a much clearer understanding of the work of a modern school.

Freshman class working on grass, clover, and alfalfa test plots. All annual and biennial plots are reseeded each year. About 50 plots are grown and cared for by the boys enrolled in the department of vocational agriculture at Chevelah, Washington.—George R. Isaman, Teacher.

Developing a Large Milk-Testing Program

HOWARD DOSCH, Instructor,
Blue River, Wisconsin

I FEEL that the greatest single need of a dairying community is a feeding and testing program for dairy cows. With this viewpoint in mind, I began to develop a testing program in the Blue River High School that would include all the herds in the entire community. So far I have not succeeded 100 percent but I have the "individual cow records" of about 65 percent of the herds.

To begin this program, I spent the first two months with individual students, drilling them on the procedure of testing milk. When I felt that the student was capable of testing without my help, I gave him a herd to test—either his home herd or some other herd he would like to take. The students who live in town go out on farms and stay all night, helping to weigh each cow's milk and taking samples correctly.

Our department furnishes all the necessary equipment, which consists of two dairy scales, sample bottles (numbered), two dippers for taking the samples, and a kit for holding each set of equipment. The boy goes out at night, gets a sample from each cow, and weighs her milk. This process is again repeated in the morning. This means that each boy tests just once a month.

The milk is then tested during the day when the boy has available school time. After the tests have been determined the boy makes out a monthly record of the total pounds of milk and the butterfat produced by each cow for that month. This report is kept in our files and a copy is sent to the farmer. This gives the boy skill in keeping herd records along with his project.

We are testing 44 herds each month and a total of 700 cows. This total will increase to 1,000 cows in the spring because many of them are dry during the winter.

When working out a testing schedule for the boys, the first problem that came to my attention was: "How can the boys test on a school day all the time, and still test about the same day each month?" I solved this by taking the "block" of 20 school days on the calendar each month and having two boys test the first Monday of each block, two more the first Tuesday, etc. For example, the boys that test on December 6 will test again January 3.

This program has value other than dairy-herd improvement. It brings the instructor into closer relationship with the farmer and brings about a state of co-operation that can be found no other place in my teaching activities. Farmers will come to the school or will call me to their farms to talk over their tests. Many have sold "boarders" from their farms that they otherwise would have kept.

Agricultural Material

PEDER E. PEDERSEN, Teacher,
Balsam Lake, Wisconsin

THE commonly accepted final objective for the teaching of vocational agriculture is to help the farm boys to become effective farmers who can actually perform the many tasks involved in carrying on that occupation. In turn, the learning objective of the boys becomes "learning to do." The same idea is expressed by the commonly used term, "learning by doing."

On the part of the student of vocational agriculture, "learning to do" involves a variety of activities, such as supervised practice, F. F. A. work, field trips, class discussions, reports, reading, and so on. Every teacher of agriculture can extend the list. Only one of these activities will be discussed in this article, namely, reading.

The study upon which this report is based was begun about three years ago with the purpose in mind of finding the possible remedy for sudden breakdowns in active discussions occurring for no apparent reason. After some study it was found that these breaks were caused by reading and vocabulary difficulties. Such methods as check tests, oral questioning, and having the students write all the unknown words on a sheet of paper, were used to find what words were unknown.

The number and types of unfamiliar words encountered by the students are surprising. The words fall into two groups: those specific to agriculture, and those of general usage. It is not surprising that advanced agricultural terminology should cause the students trouble, but it does seem odd that farm boys are unfamiliar with such commonly used words as *scour*, in relation to plowing, *moldboard*, *landside*, and others of similar nature. It is also worthy of note that words of general usage are not understood. Numerous words, such as *meritorious*, *palatability*, *disintegration*, *optimum*, *complexity*, *vigorous*, *phenomenally*, *restoration*, and *retard*, cause the students difficulty. The seriousness of such a situation can be readily seen when the term *"optimum temperature for germination"* is used without any indication as to the possible meaning of optimum.

Another important point that must be considered in helping the students is the great number of words unknown to them, that they might meet in one ordinary assignment. In one such assignment the average number of unfamiliar words encountered per student was 13. One student came in contact with 20 words he did not understand. The students were freshmen using a standard high-school text on soils. About one half of the unfamiliar words were of a technical nature, and the other half were words used in all types of writing.

It can readily be seen that the handicap of meeting from 10 to 20 unfamiliar words in a study period of from 20 to 30 minutes is serious. If the boy skips the words, he does not gain a clear concept of what he has read. If he looks up each unknown word, he is delayed decidedly. If the teacher must define the words, there will be much duplica- tend to be unfamiliar with the same words but do not meet them at the same time. Some other way of handling the situation would be better.

Of all the various "doing" activities so rightfully and strongly emphasized in vocational agriculture, the one of making decisions is certainly of great importance. Most types of manual activity and doing require the making of decisions, which are in turn based upon facts and principles. Furthermore, some of the most important acts in profitable farming are purely mental without any manual activity. The basic facts and principles governing correct farming can be acquired by the farmer in many ways, but reading is one of the most important. The value of a reading activity is in proportion to the amount of understanding with which the reading is done. It is therefore important that every student should know as many of the words as possible before he begins his reading.

The significance of this vocabulary situation in connection with agricultural material is evident in relation to the reading done by adult farmers. In order to study this problem, a supplementary study was carried out to find how many homes received bulletins regularly from the College of Agriculture and from the United States Department of Agriculture. Only about one percent of the farm homes studied were on the mailing lists and about 10 percent of the farmers read bulletins regularly. No effort was made to find the reason for this situation, but informal observation carried on in connection with evening-school work and other farmer gatherings points decidedly in the direction that farmers do not read bulletins because the reading is too difficult. The ideas and ble when coached in plain style and simple vocabulary. In order to avoid having our Future Farmers eventually fall into the same rut, it would seem that something should be done to remedy this situation.

The problem may be solved in two ways: The vocabulary and diction found in bulletins, textbooks, magazine articles, and forms of agriculture literature could be simplified without injuring the quality of the discussions as to the amount of information imparted. The other method of solution is to teach the students how to read *agriculture* literature more effectively and at greater speed. It is doubtful if our reading matter will be simplified, so it falls upon the teacher of agriculture to improve the abilities of his students in relation to reading.

The teacher of agriculture must then become a teacher of reading. However, his objective should not be merely to teach the student how to read, but to teach him to read so he may learn to do farm jobs.

The longer period used in teaching vocational agriculture lends itself well to carrying out such a remedial program. A considerable number of activities can be used to improve the reading ability and vocabulary of the student. The teacher might anticipate the word difficulties and make out lists with definitions to be given to the students for use during the study period. Glossaries can be added to our agriculture texts. The students' vocabularies can also be increased by showing them how the meanings of many words can be determined from the meaning of a root word, and how prefixes and suffixes are

(Continued on page 98)

Ten-Year Teacher-Trainers to Celebrate Tenth Anniversary of Their Organization

THE Ten-Year Teacher-Trainers in Agricultural Education will celebrate the tenth anniversary of their organization at the 1938 A. V. A. meeting in St. Louis. As in past years, it will be in the form of a fellowship breakfast. The officers are president, C. S. Anderson of the Pennsylvania State College, and secretary, G. A. Schmidt of the Colorado State College.

The organization affords an opportunity for frank and open discussion of problems in the field of agriculture education among the experienced members of the profession. All men who, for a period of 10 years or more have served as teacher-trainers in agriculture, automatically become members of the organization without formal nomination or election. Members of this organization who know of men who have become eligible during the past year should forward their names to the secretary at once, in order that they, too, will receive notification of the time and place of the approaching meeting.

Following the time-honored custom of the organization, the discussion leader and his topic will not be announced until the members are assembled.

The past officers of the organization and the guest speakers who have addressed it are as follows:

Year	Place	President	Secretary	Leader
1929	New Orleans	(Organization meeting)		
1930	Milwaukee	C. V. Williams	R. M. Stewart	H. E. Bradford
1931	New York	R. M. Stewart	H. G. Parkinson	J. T. Wheeler
1932	Kansas City	H. G. Parkinson	H. M. Hamlin	A. W. Nolan
1933	Detroit	H. M. Hamlin	W. F. Stewart	E. C. Magill
1934	Pittsburgh	W. F. Stewart	N. E. Fitzgerald	H. F. Cotterman
1935	Chicago	N. E. Fitzgerald	S. Dickinson	J. A. James
1936	San Antonio	Sherman Dickinson	A. W. Nolan	E. R. Alexander
1937	Baltimore	A. W. Nolan	C. S. Anderson	C. B. Gentry
1938	St. Louis	C. S. Anderson	G. A. Schmidt	

Supervised Practice

H. H. GIBSON

The Place of Continuing Projects in a Long-Time Program

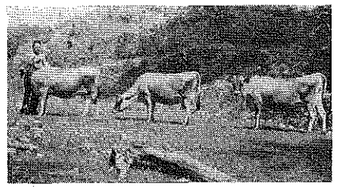
JOHN G. GLAVIN, Supervisor,
Boston, Massachusetts

Success of Instruction

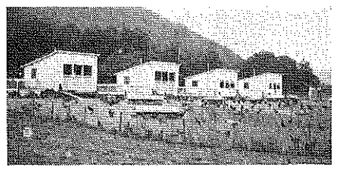
John G. Glavin

IN NO other field of instruction is success dependent upon the personality and understanding of the teacher as it is in vocational-agriculture education. Success in our field is assured only by the teacher's ability to instill into his students an incessant desire for planning and accomplishment. It takes vision, dexterity, and patience on the part of the instructor, who must also have a sound grounding in practical farm operations and scientific knowledge.

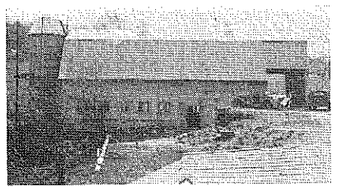
In the matter of teaching, vocational-agriculture instruction is aimless unless it is based on individual needs, and planned so as to establish the student in



Heifer, Dam, and Granddam



Brooding colony houses 1,000 capacity



Dairy Barn Improvement

farming, either as an integral part of the farm business, or as a skilled and intelligent worker in farming or allied fields.

This entails, on the part of the instructor, full knowledge of the sound agricultural practices in his surrounding territory and the establishment of contacts with successful farmers and agricultural leaders, for placement purposes, for skills during school life, and employment after graduation.

Basis of Planning

When planning a program of instruction one should base it on definite, practical grounds and be both scientifically and economically sound.

Therefore, when a community survey has not been made previously showing the most successful farm set-up in your locality, such a survey should be made by the instructor. This survey should never be conducted by students as many questions arise that need careful and tactful handling. The instructor needs these personal contacts to more fully understand the local farming problems. These personal contacts are also a means, or entering wedge, for future use in placement of students or to obtain further information for instructional purposes.

It is from the results of such a survey that plans can be made for a sound practical program of long-time projects or necessary skills.

Such a set-up would be based on proved practice and will have the necessary sound basis of practical, tried and proved adaptation.

The contacts with the college specialists and county agent allows the instructor to obtain their broader viewpoint, and safe-guards against unsound interpretation in practical or economical matters.

In our locality such a survey disclosed that the largest farm income came from a balance of major enterprises of fruit and dairy cattle, with minor enterprises of sheep and poultry. This farm balance, therefore, has been our aim in all long-time project planning.

As an example of this I present the case of a boy in a vicinity where the farm set-up showed a revenue from fruit below standard and dairy cows of low production.

During the first year, he undertook to develop a well-balanced home garden and a supervised farm program of a more thoro spray schedule on the fruit. The second year, he purchased heifer calves from a breeder in the neighborhood, and a bull calf from the college farm. These were handled as ownership projects. That year he also started a poultry unit. The third year, he purchased more calves, enlarged the poultry unit and, as supervised farm work, undertook the production of higher quality fruit. The fourth year, he took over the feeding of the dairy cows, drew up plans for a new stable, and carried along his previous projects and supervised farm work program. This gave him a well-balanced farm program at graduation.

By keeping in touch with the college specialists we have been able to obtain advance information of other practices showing possibilities of adaptation to our locality, allowing for a greater choice in balancing the farm set-up.

Potato and rutabaga production on a sound basis, co-operative marketing of poultry and eggs, sale of hatching eggs, more economical rearing of dairy cattle replacements for home herd or for sale, and pasture improvement, all have been fitted into the farm set-up.

These new adaptations to a well-balanced farm program allow for wider variation. This has come about thru college specialist contact.

A few years ago while consulting with the animal chemist at the college, he informed me that his work showed that fish meal could be substituted for a large amount of the skim-milk generally fed to calves. Also that the whole milk allowance could be reduced. This practice was then checked and put into operation as a feeding program in calf rearing. The information was not released by the college until a year later.

Potato production, in sections similar to ours, was proving a splendid cash crop. The specialist gave us a set-up of necessary skills and proven practices to use as teaching material. As some of the students needed a cash crop in their farm balance, potatoes were grown as part of the home garden project, using two bushels of seed. Many of these boys have enlarged their acreage up to five acres or more.

Procedure in Planning

In the procedure of planning, facts must be faced and use made of certain tried and proved methods of procedure.

In our department we find that students can be classified under three main heads:

(a) Those boys residing on farms large enough to allow for developments to lead to future placement thereon as partners, or where a boy may have ownership enterprises and work on the farm the remainder of his time.

(b) Those boys residing on farms too small in acreage for the employment of more than one family. In such cases ultimate placement must be elsewhere.

(c) Those boys from town with little or no farm experience.

In planning a program of study and work for these students different methods of approach are necessary.

1. Home Farm Survey

In the case of those boys from large farms, the home farm survey as a basis for project planning and study is best. A careful survey of the home farm setup is made by the teacher in the presence of the father and the boy. Information as to number, size, and quality of enterprises, land acreage and adaptability, and crops grown is obtained. Our state furnishes such a survey blank, which also includes the project agreement for the parents' signature.

With the community survey as a guide to proper balance of enterprises, and by the use of farm analysis figures, the boy may, therefore, use the home farm survey as a basis for planning his projects and supervised farm work program. These projects may be of an improvement nature, that is, the betterment of the present enterprise by simply adopting more proper methods of breeding, seed selection, or management. New projects may be adopted for better balance. All projects or supervised farm work should be carefully planned on a four-year basis, with each continued in operation and, when necessary, enlarged each year. Such plans must be flexible, and continual replanning will be necessary. All projects should be of a size to allow for economical production.

To illustrate this point we might view the program of one boy. This boy started in the department in 1928. His home farm setup showed 60 acres of tillable land, 40 head of milch cows of good breeding, two acres of tobacco. The family consisted of three boys, the mother, and father. The two brothers had taken the two-year course at the state college. This boy, in his first year, started a flock of 25 ewes for out-of-season lamb production and carried as a supervised project a farm garden. The second year, he started a poultry unit of 250 chicks and housed 100 layers. He increased his flock to 50 ewes, and as a supervised farm work project undertook to bring some open pasture land into proper condition for crops. This was necessary because of the extra livestock load. The third year, he handled the feeding of the cows as a supervised farm work project, as well as the rearing of five calves. The fourth year, as supervised farm work, he remodeled an old barn to house 500 layers, brooded 1,500 chicks, opened up more pasture land for crop purposes, and handled his own sheep project as well. This balanced satisfactorily as to spread of labor and brought in an almost even monthly supply of cash earnings. The three boys are now married and are in partnership with their father.

In the case of boys from small farms, the home farm survey may also be used by the boy in his planning of a program of work and study. This gives him an approach, the innermost facts with which he is familiar, and starts him on known ground. It is a well-known fact that the less artificial or distant from his natural surroundings the basis for his planning is made, the more understandable will be his approach and the more successful will be his progress in planning his necessary study. On such a farm some of his supervised farm work may be undertaken, but placement elsewhere for certain skills and experience is vitally necessary for proper development.

2. Case Farm Study and Use

Boys coming from town homes may use a practical setup of balanced farming in the locality, called a case farm, as their basis for planning their study program and necessary skills. These farms also will prove valuable to a boy from a farm too small as his future place of employment. Such farms should be examples of efficient and practical management, and should represent ideals attainable by others.

These case farms allow the boy to view personally the situation as it is under operation, and secure during school time, experiences and practices for needed skills.

His approach is practical and he will more easily understand the problems he must study and solve, and the skills he must attain to complete his school program.

In Shelburne we use as a case farm the layout of a member of our advisory board. On this farm the students have full charge of the orchard, figure fertilizer requirements, spread the fertilizer, prune the trees, and have even set out a new block of trees. They plow with a tractor, sow the seed, and cut the early grass. They plant strawberries and in the fall mulch the beds. Most of this work is done by boys who have no opportunity to obtain these skills on their home place. All this work is done during school time with the instructor present and in charge.

3. Supervised Farm Practice

For boys whose home conditions do not allow for ownership projects of an economical size, leading to later connection, when possible, with the home farm setup, a well-balanced supervised farm practice program must be used in the learning process. A similar program, in addition to the ownership projects, must be undertaken by the other boys in order to gain skills necessary to full farm experience.

This type of program is the basis for learning for the boys from small farms or village homes. This program should, whenever possible, entail cost accounting and record keeping on the enterprise with which the boy is working. The case farm figures will act as a standard for comparison as to value of results shown.

In working out the program of supervised farm practice the student should have a definite idea as to his aims in life, his program planned accordingly.

Placement, with definite agreement with the employer, should be obtained with the view to gaining necessary skills in certain definite enterprises. The skills should be planned according to the boy's physical condition. The classroom study program should be planned so that the student shall enter upon the job with knowledge as to procedure, with sound reasons for his plan. His and be practical under his local and working conditions. The case farm and practical procedure information, gleaned while making the community survey, will be the best practical authority.

As an example I might cite the case of a town boy who came into the department after completing two years of the academic work. He was interested in fruit but also wanted to obtain skill in handling dairy cows and poultry. His program was arranged for study and work on this basis. Placement, with the understanding that he was to have various jobs for definite periods of time, was arranged on a large fruit farm in the next town. Other work in school time, and when he was not working on the fruit farm, was arranged on a dairy farm close to school. This boy put in from 1,600 to 2,600 hours of labor on various farm jobs each year. Some of the work he did without pay. This boy is now manager of the fruit farm where he obtained his experience.

A boy entered the department this year from a village home. He is developing his program to obtain skills from a case farm setup of a general farm nature. At the present time he is working on a dairy farm after school, and receives pay only when his work does not replace that of the owner. This boy is working about 20 hours each week. He seems the happiest and most enthusiastic student in the class.

After-Graduation Contact

Secondary school academic education has been accused, justly or unjustly, of attracting a certain type of boy out on a limb and then letting him dangle. If vocational education is to remain free from such criticism, contact with our students must not end upon completion of a certain prescribed period of school time.

Our experience has shown that graduates become operators or partners in farming anywhere up to 10 years after completing the regular school course. How soon this takes place depends on the natural ability, financial condition, and the fulfillment of the planned supervised or project program of the student.

To guide and be sure the necessary material for further planning is available, all graduates should be contacted periodically. Our state requires that yearly contacts shall be made for a period of five years after graduation, and recommends that it continue thereafter. Only by such a method of systematic contact will progress proceed satisfactorily to the full realization of advancement.

The other day, I contacted a graduate of the class of 1921. His herd had contracted contagious abortion and his revenue was reduced considerably. We are now working together for a new setup of enterprises to include cash crops and poultry. Incidentally, it also developed that he could use a boy around the place. A boy desiring farm skills was obtained and is working on the new farm setup as part of his classwork. These are some of the unexpected problems and solutions that arise every day.

*The facts in this article are based upon Mr. Galvin's experience as teacher of agriculture at Shelburne Falls, Massachusetts.

Farmer Classes

V. G. MARTIN — J. B. McCLELLAND

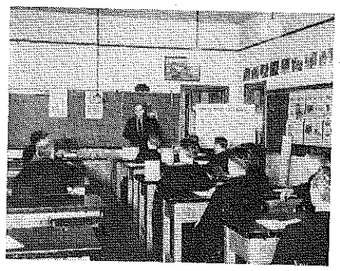
Evening Class Work for Operating Farmers

W. E. FOWLE, Teacher,
Traverse City, Michigan

THE Traverse City High School is one of 20 vocational agriculture departments in the State of Michigan that is carrying on a course of adult education in agriculture. This course is designed to give systematic instruction in soils to "operating farmers" of this trade area. The course covers 12 ninety-minute periods of instruction. These periods are held twice a week during the months of February and March. Each period consists of a lecture presenting data on some phase of soil management. During the class period, the men are given time to do actual laboratory work leading to a better understanding of the scientific principles behind certain improved farm practices. As the class is composed of farmers, each member has selected at least one improved farm practice which he will put into operation on his farm during the coming crop season.

Testing soils

The enrollment in the class is 58. Many of the members have had 100 percent attendance at the class periods, some driving 20 miles or more to attend the course thru some days of northern Michigan's most wintry days. The school has served farmers in two counties and is made possible by the co-operation of the county agricultural agents and a Michigan State College Extension Specialist aiding the teacher in conducting this course. The underlying purpose of the course is to give systematic instruction in soils to the class members adopting improved farm practices on their farms. Being carried on under the school atmosphere, the major thought is "to know the reason why as well as how in agriculture practices."



Conference session

The personnel of this class is rather interesting. The age of the scholars ranges from 21 to 61. Ninety percent of the class members own farms and only 10 percent are renters or workers. Sixty-six percent of the members had left school at or below the ninth grade, 24 percent had completed high school, and 10 percent had college training. Four attended short courses at Michigan State College at some previous time. Under the fine guidance by the instructors, this group is carrying thru to completion one of the most interesting series of agriculture meetings held in this trade area. At the completion of the course, certificates are to be presented by Superintendent L. Hockstad of the Traverse school system to those completing the course and making definite plans to carry on improved practices during the coming season.

Increasing Adult Enrollments

S. D. MITCHELL, State Teachers College,
Conway, Arkansas

VOCATIONAL agriculture instructors of Central Arkansas expect to increase their evening class enrollment 100 percent thru visual education if their plans are successful.

Nine vocational agriculture instructors conveniently located in Central Arkansas launched a co-operative group project this summer to secure a portable sound projector for their communities. Personal contributions by the instructors made possible the purchase of the 16 m.m. projector and speaker. Entertainment pictures shown on a circuit including all the communities are providing the revenue for reimbursing the instructors, and advertising is providing the operating expense. Weekly film rentals which are twice those of the daily rate made the group movement desirable by supplying films at reasonable rates. Liquidation of the equipment is progressing at a satisfactory rate.

A "Complete Program for the Whole Community" will be the object of the monthly free programs as soon as the liquidation has been completed. The regular monthly programs comprising comedies and educational pictures supported by demonstrations, charts, graphs, lectures, and discussions, will contribute to the annual theme. Entertainment and educational features will be provided for all. The instructors will work with groups of like interest in their evening classes thru committees selected by the chairman of the general program. Regular monthly programs will include local talent, and reports will be made of the goals and achievements of the special evening-class groups. The community program, while not functioning as an evening class, will provide solidarity of purpose and keep the community posted on the progress of community betterment.

While the program was initiated only last summer the cost of the equipment is more than half liquidated and unforeseen possibilities are evident. The equipment makes possible wholesome rural entertainment at reasonable prices, provides a source of revenue for equipping vocational agriculture departments, and stimulates evening-class attendance.

Charts Indispensable for Evening Schools

E. A. TEMPLETON, Teacher,
El Dorado, Kansas

ANYTHING I might write relative to evening schools for farmers will no doubt be "old stuff" to a great many teachers, as many have had more experience in this field than I. However, it may be that those contemplating the organization of an evening school for the first time will be able to glean some ideas from the suggestions offered here.

The first problem confronting the instructor of an evening school is WHAT TO TEACH. My first contact was my farmer member of the board of education. He gave me a list of five or six key farmers in the community. I next visited these men, along with several others that I knew personally, and got their ideas on what would be the best course to offer. Finding that feeding of livestock headed the list I next made up a series of ten lessons that I thought would be most appropriate. This list of ten lessons and a mimeographed letter from the office of the superintendent of schools were sent to a list of farmers in the community. The mailing list was compiled by the F. F. A. chapter and the instructor. The chapter also assisted in addressing the letters. The farmers receiving the letters were invited to the agriculture classroom for an organization meeting. The date, time, and topic for this meeting were designated by the instructor. At the organization meeting the group decided on the dates for future meetings and the order in which the lessons would be taught. A notice in the local paper is desirable, too, in order that anyone who has been overlooked but who is interested in the school will feel free to attend. Each week a news item in the paper will help to keep the community informed of the progress of the class.

Probably one of the biggest jobs for the instructor will be the organization of teaching materials. Leading a discussion for a group of farmers is quite different from carrying on a class recitation where questions have been assigned to the group. Visual education in the form of charts has been my stronghold in adult teaching, using in many cases the same charts that are used for day-school classes. If you are fortunate enough to have a good supply of charts for day classes, the preparation for an evening class will not be so difficult. If charts have not already been made up, I found that a 24" x 36" sheet of paper that can be charted on both sides proves quite satisfactory. Personally, I prefer using a speed ball pen and India ink for making charts as they are more easily read from a distance than charts made with crayons. Chart the material in the order it is to be presented and fasten the chart to a piece of No. 9 wire by means of pieces of gummed paper. Allow the wire to extend out from the edge of the chart an inch or two.

By having two sets of hooks above the blackboard, the charts may all be placed in order on one set of hooks and transferred to the other set of hooks as used. This method enables one to reverse a chart very easily or turn back to a chart with little effort. It is also a simple matter to build a narrow case for storing this type of chart, hanging the chart in the case rather than rolling it.

While we have always thought that evening schools should be conducted during the slack season, I found October to December to be a very satisfactory time to hold one.

The instructor starting his first school will find that it requires a good deal of time to prepare and conduct an evening school, but there is no doubt in my mind that it is one of the best ways to establish oneself among the farmers in the community. (Kansas Newsletter, January, 1938)

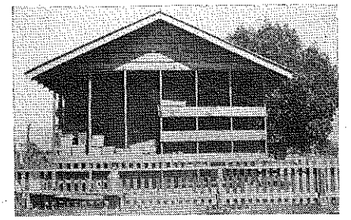
Evening School Helped Develop Poultry Co-operative

DONALD C. TOBLER, Instructor,
Bunkerville, Nevada

THE farmers in the Virgin Valley, located in southern Nevada, 85 miles from Las Vegas, had been raising poultry for many years prior to 1934 and had experienced considerable difficulty in disposing of their surplus eggs at a profit because they were traded in at the local stores for merchandise. It was not possible to get cash for their eggs, and as a result only small flocks were kept and farmers were not enthusiastic about raising and caring for chickens.

After carefully studying the adaptability of the valley for egg production and possibilities for a market, it was decided that this valley was favorably situated for developing an intensive poultry enterprise. Therefore, in the spring of 1934, ten F. F. A. boys and quite a number of adult farmers placed orders for triple-A White Leghorn chicks. It was planned at that time to work together and sell eggs co-operatively when the pullets matured and came into production.

The first problems which came up were setting up a stable organization and determining how the eggs were to be handled in order to provide the Las Vagas market with a high quality product. This called for group action and they found it necessary to meet together to study these problems. Two meetings were held in August, 1934, to work out details for forming a co-operative association.



Egg station built by Virgin Valley Egg Producers' Association, showing empty case rack. Eggs are handled in the concrete basement and feed handled above. The feed room has a concrete floor with adobe walls

Evening classes have been taught every year since 1934 for the purpose of analyzing and studying problems connected with the production and marketing of poultry and eggs. Some farm shop work has been included dealing with the needs of this enterprise. The classes have been held during the year at times when there was a need for the instruction because of special problems arising in the poultry business. The following is a summary of accomplishments:

A co-operative association was established with a general manager and a town manager in Mesquite and Bunkerville where receiving stations were established. A board of five directors was elected. Each member was required to purchase one share of stock worth one dollar for every 50 hens he had in his flock.

The necessary equipment, including grading scales, candling devices, cartons, cases, stamps, etc., was purchased and all was in readiness to begin shipping the latter part of September with the first eggs being shipped to Las Vegas October 1, 1934. At least one shipment has been made each week since that time. In handling the eggs everything has been done which will insure a high quality product for the market.

Dave Abbott, Mesquite town manager, loading truck with eggs for Las Vegas market

The producers receive for eggs full market value, less 4¼ cents to meet expense of handling, purchasing cartons and cases, and transporting eggs to Las Vegas. One cent per dozen is set aside as a "sinking fund."

The association is now purchasing the necessary mash and other feeds for its members at a saving of 30 to 40 cents per hundred pounds, even tho ten cents per hundred is charged for handling the feed.

In the town of Mesquite one building has been erected which has a concrete basement for handling the eggs, and a has been purchased by the association. Another building similar to this one is planned for Bunkerville.

The first year the association sold $4,181.17 worth of eggs; the second year $15,144.20; and from October 1, 1936 to June 30, 1937 it has sold 1978 cases for which it has received $15,237.07. There are 52 members in the association, including several F. F. A. boys who are enrolled in vocational agriculture.

Evening classes will be continued so that members may meet together from time to time to discuss special problems dealing with the production and marketing of quality poultry and eggs and business activities of the association. There is still room for expansion of the enterprise as the association is supplying only a small percentage of eggs sold on the local market at Las Vegas, Nevada.

Adult Evening Courses

H. B. DRAKE, Instructor,
Miamisburg, Ohio

THE adult evening course has caused considerable comment in this locality because of attendance and interest. I will give a few facts which I believe are partially responsible for the success of this phase of our work.

Our school district lies west of Dayton, Ohio, and is contiguous to that city. Therefore, we have a number of small farms, and in many cases they are farmed by part-time operators who earn part of their income by working in one of the many factories in the city. Thus, while the attendants at our course may not be full-time farmers they are interested in farm life and its many problems. About one half of our attendance is from this group and the remainder depend upon farming for a living.

The time and place is set at the first instructional period of the year. It is the only time this is done. At this meeting we organize, and the men elect their officers for the year. We also select the problems to be discussed. A brief period is allowed for suggestions; then if necessary I make suggestions as to what might be offered. After we discuss the various suggestions, the group decides the problem by a majority vote. Usually this vote is unanimous. Thus we have a feeling of need, for the thing to be discussed, developed in each person in the group and a start is made toward an interesting course.

During the winter meetings an attempt is made to secure some specialists on the subject under discussion. These are usually spaced at intervals of three to four weeks. While the group appreciates the opportunity of hearing these men, they also enjoy the meetings where only the people from their own community are present. It seems there is a greater freedom of discussion in the latter case. The more discussion there is the more interesting the meetings will be.

At the conclusion of our winter meetings, which start in November and end in March, we have a banquet. The men bring their wives to this event and all enjoy the evening together. It is held

for the social value and not for any instruction. All the members look forward to this evening's diversion.

Recreation also plays an important part in our meetings. Most of it is in the form of volley ball. After a period of solving their problems together the men enjoy a period of playing together. It adds much to the group feeling.

At our organization meeting we also elect captains for our volley ball teams. These captains then choose their teams for the entire year. If any members enroll late they are chosen in order of their enrollment. Usually about 85 percent of those present will take part in the games. Their ages range from 25 to 65. The teams compete after each meeting during the winter. We thus have time for 75 games during a season. It is understood at the beginning that the team losing the most games will furnish the provisions for a weiner roast to be held in the early summer. An effort is made to have at least two such social meetings during the summer. In addition to our own volley ball games, we make an effort to meet with a neighboring course once each year and play a few games.

While it may not be part of an agriculture instructor's job to provide recreation for the adults of the community, I believe we are rendering a service to both the men and the community by so doing. Very few of the men had the advantages of a gymnasium when they attended school, and they are almost as eager to enjoy it as are the pupils of high-school age. It is my observation that they appreciate it even more. The spirit of rivalry is still present altho the man may be 50 years old.

At each meeting an effort is made to point out the approved practices that might result from the things that have been discussed. These are then summarized again at the end of the course. In a large number of cases the practices will be used while the course is still in progress.

As an improvement in our program, I am looking forward to the time when we may have definite scheduled meetings thruout the year, and the group considered a permanent organization open to everyone interested in farming.

My Experiences as a Pioneer in Young Farmer Education

RUSSEL M. ADAMS, Teacher,
Eugene, Oregon

EUGENE, Oregon, is a city of 25,000 people, situated in the heart of a very fertile agricultural district. Approximately 1,000 students are graduated from its rural schools each year, all of whom must find a place in our American economic society sometime in the next eight years when all will have left high school and college. The approximate extent of unemployment in this age group living in Eugene and vicinity is indicated by a survey made under the supervision of State Director of Vocational Education, O. D. Adams, early this year which found 1,800 young people within the city limits, between the ages of 16 and 25 out of work. Aside from some seasonal employment I am convinced from my personal contacts with young farmers in three different districts adjacent to Eugene, that the unemployment situation is just as serious among them.

Because of the very apparent need for assistance of these young people in a vocational way, the Eugene Vocational School was started by the State Board for Vocational Education with the registration opening on January 17, 1938. Classes were offered in home economics, trades and industries, service occupations, and agriculture. The objectives in each group included improvement of each individual in his doing ability in his or her chosen occupation, and establishment in employment in that field as far as possible.

As agriculture teacher it was the writer's duty to ascertain rural community needs and desires, especially among the young farmer group that was still seeking to establish itself in farming, more or less haphazardly. There had never been any Smith-Hughes work done in this territory before, so we had to start from the very beginning to tell people, who might be interested, what our service offered. As a list of leading farmers, farm organizations, and pertinent facts had been prepared by the state office staff before my arrival, I had some information to start on. Then too, the Oregon State College Extension Service was holding a three day conference the first few days of our work, and thru the co-operation of County Agent O. S. Fletcher I was able to meet several of the agriculture leaders. Thru them I ascertained the meeting nights of several of the Granges and received invitations to visit them.

Each of the first four groups before which I appeared expressed a very real interest in what we were trying to do. In each case an advisory committee of Grange members was appointed to work with me. Thru them a list of prospective young farmers who might attend each school was obtained. They also arranged for the place of meeting. I was made acquainted with one of the young farmers in each terriroty and an appointment was made for him to accompany me on visits to prospective members of the classes that were to be held. I found this a very happy and efficient way to get acquainted in a new farm community. Seventeen prospective students were visited in the average day's work. One day's time was devoted to these personal contacts for each group organized. In addition to this, informational talks before the Granges, newspaper articles, mimeographed letters, and post cards were used from the beginning and thruout the school as a means of keeping those interested informed of what was going on. Right at the start adult interest and willingness to assist was evident among the Grangers. Their co-operation has been very helpful.

As a result of this procedure three young farmers' schools were organized, one to discuss swine raising and soil fertility; one to study soil fertility; and one to study diversified farming.

Possible topics for study were talked over with each prospective class member at the time of the home contact. Then the majority vote of those present at the first meeting decided the course of study.

In addition to the regularly selected topic, meetings have been given over to a discussion of how a young man can get started in farming today. I think in another year, the majority of the time could be profitably spent on this subject. Several other subjects of practical interest appealed to the members, due often to their home and individual problems. Consequently afternoon field trips and demonstrations were organized in killing and dressing of hogs, soil types and testing, laying out a drainage system for wet fields, selecting brood sows, poultry culling, and dairy cow selection. These trips were announced to members of all three groups and fellows from more than one group often attended.

The young men attending the classes divided themselves into three types, namely: those hired out as farm laborers; sons living at home with their parents and still dependent upon them for support, altho capable of earning their own living if the opportunity arose; and those who already had something of a start in farming for themselves, altho often in a small way. As would be expected, those most interested belonged to the last group.

The greatest handicap to most of these young men, and the reason many did not turn out more regularly, was a lack of available capital to put into more or less immediate use the information conveyed. Farm laborers at low wages and sons of poor or unsuccessful farmers felt particularly handicapped in this regard. Sons of the better class of farmers often were getting their start thru parental partnership or financial assistance. If the Government wishes to actually assist some of these most promising young men into successful independent farming, herein lies its next step, to furnish them by some means, the necessary starting capital as well as educational supervision. Many of them exemplify America's finest kind of rural young manhood, and a solution of this problem among them would reward not only the individuals involved, but the Nation as a whole, by establishing an efficient rural citizenship.

The problems in this field of endeavor are many, but so are the rewards. I ran across a little poem the other day, published in an article written by another teacher, which seems to me to set forth a philosophy needed by everyone who is trying to assist our often discouraged and faltering youth.

Content

If I have planted hope today in any
hopeless heart,
If someone's load has lighter grown
because I did my part;
If hap'ly I have caused a laugh that
chased some tears away,
And if tonight my name is named where
someone kneels to pray—
I claim my day has been well spent,
Not lived in vain, and am content.
If cup, or crust, or covering has been
dispensed by me;
If I have helped the weak to stand
Or warmly clasped some hungry hand
In friendship, it may be;
Or if some lonely little child
Has known my comradship and smiled,
Then, humble though I be, I know
I have been helping God and so
Serene, I claim my nightly rest,
Just glad that I have done my best.
—Selected.

Procedure Used and Results

H. H. RADKE, Instructor,
Houston, Minnesota

AN APPROVED practice schedule which was passed out to the farmers revealed that there were 54 farms represented in the group. It also showed that while only one third of the farmers had planted any hybrid corn up until this year, next year would find one third with full acreages of it, and the other two thirds would all be trying some.

Twelve farmers decided to try crossbreeding of their market hogs, with about the same number indicating that they would start a crossbreeding program next year. Six farmers who previously had been buying new pure strains every year are this year retaining their crossbred gilts and buying only a purebred boar as a result of the discussion on swine breeding.

Final Meeting—Farmers and Businessmen

Practically all of the men are taking advantage of the plan for providing low cost lime to the community.

The demand was strong for seasonal follow-up meetings, rather than waiting until next fall and then holding another unit of ten.

This series of meetings has had as a drawing card only a desire on the part of the instructor to put across good, straight farming, which, together with splendid co-operation from the school board, the extension service, Superintendent of Schools, E. M. Eliassen, and the farmers of the community, seems to have been what it takes to put across adult evening-school work in the Houston Community.

Probably the best method of explaining how the work was carried out in adult evening school this year, is to give a brief summary of the meetings, with the subject, leader, and attendance recorded for each meeting.

1. What shall be the basis for the selection of our herd sires? (Both for hogs and cattle.) Leader—Radke. Attendance—21.

2. Crossbreeding of swine. (When to use—what to expect from it.) Leader—Radke. Attendance—37.

3. Swine feeding. (Special emphasis placed on vitamins, minerals, importance of good pasture, and the winter feeding of brood sows.) Leader—Radke. Attendance—43.

4. Beef-cattle feeding. (Value of legume hay, protein supplements, silage, etc. Also kind to feed and length of feeding period.) Leader—Radke. Attendance—50.

5. Hybrid corn. (Emphasis on the principles back of its production and its preformance in Houston County.) Leader—Radke. Attendance—37.

6. Weeds. (Means of control and plans for community control.) Leader—Fred Miller, State Capitol. Attendance—55.

7. New varieties of grains and grasses, with special emphasis on new pasture practices. Leader—Bob Hodgson, Waseca. Attendance—60.

8. Soil conservation in 1938. (A lime crushing project was also organized at this meeting whereby farmers will be able to secure lime delivered on their farms for $1.35 per ton.) Leader—Francis Brady, County Agent. Attendance—65.

9. Swine sanitation and diseases. Leader—Morris, University Farm. Attendance—75.

10. Principles of breeding and feeding dairy cattle. Leader—H. R. Searles, University Farm. Attendance—82.

Attendance for last meeting (farmers plus businessmen)—125.

This series of ten meetings was organized from a small group of farmers who attended an organization meeting held October 7, with the first regular meeting held October 14. Suggestions for subjects were obtained thru visits with farmers, and a list compiled. At the organization meeting they selected the ten they wanted. The series came to a close on December 15, with the local Commercial Club attending the meeting and acting as hosts at an oyster stew for the farmers. Twenty-eight farmers were awarded certificates for attendance after the meeting.

One of the gratifying things about this program has been the steady increase in attendance. Altho not such a large proportion were "graduated" for attending a large number of meetings, it was noted that as new members were drawn into the group they remained. Announcements were mimeographed and sent out before each meeting to those enrolled and to those whom they had suggested as good prospects. In this particular community, at least, it seemed to act as a reminder and gave the men a feeling that we were personally interested in their attendance.

Fears About Evening Class Work

L. C. SCHANK, Instructor,
Fallon, Nevada

NO DOUBT many teachers feel as I did before attempting to conduct evening classes for adult farmers. It takes considerable courage to start and carry thru an evening class. Excuses like the following are always in the way:

1. I am afraid I can't talk it up and get it started.

2. I am afraid the farmers will not be interested.

3. I am afraid I can't teach them anything because they know far more about farming than I.

4. I am afraid if I get a class started, it may fall thru.

You will observe that all of these excuses are based upon doubt and fear. Many goals have not been reached because individuals were afraid to make the start. The hardest problem about an evening class, as I found it, was to make up my own mind 100 percent that I was going to organize and carry thru such a course for adult farmers. In my case I conquered Fear No. 1 by first consulting my school principal and the county agent. In both cases their reactions and suggestions were favorable and helpful. Following this, I selected a locality where poultry was an important enterprise on many of the farms. I personally contacted farmers in this area whom I thought would like to attend a school of this type. I explained to them the nature of the course and how it would be conducted. Each one was asked in a casual way about some of his poultry problems, and in most cases I was invited to go over the poultry plant with the owner. Before leaving the farm, I made sure he knew when and where the first meeting was to be held. Fear No. 2 disappeared after talking with individual farmers, because in practically every case they showed great interest in a proposed course in poultry production.

To overcome Fear No. 3 I found that thru careful study and planning for each meeting, my work was effective. The method of teaching a course for adult farmers should be different from teaching a class of high-school farm boys. A teacher must act more as a chairman in getting discussions started and directing them to the problems at hand. It is far better to get the exchange of ideas among the group than for the teacher to try to answer all questions and tell them how to do the different jobs. At times the teacher can offer some experimental data which will aid in solving a problem or improving a practice.

Several ways were tried in keeping up interest and attendance, and therefore,

(Continued on page 98)

Studies and Investigations

C. S. ANDERSON

Tests in Agricultural Education*

G. P. DEYOE, Teacher-Training,
East Lansing, Michigan

"Just as the best teaching concerns itself largely with training the students to use skillfully the knowledge that is taught, so the best tests should actually measure this ability to use it, as well as the disposition to do so voluntarily."—W. H. Lancelot.

G. P. Deyoe

IN AN article in a preceding issue of *The Agricultural Education Magazine*, the purpose was to provide an integrated viewpoint of what is involved in the appraisal of the results of instruction in agricultural education. With this orientation, it should be possible more clearly to see the place of classroom tests as instruments of evaluation. Written types of tests for classroom use have a place in the appraisal of the results of instruction, and with improvements and refinements they should prove increasingly valuable. At their best, they can meet satisfactorily many of the standards demanded for good instruments of evaluation; at their worst they may provide for the instructor a sense of security based upon false hopes and wishful thinking.

There are three general types of written tests or examinations which should be given consideration for classroom use in agricultural education: (1) essay tests, usually teacher constructed, (2) new-type, objective tests constructed by the teacher for local use, and (3) standardized, new-type tests, usually constructed by test experts. The discussion which follows will deal primarily with the new-type tests, constructed by teacher or test expert. Many principles basic to any type of written test are involved.

Weakness of Tests Now in Use

To date, many new-type tests, constructed by the teacher for local use in classes in vocational agriculture, exhibit certain weaknesses. (1) Most of these tests measure restricted types of learning products; and frequently these are products, such as the temporary retention of fragmentary knowledge, which are relatively unimportant. In many cases, sheer memory is the chief aspect measured. It is too often assumed that tests of this type measure many or all desire outcomes in a given subject. For example, it is often assumed or implied that a test which measures the acquisition of information is an accurate instrument for measuring the extent to which information can be applied intelligently. As the result of investigations in vocational agriculture, as well as in other fields, it should be emphasized that this assumption is not justifiable.[1] (2) Some instructors devise test items which call for an approach entirely foreign to that which predominates in the class assignments. Such types of items are subject to criticism, if the purpose of the test is to measure growth which results from class instruction. (3) Items in these tests are frequently ambiguous or are otherwise faulty in mechanical construction. The presence of words which serve as cues to the testwise, the lack of clarity of certain items, and the use of difficult terminology are illustratative of these weaknesses. (4) Some items may fail to keep pace with the recent scientific knowledge in agriculture. For example, items which deal with the selection and improvement of livestock frequently are based on superficial and highly fallible techniques which do not harmonize with the newer developments in genetics. (5) Some tests consist of such small numbers of items that chance may affect materially the scores of individual pupils. The writer has seen tests of the true-false type with as few as ten items, and these are being used in all seriousness as the basis for evaluating achievement in considerable portions of given courses.

The Science and Philosophy of Test Construction

A test, or any device for measurement for that matter, to be desirable should possess certain characteristics. *Among these criteria of a good test are objectivity, validity, reliability, and ease of administration and scoring.* In the paragraphs which follow, *each of these is discussed with special emphasis on aspects which frequently are given little consideration in the construction of tests for vocational agriculture.* No attempt will be made to discuss in minute detail all aspects of each, as this has been done in many publications which deal with test construction.

Objectivity in a test is desirable, but many people are laboring under the delusion that desirable tests can be constructed and scored by processes in which subjective considerations are eliminated entirely. Objectivity is a relative matter and not an *either, or* proposition. Regardless of the purpose for which the test is being constructed—whether for the measurement of technical information, functionalized knowledge, or other outcomes—subjective decisions will be encountered in the derivation of objectives, in the definition of these objectives in terms of behavior, in the selection and statement of items for the test, in the decisions as to what will be regarded as correct responses for scoring purposes, and in the final interpretation and use of results. It is true that once a test is constructed and the scoring key is set up, the actual scoring can be done with a high degree of objectivity. This is to be desired; but one should not lose sight of the fact that considerable subjectivity is involved in the steps preliminary to that stage. The subjective aspects may be reduced, but care must be taken that objectivity does not become such a fetish thing that in order to secure it some of the most vital aspects for which evaluation is sought are lost.

Validity as a criterion for test construction frequently has been disregarded or misunderstood. Tests should be constructed which measure what they are supposed to measure with a reasonable degree of infallibility, but it should be recognized also that validity is a relative matter. A test may be highly valid for the measurement of certain outcomes of instruction, and relatively low for some which may be much more significant. The primary emphasis in tests to date has been on the temporary retention of subject matter. Such tests are probably quite low in validity for measuring the materials which will be retained over a period of years, and are demonstrably low for measuring outcomes involving the higher thought processes and other aspects of behavior other than sheer memory[2].

This is not to say that it is a simple matter to construct tests which measure the important outcomes of instruction. In fact, this constitutes a real challenge in test construction. If an infallible criterion could be found, the job would be easy. However, the very tests that we may wish to evaluate may be the best devices that we may know how to construct for the traits to be measured. To date, comparisons with general ratings of pupils by teachers, and expert opinion as to whether the test includes items which measure what it is supposed to measure, are among the best approaches available for validation.

Another aspect of validity deserving serious consideration is the degree to which pencil and paper tests can be devised to measure performance in all of its aspects. Certain problems can be reduced to such a basis with little or no loss in validity, and for certain other problems the stages preliminary to action can be so reduced. However, there remains the possibility that individuals have not mastered the processes necessary for final application, or that they may lack the "will to do" for this last step. For example, in the selection of a dairy sire, it is possible to determine whether or not a person is aware of various considerations in addition to type, such as indications of transmitting ability. Even tho the person may be aware of such considerations, to what extent is it guaranteed that he will not disregard some of them when the actual selection is made? How seriously this aspect affects the validity of written tests for certain types of problems is difficult to surmise. Perhaps a little introspection on the part of most teachers in relation to putting their own theories into practice will help in appreciating its seriousness!

A further aspect of validity is related to the discriminating power of individual items. If every person who responds correctly to a given item ranks higher on the test as a whole, or on some general scale of achievement, than any pupil who fails to respond correctly, the item is said to have perfect discrimination. While this ideal cannot be attained for all items, it should be approximated.

In building a *reliable test*, the length of the test is a primary consideration. In many tests considerable "filler" is included, unintentionally perhaps, due to the inclusion of items which all levels of ability answer with about the same proportion of errors, and some in which the responses by individuals varying in ability are the reverse of what is intended. Many tests are low in reliability, probably as low as the typical essay test, because of too few items or poorly selected items.

No lengthy discussion seems relative to constructing a test which is easy to *administer and score.* Essay tests in general are not easy or economical to score, but it may be possible to derive tests in agriculture which correlate highly with responses for essay tests, thereby securing a valid substitute test which is easier to score. For objective tests, various short cuts for scoring may be devised.

The Relations of Classroom Teachers and Test Experts in Test Construction

There are those who argue that construction of new-type tests is such a technical process that all or most classroom teachers should not attempt it. There are others who contend that for agricultural education no one but the teacher on the job can prepare tests of any value for use in a specific situation.

If improvement in the evaluation of the results of instruction is to take place, it is evident that each instructor must assume considerable responsibility. Each instructor should map out an entire program for evaluating instruction in his own situation and then select instruments and develop techniques appropriate for this evaluation. For such a process he should realize the value of classroom tests as a part of the total measurement program. Furthermore, the instructor should know how to utilize tests and test results in measuring pupil growth, diagnosing pupil difficulty, individualizing instruction, and in other ways for improving the instructional program. There is undoubtedly a need for each instructor to assume responsibility for devising tests and techniques which will fill the gaps not bridged by devices now available. This requires a sensitivity to the many ways in which achievement can be detected and evaluated, and it reveals the need for developing tests of various *as one approach* to the measurement of these learning products.

Regardless of developments in the construction of tests for use over wide geographic areas, each instructor should develop some tests especially adapted to the conditions in the local community. This implies the need for knowing the techniques for constructing new-type tests of merit. The technical aspects of test constructions are not too complicated for the average instructor to master, even tho much that is written about the subject is sufficiently technical to frighten the most timid. *The experience gained in building a few tests may prove more valuable than the tests which result*, as such a process will force each instructor to clarify the objectives of his instructional program and will no doubt convince him of changes needed in instructional procedures.

When this much is said, it would seem that there is a place in agricultural education for standardized tests developed for use over a fairly large area. These will make interpretations possible in relation to norms for groups larger than those for one locality. If suitable tests are available for portions of the measurement program, it may be more economical for the instructor to use them. He can expend his efforts in developing supplementary tests and in making better use of the results from all tests.

Tests from the outside may serve as patterns and in other ways provide suggestions for developing tests for local use. The test expert may assist materially by leading the way in adaptations of techniques and in devising new techniques for agricultural education. There are basic control processes in both plant and animal production and aspects of agricultural engineering, farm management, and agricultural economics for which certain generalizations have widespread application. Such aspects may be incorporated into standardized tests for rather wide use.

Suggestions for the Construction of Tests

Practical suggestions for the construction and use of tests appear to be needed if classroom teachers are to develop and utilize tests more extensively. New-type tests of varying degrees of merit have been developed by classroom teachers. Such tests have advantages over the usual essay type. (1) A wider sampling is possible. (Some test makers estimate that for a given period of time devoted to testing, the sampling may be several times as extensive.) (2) The scoring is more objective. (3) The scoring is done with greater economy of time. (4) The test is more reliable, due largely to the first two advantages. (5) The new-type test does not confuse knowledge or the use of knowledge with abilities of expression and organization; consequently, it is more valuable for diagnostic purposes. (6) Standardized scoring bases are provided more readily for new-type tests.

On the other hand, the essay test has certain advantages, and it is deserving of a place in testing programs, at least until new-type tests are found which measure more of the products now limited to the essay type. The essay test is useful as follows: (1) It measures the abilities associated with the expression and organization of knowledge, and (2) it may provide a basis for detecting attitudes and interests in relation to various responses.

In constructing a new-type test, it is necessary to consider various aspects of the process. (1) It is important to decide on the objectives to be measured. *These should be defined in terms of behavior.* Behavior may involve the ability to collect and interpret data, to apply principles to new situations, to see relationships, to devise ways of solving problems, to differentiate and discriminate, and in other ways to indicate facility in specific situations. It may involve manipulative skills, and it may reveal itself thru attitudes, interests, and appreciations. (2) Items should be selected, formulated, and arranged which represent situations in which the achievement of the objectives will be revealed. These items should be new to the person taking the test, but the general method of attack should not be entirely foreign to that which has been used in the classroom. (3) A scoring key should be developed, usually by having several experts score the test as set up. (4) The test should be given a tryout with a group representative of those to be measured. (5) The discriminating power of each item should be determined by making error analyses. (6) The reliability of the test should be computed, usually by the "split-half" method. (7) Revision of the test should be made. (Several revisions may be desirable.) (8) Norms or standards should be developed for the local situation or a wider area.

The writer has had some experience in the construction of achievement tests for understandings and problem-solving ability in animal husbandry. Temporary norms and a profile chart for aiding in diagnosis have been provided. The types of items used are: (1) true-false for measuring the mastery of general understandings, concepts, and principles, (2) multiple-choice of the best-answer type to introduce an added element of discrimination and selectivity in the selection of the response, (3) multiple-choice of the plural-response type centered around problems which call for interpretation, and for reasoning and judgment in selecting responses, and (4) problems which require various higher thought processes, including computational skill. These types of items lend themselves to the measurement of achievements which involve various of the higher mental processes, and the emphasis is removed from the retention of isolated facts.[3] The writer realizes that this test represents only a start and that there are many possibilities by way of future developments from many sources.

Other suggestions for developing items for new-type tests are available in several sources. Two articles have appeared in recent issues of *The Agricultural Education Magazine.*[4]

Effective Use of Tests

In the use of tests by various teachers of vocational agriculture, the writer has observed shortcomings (in addition to those already discussed) which should be corrected. It has already been mentioned that teachers frequently are in error in assuming that tests which they have developed for measuring one type of outcome are useful for measuring other types of outcomes. Likewise, in using tests available from the outside,

(Continued on page 98)

Future Farmers of America

A Feeder of Grand Champions

Le Roy Bunnell, Garland, Utah

WHAT is probably a national record was made by Verl Anderson of the Bear River Chapter of Future Farmers of Tremonton, Utah, when he exhibited three Grand Champion Steers in three major livestock shows and received in total $1,750 over the auction block in less than a year. Verl is a senior in high school, has been feeding steers for four years and has exhibited in local state and interstate fairs each year. This year he carefully selected a number of feeder calves from the best breeders of Hereford, Shorthorn, and Angus herds. He purchased them at what he thought to be a reasonable price and worked out his own program of feeding. He formulated his own rations as a result of his study in vocational agriculture and his solicitation of information from the best livestock feeders of the intermountain area.

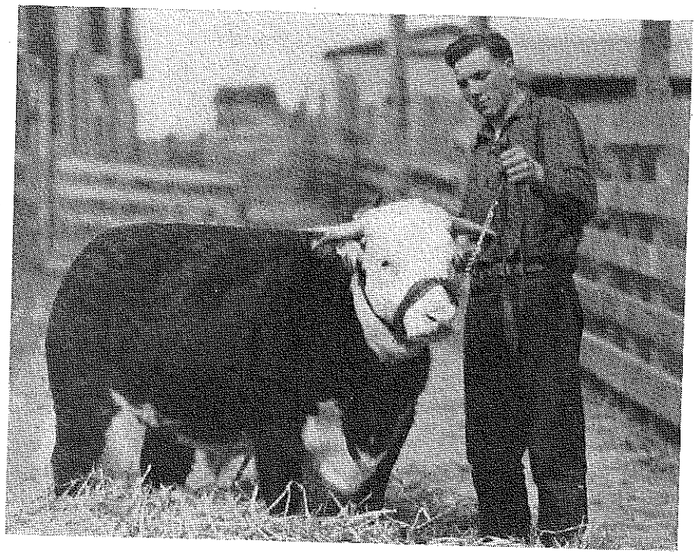
In January he exhibited a 700-pound Hereford calf from the Winterton herd at the Ogden Livestock Show with plenty of competition in both the Junior Division and the open class against professional showmen from the intermountain states, Texas, Iowa, and other states. This steer was declared Grand Champion of the Show and sold for $700, one dollar a pound.

At the Interstate Junior Livestock Show at San Francisco in April, Mr. Anderson exhibited another Hereford steer out of the Chandler herd of Oregon. He exercised the same care in feeding and grooming his animal for this marvelous show of farm youth. In competition with over 300 choice steers his animal was declared Grand Champion of the show and was bid in at 96 cents per pound.

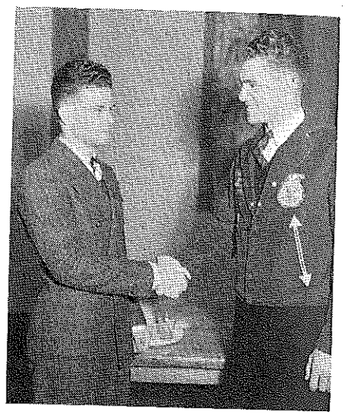
In June young Anderson exhibited a Shorthorn steer from the Norton herd of Salmon River, Idaho, at the Intermountain Junior Livestock Show at Salt Lake City. With plenty of competition in all classes among more than 250 entries, for the third time this Future Farmer exhibited the Grand Champion steer weighing 790 pounds which sold for 35 cents a pound in the auction sale.

This young Future Farmer and his older brother Max are living examples of what can be done in training inexperienced boys in the selection of good livestock and feeding them properly. The contention is not made here that Future Farmers should all feed for Grand Champions. Indeed, only one boy under our present system can have a Grand Champion. But the point to be emphasized in these examples is that a boy in the feeding business should know as the first essential, what constitutes a good animal and what under present and prospective market conditions he can afford to pay for feeder calves. The second essential in the feeding business is that having secured good feeder calves the boy must learn how to feed these calves to make proper gains with the local home-grown feeds at a cost that will make it possible for him to have a net profit commensurate with his efforts.

Verl Anderson, his brother Max, and associates are learning the livestock feeding business. They live in an area suited to livestock feeding with no precedents to follow. Theirs is a pioneer effort. They are not training to be "Gypsie" showmen but to market their feeds thru livestock feeding at a reasonable profit. This is learning the business of farming, "learning to do by doing."



Verl and a Grand Champion



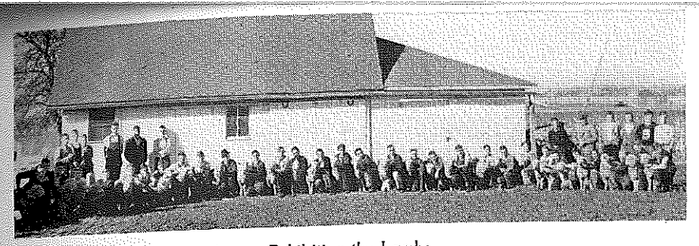
Leslie Standlea (left), Ontario Chapter, California, receiving congratulations from Lowell P. Bland, National Student Secretary, Future Farmers of America, who presided at the Pacific Regional Public Speaking Contest. Leslie later won the National Contest at Kansas City.

Lamb Feeding Project

BOB LORIMOR, Reporter,
Farragut, Iowa

THE Radio City chapter of Future Farmers conceived the idea of feeding 32 head of Montana lambs as a means of raising money and learning to care and manage livestock. The lambs were bought in Des Moines on October 7, weighing 68 pounds. The Shenandoah Kiwanis Club financed the project. The lambs were sold in Omaha on January 28, weighing 95 pounds.

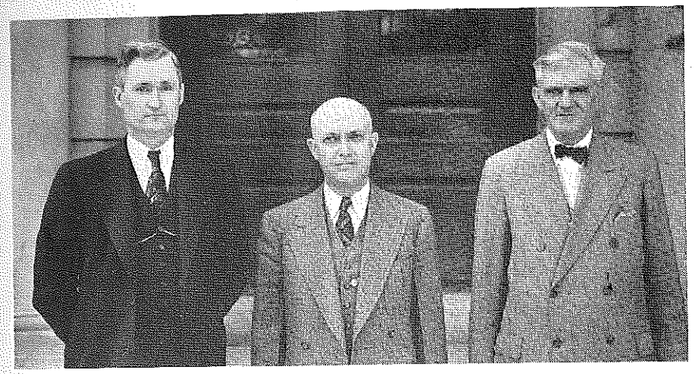
The chapter rented a barn and dry lot near town for the project. Each of the members contributed one bushel of feed for the lambs. A committee of boys was appointed to buy the rest of the feed. The management of the project was left to the animal husbandry class. We were careful to start the grain ration slowly and increase the amount gradually. As a result, our lambs were not off feed much of the time and there were no death losses.



Exhibiting the Lambs

Due to the lamb market in January, we lost money but we believe we succeeded from the educational point of view. The feeding problem was the greatest concern over the entire period. We also had some valuable experience in the treatment of sore mouth and stomach worms. The care of the lambs off feed was the difficult situation with which we were confronted. The experience of buying the lambs, securing loans, buying the feed, insuring the lambs against death loss, and the selling of the lambs were subjects that we could not learn in any other way. We also used the lambs for judging practice.

Our Kiwanis Club is interested in the farm boys of our community. This is clearly demonstrated by the fact that they were willing to loan us the money for the purpose of buying and feeding the lambs. An organization with such a spirit can truly be called a "service club."



First class of honorary State Farmers in Missouri—1929; reading from left to right—J. L. Perrin, former instructor at Salisbury, present state adviser; Guy E. James, former state adviser, W. A. Cochel, Editor, Weekly Kansas City Star and donor of the Star Farmer awards. These men attended the eleventh annual convention of the State Association

Does Your Chapter Need Money?

IVAN JETT, Adviser,
Stamping Ground, Kentucky

Ivan Jett

THE answer to the question, "Does Your Chapter Need Money?" is a simple one, "Yes." There is probably no chapter in the United States that has more funds than it can use profitably.

Many of us are handicapped by being located in less prosperous communities but I sincerely believe that money can be made by local chapters. There are very few, if any, plans that will work exactly the same in every department, so we must go back to the essentials and make the plan fit our own personal department. A few of the essentials that will fit all departments are: originality, publicity, hard work, tact, and confidence.

The first one, originality, is probably the most important because everyone is interested in something new, mysterious, and unusual. It is the impelling force of curiosity that will draw their attention and assure their participation. Surprise of the item itself causes much comment. Of course, it is very difficult to think of an original idea, but many a man has grown rich by taking an old idea and changing it a little. We can do the same in raising funds for our chapters.

The second one, publicity, has been fully covered in hundreds of pages in books, magazines, etc. but it seems as if very few of us read them and if we did, we did not understand or practice them. It takes a large amount of time to furnish daily or even weekly articles in different papers, or an occasional magazine. Considered in large numbers by the year it is expensive. It is very difficult to evaluate advertising. Publicity campaigns may be carried on thru an organization of the most influential and most interested people in the community. This organization will require a great deal of time in its formation but it may be used repeatedly to an advantage.

Some of the methods that are successful are as follows: the mail, newspapers, personal contact, announcements at public meetings, handbills, posters or window cards.

It is impossible to personally contact everyone but we can use post cards to notify our more important citizens. One hundred post cards will contact 400 or 500 people. This cost would drive your car only about 20 miles.

If you think that you are not getting satisfactory results from your publicity, ask yourself these questions: Is it written clearly? Is it in sufficient quantity? Do you know your newspaper editor personally and is he thoroly acquainted with your work? Did you send your announcement to the newspapers a few weeks in advance? Many people might miss one announcement. Perhaps if you would start a scrapbook contest your boys would become interested.

Handbills can be used only on big occasions. A duplicating machine can make 1,000 with the approximate cost of $1.25. A good method of distribution is to give one to each school child to take home to his parents. Place handbills in cars on Saturday or when there is a large crowd in town.

Posters or window cards are very good. Do not be satisfied with three but make three or four dozen. Let your boys make them. You can get a rubber stamp printing press for a few dollars. If you are to get satisfactory results from your publicity you must use several of these methods and not rely on one or two. Announcements in public places can be made weeks in advance as well as calling the attention of the public to it when the project is near.

As you are interested in the school and its success, talk over the intended plans with other people, secure their ideas, help and co-operation. You must have confidence in yourself before you can instill it in your boys. If you have confidence, you will receive the full support and confidence of everyone if you deserve it.

None of us like to ask continually for money and it takes courage to do so. Many people want to be sold on a proposition. You must be a salesman. If you think a project is not worth while, important, and of value to those whose support you are asking, do not start the project. It is unfair to ask businessmen or individuals to support anything that is a detriment to them. If you try, you will fail.

All of us believe we are tactful. Remember no one's idea was ever changed by an argument.

The last essential, hard work, is to be taken literally. Maybe a better statement would be: Do not lose an opportunity to promote some idea that you are sponsoring. Most of the work will be in getting others to do it, and you have to remember that 10 people working will do 10 times as much work as you can by yourself. It will take a great deal of your time to help them but you owe it to yourself and to them.

No mention has been made up to now of the many methods of raising funds. A

short list follows: selling magazines and newspaper subscriptions; box suppers; plays; donations; advertising in "Newsletters"; dues; sale of feeds, seeds, and fertilizers; chapter projects; basketball games; entertainers from radio stations; sale of candy; cleaning and testing seeds; and many others.

Are you saying it is easy to write, but hard to do? I will agree with you, but if you say, "I can't raise funds," I will not agree with you.

F. F. A. Highlights

New F. F. A. Manual

The F. F. A. Manual is being revised. The new publication will contain the revised constitution and many additional suggestions and helps for the promotion of the program of this dynamic youth organization.

President Tours West

National President, J. Lester Poucher, of Largo, Florida, recently attended the regional conference of the North Central Region. He extended his trip to reach Future Farmer members in Hawaii. On the return trip he made stops in California, Wyoming, and other points. The number of requests for visits from our national president is increasing each year. Many of these invitations come from adult farm organizations and other organizations interested in rural youth. When farmers and their sons representing entirely different organizations clamor to sit around the same banquet table to talk things over, then indeed, these are signs of the approach of the Millenium.

F. F. A. Motion Pictures

The motion pictures of Future Farmer activities taken at the Ten-Year Celebration at Kansas City last October are being circulated among the chapters of state associations. Reservations should be sent to W. A. Ross, U. S. Office of Education, Washington, D. C. Arrangements may be made either for the sound film or still films. Many of the state associations are purchasing these films and distributing them to local chapters. Any state association can well afford to pay $37.50 for the 16 mm sound picture. Orders should be sent to Action Film Company, 2901 Prairie Avenue, Chicago.

Contributions of Leading Americans to Agriculture

(Continued from page 85)

this article would be quite incomplete, however, if I did not stop to say that Eli Whitney's birthplace and old home farm still delight in claiming their son. The farm is now owned by Victor S. Despres and he is making of it a Whitney shrine. An appropriate marker has been placed on the farm, and Mr. Despres has collected a notable library on the cotton gin in order that future generations may more easily understand the contributions of Eli Whitney to American agriculture.

Learning to Read Agricultural Material

(Continued from page 87)

used. Another useful technique is to develop a clear understanding of the relationship between nouns, verbs, and the other parts of speech. If the student who had trouble with the word *meritorious* had understood this relationship, he would have seen that the word is an adjective derived from the noun *merit*. Naturally, the dictionary habit should be developed. Especially should the students be encouraged to carry small, handy dictionaries that they can use quickly and easily without causing class disturbance. It is surprising how quickly a student will develop his vocabulary in this way. As soon as the students see the significance of the program of developing their ability to read the written page containing material in which they are interested, they respond with gratifying willingness, both toward the regular English course and to the program of reading agriculture.

Tests in Agricultural Education*

(Continued from page 95)

the teacher frequently disregards the purposes for which certain tests were developed. For example, a test valuable for measuring the broad aspects of growth and for determining the general features of a given field which need instructional emphasis in a given class may be unsuitable for measuring specific aspects of instruction over short periods of time, and vice versa.

There is too little recognition of the value of test results beyond the determination of grades or marks of the report-card type. It appears desirable to give many tests in which the pupil knows that the results will have little or no bearing on the final grade. If the pupil is encouraged to think of education in terms of his own growth, he will wish to utilize tests and other forms of evaluation to determine his points of strength and weakness and his progress toward certain goals. A. E. Morgan has said, "The greatest of all adventures is doing one's level best." Tests used as one basis for evaluating progress and as an aid in diagnosing pupil difficulty can contribute to the achievement of this challenging goal. Until this viewpoint is taken, tests may be approached by the pupil as devices by which he attempts to hide his weaknesses, and by the teacher as devices for ferreting out the shortcomings of the pupil to be followed by the issuance of a grade as a penalty or reward.

In closing, let it be emphasized again that there is an urgent need for improvement of evaluation in agricultural education. This implies the development of a program calling for various techniques and procedures. Local instructors, as well as research workers, have many challenging problems along this line. Each instructor should utilize suggestions and devices from as many sources as possible and develop a program suited to his situation. Not only is it important that achievement in all of its aspects be appraised, but the data thus accumulated should be carefully analyzed and interpreted to the end that the instructional program will more nearly meet the needs of the individual pupils.

*Portions of this discussion were presented at the North Central Regional Conference for Agricultural Education, March 30, 1938.

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Fears About Evening Class Work

(Continued from page 93)

Fear No. 4 was overcome in the following manner: At the beginning of each class, I had two or more of my F. F. A. boys put on some musical numbers or demonstrations. At the close of each class the job or problem for the next meeting was clearly outlined and in case any special demonstration, speaker, or equipment was to be used, it was made clear to the group. After each meeting short news articles were prepared for the local paper, giving a report or summary of the discussions and a statement of the job to be taken up at the next meeting. It was found helpful to call individual farmers by telephone, and contacting them at their home farms helped to build and maintain interest thru the course.

Use was made of the local veterinary in two meetings, and two members of the Agricultural Economics Staff of the State University contributed on the job of record keeping. At the beginning of each class, the members were provided with mimeographed copies of the approved practices which had been worked out, dealing with the job discussed at the previous meeting. These were read over and briefly discussed by way of review before starting the new lesson. Many bulletins were provided for the members during the course.

The success of an evening school is for the teacher to be sold on it, and for him to be friendly, helpful, and sincere.

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