Subscription Data by State

(Continued from page 114)

State	Number of Teachers 1935-36 (1)		Supscriptions November 1, 1936 (2)
	White	Colored	
New Jersey	30	1	32
New Mexico	36		55
New York	282		246
North Carolina	252	44	41
North Dakota	39		34
Ohio	239		279
Oklahoma	108	21	111
Oregon	44		31
Pennsylvania	185		174
Rhode Island	10		
South Carolina	161	95	139
South Dakota	60		45
Tennessee	154	22	168
Texas	446	130	245
Utah	49		32
Vermont	29		34
Virginia	144	34	179
Washington	80		70
West Virginia	71	3	54
Wisconsin	139		74
Wyoming	32		41
Hawaii	50		
Puerto Rico	57		
Alaska and United States Possessions	4		99
Foreign			12
Total	6,220	644	

1. Data furnished by Mr. J. A. Linke, November, 1936.

2. From Meredith's monthly report to the Business Manager, November, 1936.

Desirable Educational Ends Achieved Thru the F. F. A.

CHARLES L. PARK, JR., Teacher,
Thetford, Vermont

AS F.F.A. advisers, we teachers of vocational agriculture have a privilege in working with our students. While we should serve only in an advisory capacity and allow the members of the F.F.A. to carry on the work of the chapter, we can see to it that the chapter functions in a way most valuable to our pupils.

It seems to me that it is wise to give some thought to the seven cardinal points of education when planning the annual program; namely, health, wise use of leisure time, a command of the fundamental processes, development of character, worthy home membership, good citizenship, and vocational guidance.

Let us consider the problem of health. We should strive to encourage sanitation among our students in every possible way. Being neat in our own appearance at all times is a good example. Keeping our classroom and workshop in order will help, since a person who has clean surroundings learns to take similar care of himself. Our chapter fixes certain standards in regard to the appearance of its members at the meetings.

We should strive to enable each boy who is wasting his leisure time to make some worth-while use of it. Not all students care to have the same things thrust upon them, but very few will fail to respond to encouragement or advice, once a little guidance is given them. Examples of this are to be found in the spare time are to read beneficial books, to write articles for a boys' magazine, fix up his room at home, or engage in athletics. Most every boy has a hobby which can be developed in his leisure hours. Such hobbies as bee keeping, flower culture, and a development of musical abilities are a few worth mentioning.

A continued development of the fundamental processes results because of the practical nature of vocational agriculture. One may ask how this can be achieved thru chapter activities. The members of my chapter are very fond of shopwork. Their interest is encouraged, and a certain amount of time during the social hour of our meeting is set aside so that boys who wish to do so may use the shop and equipment. Thus the boys have the opportunity to make things appealing to them, and this results in an increase of the tool skills. During the Christmas season the boys made several types of toys for distribution to needy children in the community who otherwise might have had an empty stocking.

The building of character is vitally important. Many students in our high schools come from homes with extremely poor environments for youth. Still it is surprising what improvement can be made with these same boys thru the exercise of patience, reasoning, and hard work on the part of the teacher. Here again membership in the F.F.A. aids the boys. A spirit of co-operation exists, and each boy feels that every other member is a friend and helper. This reflects to advantage on the characters. A respect is learned for the flag, and the salute is given with all sincerity. It is well to have the pastor in occasionally to lead the group in prayer or to offer a blessing before a luncheon.

If boys can be brought to realize the sacrifice which parents make to keep them in school, a better home relationship often results. A closer feeling between parent and son may be developed thru F.F.A. luncheons, social hours, and lectures to which parents are invited. This tends to increase worthy home membership.

Building into a boy's character honor, love, friendliness, and courage will result in what we are striving to attain; namely, good citizenship.

Finally, vocational guidance within the school and without will serve to do much in developing a boy into the kind of man the country is going to need, a real future farmer.

The F.F.A. at Thetford Academy is a young chapter. We follow the requirements for membership set forth in the manual. No boy needs to be urged to become a member. Rather, a feeling prevails that it is an honor to be selected for membership.

Meetings are held at least once each month, and whenever possible we like to have them every other week. The full order of business is followed. The officers are not the only ones who take part in the meeting in the transaction of business. When degree work is carried on it is done in an orderly, businesslike manner.

Following the business meeting a recreational period is provided. Our classroom is located above the workshop and is large enough for chapter meetings. There is a radio for listening to worthational periods. The long class tables serve nicely for ping-pong tournaments. Downstairs in the workshop after the business meeting the boys have an opportunity to learn the rudiments of boxing, wrestling, or they can use the shop equipment. Upon other occasions our chapter plans hikes, corn and wiener roasts, and radio dances.

A chapter project is promoted each year. Last year we operated two hotbeds. This year the boys want to add a project in incubation and brooding.

Quite often individuals secure work outside of school hours in the community. We maintain a labor bureau. The person in charge keeps in mind the work which needs to be done in the town and attempts to secure it for chapter members. Each boy is selected according to his ability, honor, and care in performing a job. Gradually most of the boys who are desirous of finding work realize what is expected and improve themselves to meet the standards set.

Last fall the group established here a day which was termed F.F.A. Sunday. The congregation doubled in number over its regular attendance. A large percentage of the boys came to church accompanied by parents and friends. The pastor delivered an excellent sermon appealing to young farm people. Several of the boys assisted by ushering, taking the collection, and singing in the choir.

Our chapter belongs to the Farm Bureau and makes use of it thru the county agent and farm bureau publications.

Boys are urged to visit one another's projects, both as individuals and as a group. Thus, a sense of pride in one's work results, and more care is given to a project, which in turn leads to greater profits.

I trust that I have made myself clear in presenting my idea of meeting educational ends with the F.F.A. In closing I might present a little poem, which I concocted in an idle moment and which is called "The F.F.A." To any person who may be unacquainted with F.F.A. work, it briefly presents a picture of the chapter activities.

The F.F.A., what does it mean
To all of you who have not seen
The meetings held week after week
By boys who do so eagerly seek
To do their work in such a way
That they may carry on some day?

American farm boys 100,000 strong,
Taking vocational agriculture all the year long,
Seeking to build in an earnest way
Long-time projects whate'er they may,
Planning now that they shall stand
As ideal future farmers of our land.

The Future Farmers of America now, you see,
Have a right to be recognized by you and by me.
Chapters exist in forty-seven states,
And Hawaii and Puerto Rico are within the gates.
Now pause a moment to grasp the truth,
And you'll see the value of this work for

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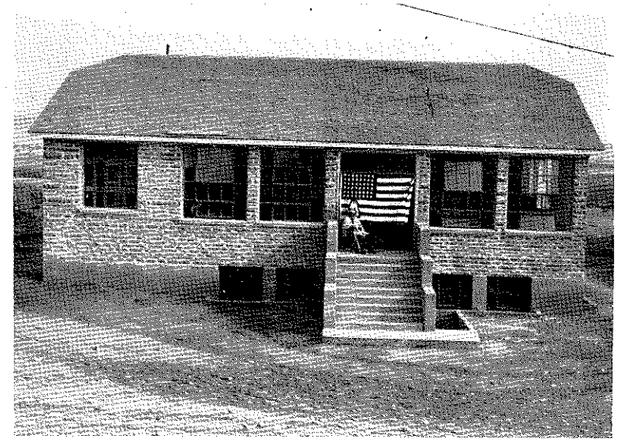
Agricultural Education



Toyack F. F. A. Chapter House
Roosevelt, Utah. Dedicated November, 1936. (See page 142).

"The secret of success in life is for a man to be ready for his opportunity when it comes."—Disraeli

EDITORIAL COMMENT

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.

Subscription price, $1 per year, payable at the office of the Meredith Publishing Company, Des Moines, Iowa. Foreign subscriptions, $1.25. Single copies, 10 cents. In submitting subscriptions, designate by appropriate symbols new subscribers, renewals, and changes in address. Contributions should be sent to the Special Editors or to the Editor. No advertising is accepted.

Entered as second-class matter, under Act of Congress, March 3, 1879, at the post office, Des Moines, Iowa.

AGRICULTURAL REGIONAL CONFERENCES

North Atlantic	New York, N. Y.	March 22-24
Southern	Birmingham, Ala.	March 22-26
Central	Chicago, Ill.	March 29-31
Pacific	Reno, Nev.	May 18-22

WHY TEACH FARM MECHANICS

IT HAS been estimated by reliable authorities that a farmer who engages in the business of farming over a period of 40 years, acquiring ownership of a farm, will during that period expend from two to three times as much for farm machinery and equipment, including small buildings and their maintaining, as he has invested in the land which he farms. This alone is enough to justify emphasis on farm mechanics in any program of agricultural education. Farm machinery and equipment have grown in amount and in complexity thruout the past two decades. A farmer is constantly working with machinery. The success of such operation is based largely on his knowledge of the fundamental principles upon which the machinery is built, the judgment used in its selection, and the skill with which the machinery is operated, adjusted, and repaired.

Many pieces of valuable farm machinery have found their way to the junk heap prematurely, due to lack of proper adjustment and repair. One of the greatest opportunities for improving efficiency on Kansas farms lies in a program of mechanics training in our high schools that will enable farm boys who graduate to meet the mechanical problems of farming efficiently. On their ability to do this will depend in no small measure their success in the business of farming.

The type of farming and the equipment incidental thereto very largely determines the type of farm mechanics instruction that will be offered in a vocational agriculture department in a given community. Entering the farm shop in a typical Kansas vocational agriculture department, one is likely to observe one boy building a self-feeder, another a hay frame, another a wagon box. Another may be overhauling and repairing a mowing machine. Another may be seen at the forge sharpening the teeth of a smoothing harrow. Others will be sharpening and tempering cold chisels which have been brought from the home farms. Some may be found filing saws, sharpening planes and wood chisels. Still others may be washing, sewing, oiling, and painting [illegible] has brought from the home farm. Occasionally the class is taken to a near-by farm where the boys build a concrete foundation for farm buildings or perhaps build a concrete water tank, lay a concrete walk, or engage in some other practical use of concrete on the farm. Such classes have built septic tanks on near-by farms.

It is not uncommon to observe a class in farm mechanics in the construction of a poultry house, or the remodeling of a poultry house. The acquisition of skill is not the sole purpose of a farm mechanics course. Practically every mechanical skill is underlain with a mechanical principle which boys are brought to understand.

The farm shop schedule of each boy during his school year is by no means a hit and miss affair. Early in the school year each boy makes a survey of the home farm and its equipment to determine the mechanical needs in the way of construction and repair work. He makes this survey under the guidance of his teacher and with the advice of his father. The aim is to secure the range of mechanical jobs that will give the boy a well balanced training as between hot iron work, cold iron work, sheet metal work, rope work, carpentry work, tool sharpening, machinery repair, etc. As the year's work proceeds, he attacks the jobs on his schedule usually in the season of the year when the equipment in question is needed on the home farm.

Quite often boys pick up here and there discarded pieces of farm machinery. Thru the expenditure of a few dollars for parts and several hours of labor in the shop, they have been able to produce at extremely low cost serviceable pieces of farm machinery of their own. This in itself constitutes a step toward becoming established in farming, along with giving the boy a type of training highly essential to success in farming.

Perhaps in no state in the Union is agriculture more highly mechanized than in Kansas. It is idle to assume that the millions of dollars worth of farm machinery on Kansas farms can be intelligently and efficiently operated without some training in mechanics principles and skills. Inasmuch as a high percentage of boys who graduate from high schools return to the farm, it is hard to conceive of Kansas high schools in rural environment as having discharged their responsibility to these boys without giving some scientific and practical training in the use of the devices which will mean so much to their success or failure in the business of farming.—Lester B. Pollom.

SCHOOL OF VOCATIONAL EDUCATION ESTABLISHED AT THE LOUISIANA STATE UNIVERSITY

A SCHOOL of vocational education was established at Louisiana State University at the opening of the 1936-37 session to train men and women for teaching positions in the fields of vocational agriculture, vocational home economics, trade and industrial education, and industrial arts.

Establishment of the new school was in response to the heavy demand for properly trained teachers in the vocational fields, the need of which is being increasingly felt in Louisiana. Co-operating in the establishment and support of the new school are the Louisiana State Board of Vocational Education and the Louisiana State University.

The newly created school is composed of the departments of agricultural education, home economics education, and industrial education. The school is a unit of the college of agriculture. It brings together for the first time all the vocational teacher training work.

Dr. Roy L. Davenport, formerly head of the department of agricultural education, was named director of the school. Mr. J. C. Floyd, associate professor of agricultural education, will be in charge of the department of agricultural education; Dr. Helen Carter, professor of home economics, in charge of home economics education; and Mr. Kenneth Beach, formerly of the Oregon State Department of Education, will be in charge of the department of industrial education.

Professional

Whither Agricultural Education—in Measuring and Evaluating Pupil Growth?

C. B. GENTRY, Dean, Division of Teacher Training, Connecticut State College, Storrs, Connecticut

"I DO NOT know whether I am getting anywhere in this work or not. I work hard and think I have a fairly accurate notion of what ought to be attained by my students, but sometimes I just can not feel that we are making satisfactory progress." This is an approximate quotation of the comments of a teacher with whom I talked recently. Perhaps this attitude of uncertainty is not typical of teachers of agriculture, but it does occur often enough to justify some attention.

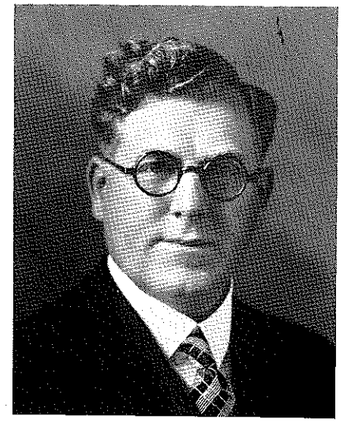
At the outset, we would offer a word of encouragement to those who are dissatisfied with progress and who are critical of their own attainments. Frequently it is the poorest teachers who are most ceratin just what they should do and quite confident that what they are doing is being done just the right way. Some of the best teachers are dissatisfied because their aims and standards are so high that progress in approaching them seems relatively slow and halting.

Specific Objectives Needed

How effective is our work and how may we measure and evaluate with greater certainty our progress and attainments? First, we must know what we are aiming at, our ultimate goals. The general aims of teaching vocational agriculture are so well discussed in former articles in this series that it would be an unprofitable use of our time to repeat them or to elaborate the discussion. May we call your attention to one general point of view which is contained in Professor Field's article in *Agricultural Education*, October, 1936. Professor Field states: "In teaching agriculture emphasis is put on the needs of the student rather than on the subject matter to be taught....For example: a good teacher will not measure his success in terms of increase in the number of pure-bred pigs, acres of alfalfa, or higher producing dairy cows in the community, but in terms of the improvement and changes that are made in the students or in the people of the community." Our success or failure in the teaching of vocational agriculture will depend, therefore, upon the growth of our students rather than the changes in farming which occur in the community as a result of our teaching. It is true that performance on the farm can sometimes be used as a measure of pupil growth, but our central emphasis should always be upon student growth rather than changed farm practice.

terms: "It will be possible by means of the proper kinds and amounts of vocational education...to shorten the period of time necessary to attain vocational competency in farming by from five to ten years...to guide and stimulate the learning of boys and young men between the ages of 14 and 25 years so that they will have the amount and kind of vocational competency that they would have had by pick-up means at 30 or even 35 years of age."

While ultimate goals are of assistance in determining direction, they are not of much help in determining rate of progress or growth. It is necessary to set up intervening mile posts in line with our major aim. These mile or quarter mile posts we will call "objectives," lesson objectives in line with course



C. B. Gentry

objects which in turn should be in line with curriculum aims such as those stated above. We can usually measure and evaluate the amount and character of progress in approaching an objective just as an army corps was able in the World War to attain an objective—"Hill 47"—in the process of winning a battle, toward a more ultimate aim of winning the war.

It is important that an objective shall *be objective*. Unless the goals of a lesson or unit of instruction are clearly defined, it will be difficult to measure our approach to them. Objectives should be stated where possible in terms of pupil accomplishment.

The Measurement of Skills

measurement and evaluation by a few illustrations from the field of sensory-motor skills. There are several thousand of these to be acquired by the owner-manager-worker on a diversified farm. Most of them will be picked up by farm boys at play or by imitation or under the tutelage of dad and the hired man. Some of them may be important enough to warrant attention in school.

"I will teach the 18 students in my freshman-sophomore class to tie a sheepshank knot in a half-inch rope in 10 seconds" was the objective which one teacher set for himself and for his class. This objective was attained by the class in less than ten minutes of incidental teaching at the end of a period when the regularly planned work for the day had been completed. Some members of the class tied the knot in much less than 10 seconds and all of them came within the limit that the teacher had set as a minimum standard of attainment. Similar quantitative objectives in terms of student accomplishment are easy to formulate and to measure in the teaching of almost all sensory-motor skills, such as sharpening chisels, estimating the weight of a horse, or preparing broilers for market.

Sometimes the performance of a skill is a good test not only of the skill but of a considerable amount of background knowledge. "Students in my class will be expected to be able to adjust a walking breaking plough in such a way that it will 'float,' without touching the handles, for a distance of 25 feet when working in friable clay-silt soil." "I will drill my class in the culling of year-old hens until every member of the class (except Jimmy, the dumbbell) can make the same judgments with respect to the very high producers and very low producers that I make and so that half the class can make the same judgments upon the average producers that I make." The teacher who set up the culling objective occupied the last 120-minute period of the lesson unit in a combination of teaching and testing activity in the culling of a flock of 62 hens on a farm near the school. Number bands were placed on the hens' legs and then the birds were passed along from boy to boy, each boy recording on a pad his judgment as to whether the hen should be kept or sold. The teacher stood at the end of the line and made a final judgment against which the boys' recorded judgments were afterwards checked. Since in this particular class no member had had any previous ex-

It will be observed from the above that the testing was an integral part of the teaching. The test of the student's knowledge and his ability to apply it as illustrated was much more effective than would be a true-false or other paper test of knowledge of pigmentation, head points, and the like. Too frequently the teacher makes the mistake of calling for special facts, such as the amount of acid and the amount of milk and the number of turns of the centrifuge in making a Babcock test, when the students have amply demonstrated their proficiency in making the test on numerous previous occasions. Ability to carry thru a Babcock test without reference to notes or directions is a much better test of the ability that we desire students to have than any paper test can possibly be. Students will also learn much more from carrying thru the test than from attempting to remember and be able to put on paper the various items of knowledge involved in the procedure.

Occasionally a teacher may need to secure a rapid cross-section measure of progress in the attaining of some particular ability, and paper tests may be used for this purpose. Altho a student's ability to do bookkeeping probably is best finally measured by the accuracy of his project books for a year or more, it frequently is desirable to ascertain his progress in a specific ability, such as recording debit and credit items, early in the learning process. The following test organized by Mr. R. L. Hahn is an example of an effective paper test. The entire test is included since it illustrates not only one means of testing simple ability but also a type of objective test which can be readily used in similar circumstances.

The following statements are either true or false. Mark + or 0.

The items below should be entered on the debit side of the ledger accounts with a laying flock.

Oyster shells bought for the laying flock	1...
Closing inventory for laying flock	2...
Beginning inventory of feed for flock	3...
Labor hired of a neighbor for the flock	4...
Manure and litter value from the flock	5...
Bran bought for hens and used by the dairy	6...
Eggs used in the house	7...
Cull hens sold to a hotel	8...
Allowance from grain dealer for returned sacks	9...
Delivery charges for feed of flock	10...
Can of milk which soured and was fed to hens	11...
Blue ointment for treating hens with lice	12...
Electricity for lighting laying flock	13...
Hen killed for Sunday dinner	14...
Mash bought for the laying flock	15...
Products from flock used in the home	16...
Sale of roosters fed from laying flock feed	17...
Pullets bought to add to laying flock	18...
Labor of owner in caring for the flock	19...
Home grown corn fed to the flock	20...
Part of total tax paid on farm buildings	21...
Cost of equipment bought for use of flock	22...
Pullets for laying flock for which hens were traded	23...
The hens that were traded for the pullets	24...
Cash paid in addition to hens in trade for pullets	25...
Grit bought for the flock	26...
Gravel from the farm for fresh floor material	27...
Egg cartons bought for packing eggs	28...
Membership fee paid to egg marketing association	29...
Money paid for advertising "Eggs for Sale"	30...
Colored leg bands for marking hens that have been broody	31...
Epsom salts (in poultry supplies) used for personal	32...
Water heater bought for use of the flock	33...
Hen that died in the flock	34...
Account books bought for records of flock	35...
Red mite paint bought for painting roosts	36...
Charge to cover costs of equipment used	37...
Feed bought that will be used after closing inventory	38...
Value of time spent going after pullets for flock	39...
Hens (in this flock) kept over from last year	40...
Charge for use of money invested in the flock	43...
Charge for use of money value of farm raised flock	44...
Anything you provide for the laying flock	45...
Anything the flock supplies you	46...
Anything bought for flock but unused at close of year	47...
Profit found in balancing the accounts with flock	48...
Loss found in balancing accounts with flock	49...
Oats from horses germinated for the laying flock	50...

When a measure of remembered facts, knowledge and understanding is desired, a test made up of items similar to the following may be prepared. These items, taken from a much more extended list organized by J. C. Dufford of Glastonbury, Connecticut, will serve to illustrate the method of procedure.

Poultry Lighting Test

The following numbered statements are true or false. To the *left* of the number before each statement that you know to be true place plus; to the left of the number before each statement that you know to be false place a zero. Do not mark statement of which you are uncertain.

1. The use of lights tends to keep hens from molting.
2. An extra egg per bird usually will cover the cost of electric current.
3. Before applying lights to late molters it is unnecessary to give the birds a rest.
4. Under lights increased consumption of mash keeps the weight of the birds normal.
5. It is good practice to separate pullets according to maturity before using lights.
6. The system of lighting on late molters should be the same as on the early molters.
7. Slow-maturing birds need more hours of illumination than do better quality birds.
8. There is no best time to start lights on all flocks.
9. If birds are to maintain a high rate of production during the second year, they must have a rest at the close of the first year.
10. Well-matured, heavy-producing pullets need more artificial light than other birds.

In the following statements there are one, or more, items that make each statement true to the facts involved. You are to place the letter that appears before each true item in the parentheses before the statement.

( ) 1. The time between meals should never be over—a. .5 to .7; b. 6; c. 11 to 12; d. 9 to 10; e. 7 to 8; f. 14 to 15 hours.

( ) 2. The intensity of light on the floor should be—a. .5 to .7; b. 1 to 2; c. 3 to 4; d. .8 to 1.0; e. .6 to .7; f. 5 to 6 foot candles.

( ) 3. When starting to use lights it is best to—a. Give light at first in the morning; b. Give light at 9 to 11 p. m.; c. Give light both night and morning; d. Give light at night. (Dusk to 6 or 7 p. m.)

( ) 4. The string of lights for any long building should be placed -
   a. Above the edge of the dropping board.
   b. In the middle axis of the building.
   c. Five feet from the front of the house and the front of the dropping board.
   e. Directly over the mash hoppers.
   f. As far from the nests as possible.

( ) 5. Lights should be continued in the spring until the length of the day is—a. 11, b. 12, c. 13, d. 14, e. 15, f. 16 hours.

( ) 6. Birds that stop laying in September and early October should be given light—a. immediately; b. first of November; c. first of December; d. not at all; e. under the light-lunch system only; f. under morning and evening lighting system.

The Measurement of Managerial Ability

Tests of skills and knowledge described and illustrated above are relatively easy to make and to evaluate. There are other still more important growths in abilities which are more difficult to measure. Managerial ability or competency in making decisions where many varying and variable factors are involved is one of these. Ability to think out a problematic situation, such as "What would I do with this (a particular case) farm if it were mine in the next ten years?" is a type of ability very much needed by every farm manager. The student should have ample opportunity to study and solve managerial problems in order to increase his ability to make such needed decisions. Care must be exercised that the student has an opportunity to do his own thinking and that he does not rely upon others in the class or upon the teacher.

Managerial ability will probably be measured almost entirely by subjective means. Such a complicated ability must also be broken down into smaller elements for purposes of assessing pupil growth. Ability to define problems completely and accurately, and ability to assemble and evaluate the relative pertinency of the several facts and factors which should be considered in making decisions may be judged in a subjective way when more objective means of measuring cannot be devised. The best means of measuring and evaluating such abilities that I have observed is to give a student an opportunity to formulate for himself and to study problems, such as "Would I change the number of cows on this farm from 12 to 36?" or "What amount can I safely borrow on mortgage on this farm?" Measurement and evaluation of his progress and growth in managerial abilities will have to rest mostly on such evidence as the clarity with which he formulates his problems, the relative emphasis which he places upon the several factors in the solution of problems, and his ability, as judged by the teacher, to make decisions.

Evaluation of Attitudes, Ideals, and Other General Patterns of Conduct

The development of attitudes, ideals, morale, and other similar general patterns of conduct is of prime importance in our teaching. These concepts are of such an intangible nature, however, that it is almost impossible to measure or evaluate our results. "Pride of a skilled workman in his practices and

Evidences From Curriculum Researches of the Need for Further Studies*

DR. CARSIE HAMMONDS, Teacher Training,
Lexington, Kentucky

Dr. Carsie Hammonds

YOU have no doubt heard the story of the woman who penciled the grocer a note: "Send me six dozen eggs. If they are good I'll send you a check." The grocer wrote back: "Send the check. If it's good, I'll send you the eggs."

Four weeks ago I had a letter from Dr. R. M. Stewart, asking me to take the subject, Evidences From Curriculum Researches of the Need for Further Studies. I wrote him that if he would send me the evidences I would present them.

One bit of evidence I was glad to find. This was not included in what Dr. Stewart sent me. I present it as basic evidence Number 1. In a recent study, in the 30's, the first statement of the final conclusions reads: "The writer found a need for curriculums and courses of study in the field of vocational agriculture."

But what are other evidences from curriculum researches of the need for further studies?

If too small a portion of our studies have dealt with curriculum problems, this might possibly be evidence of need for further studies. What portion of the studies in agricultural education, would you suppose, have been on curriculum problems, wholly or in considerable part? I have read the title, and a summary digest of the purpose, method, and findings and interpretations, of 373 studies in agricultural education, looking for evidence to use in this talk.

Of the 373 studies, 168 deal specifically with curriculum or course of study, in whole or in part. And many other of the 373 studies make contributions toward solving, or creating more, curriculum problems. A few of these contributing categories of subjects are: agricultural occupation studies, guidance studies, supervised practice studies, Future Farmer studies, method-of-teaching studies, studies on teaching materials, migration studies, and measurement studies.

The number and variety of our curriculum researches are evidence that we are, or at least were, concerned with the curriculum—evidence of curriculum difficulties. And every difficulty —whether it remains a difficulty from yesterday or whether it is a new difficulty—is evidence of need for further studies or need of application and dissemination of studies.

It is perhaps not too much to say that our most baffling problem in vocational agriculture is what to teach—what learnings to secure. This is our all-inclusive curriculum problem. In order to know *what* to teach, we must know the relative essentialness of the learnings to be secured to meet the human needs, *when* the learnings are to be secured, and *how* they are to be secured. I am not confusing curriculum with methods of teaching. Method per se is not a curriculum problem. However, those who deny that *how* the learnings are to be secured is of any concern to curriculum builders should listen in on our discussions as to the relationship of supervised practice and class instruction. Supervised practice is a method of teaching. The relationship of supervised practice and course of study is recognized in supervised practice researches. At least half the supervised practice studies have dealt, in part, with the course of study. At every turn the *when* and *how* affect *what* to teach. The extent to which we have individual instruction and the extent group instruction affects the course of study directly. When should vocational agriculture begin? At what age? How much of the training for farming should be beyond the period of formal schooling? Should *this* be taught before *that?* What amount of time is available? The answers to these questions affect my course of study.

On with our subject: Evidences from curriculum researches of the need for further studies.

1. So far as I have been able to discover from curriculum researches, no one has determined a course of study in vocational agriculture on an objectively valid basis. (This includes my own attempts.) If the course of study is determinate, and it would seem to be, how determine it? (I am not supposed to be able to tell how to do any of these things. And I am not attempting to give a critical analysis of curriculum researches. I am discussing only evidences of need for further studies.)

2. There is much evidence that we need studies that will clarify our thinking on arriving at the course of study as a whole. It is one thing to arrive at what we think should be taught in corn, or poultry, or dairy, or farm shop, when we do not consider anything else to be taught. It is quite another thing to arrive at what to teach in vocational agriculture when we consider all the things to be taught. This is no implied criticism of the special-subject studies, approximately half of which have been in farm shop. One contribution of these special-subject studies has been to help make us aware of the bigness of our problem of knowing the relative essentialness of the learnings to be secured. These studies have helped bring to the fore that from which to select. We cannot attain all possibly worth-while objectives; there must be rigid selection, in terms of human values. We must find out, thru further studies, how to make this selection. We need further studies to help us know how to balance, how to integrate, what the constants are, what the variables are—all of this in terms of needs of the learners.

3. Studies are needed which will help us refine our measurement of the learnings secured. Since the only justification for having a curriculum is to secure learnings, we are handicapped in evaluating success of curriculums if our measurement of learning does not give us valid evidence of the progress made by learner and teacher.

4. There seems to be evidence of need for further studies on the unity and development of the supervised practice and the class-instruction relationship in curriculum set-up.

5. It would seem that there is need for studies by us on relationships with other phases of education closely related to agriculture. I refer to such relationships as the relationship with home economics, industrial arts, trade and industrial education, the prevocational phases of vocational education.

6. If not a need for further studies, then a need for further study, is our relationship with the problems of a "well-rounded" education. Just exactly, what is "that growth, the need of which is common to all mankind even tho but few attain it," the field of general education? What is our task in helping provide a complete education for the learners? To what extent should we include needs of a non-vocational nature, "to which," quoting Dr. W. F. Stewart, "a contribution can be made thru vocational instruction more effectively than thru any other agency of instruction?"

7. I have not been able to find anything in curriculum researches that relates the course of study to the size of the teacher. Apparently, there is such a thing as a course to fit the teacher, as well as a course to fit the learners. The teacher must have a course he can handle.

8. The fact that apparently, and on the whole, we have done a poor job in following up our studies by succeeding studies, seems to be evidence of need for further studies. We have discontinued our studies when the conclusions were arrived at, as has been pointed out by Dr. Lathrop. Neither we nor others have picked up where we left off. There is need for studies that are continuous. In short, there is need for research programs—individual, departmental, state, national.

9. There are many beliefs and opinions expressed in curriculum researches which, if proved, might help remove some of our curriculum difficulties. Here is a sample statement: "The data presented in the study were not sufficient to warrant a general conclusion, but the author believes..."

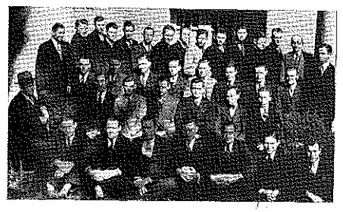
10. Curriculum researches show the need for at least one other further study. Every science rests heavily on its terminology, its system of achieving unmistakable meaning. Our curricular terms have varied meanings.

In conclusion, there is evidence from

Collegiate Chapters of Future Farmers of America

J. B. RUTLAND, State Supervisor
Austin, Texas

"EXPERIENCE is the best teacher." We who are leaders in vocational education in agriculture realize more and more the value of experiences of trainees when (1) guided by a vision for the future and a felt need for the knowledges and skills to be gained and (2) led by a teacher-trainer who has vision, sympathy, resourcefulness, and ability to get down on the level with those under his instruction and who believes in the future of farming and the ability of the trainee to profit by such experiences.



Sam Houston Chapter, Huntsville

The teacher-trainer gives the training to prepare teachers to go into the public schools to train boys in the arts and sciences of farming and to help them to develop into men with leadership, confidence in themselves and their work, ability to be thrifty, scholarship, character, ability to think straight, and other characteristics which will enable them to find their places in a democratic society.

The by-laws of the national organization of Future Farmers of America provide for the organization of collegiate F. F. A. chapters in institutions recognized under the provisions of the national education acts. "Such chapters shall be organized only for the sole purposes of training prospective teachers of vocational agriculture in their duties as advisers of local F. F. A. chapters.

"The training work of collegiate chapters shall be carried on with the regular equipment and paraphernalia of the Future Farmers of America."—National F. F. A. Manual, Page 16.

I am sure none of us would be so careless and shortsighted as to disobey or fail, on our own account, to carry out the desires of the farm boys who have been inspired and are carrying out enthusiastically their training program because of their participation in and the responsibilities assumed by them in building an F. F. A. organization which will provide a more adequate self-training device for boys enrolled in vocational agriculture classes.

The teacher-trainers and others in responsible leadership positions in vocational education in agriculture thruout the United States are to be congratulated on the progress made in developing collegiate chapters of the Future Farmers of America as a self-training

GROWTH OF THE NATIONAL F. F. A. ASSOCIATION—1928-29 thru 1934-35

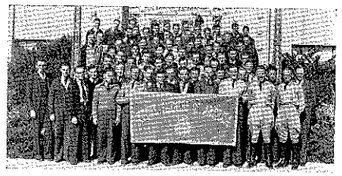
Years	Active State Associations Paying National F. F. A. Dues	Active National F. F. A. Membership
1928-29	21	16,217
1929-30	35	50,604
1930-31	43*	55,818
1931-32	47*	62,638
1932-33	43†	66,948
1933-34	45†	81,192
1934-35	49†	100,399
1935-36	49†	116,871

* Includes Hawaii.
† Includes Hawaii and Puerto Rico.

The growth in number of collegiate F. F. A. chapters is gratifying to those who feel that the collegiate chapters have a definite and important place in the pre-service training of teachers of vocational agriculture.

From the survey of the 48 states and Hawaii and Puerto Rico, it was found that the progress of the F. F. A. program was determined very largely by the attitudes of the administrative officers and teacher-training staff.

In those states where the "State Offices" are very active for the F. F. A.'s, such as in California, Tennessee, North Carolina, Illinois, and Ohio, they have live organizations and seem to be doing outstanding work; however, I am wondering if the local chapter advisers are able to do as much with their chapters as those who have an understanding of the principles and purposes of the organization and have had the leadership of the outstanding men in their state in learning the F. F. A. work. I am also wondering if they do not think of the F. F. A. as something "tacked on" to vocational agriculture just to give them one more thing to do. Are these chapters so organized that they will continue to function after their advisers leave their present locations? There is also a question in my mind as to whether the teacher has not organized his local chapter, paid his chapter's dues (out of his own pocket), taken his contestants to state contests at his personal



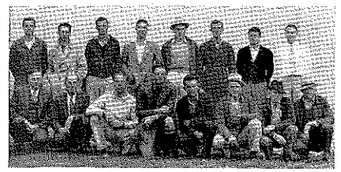
A. and M. Chapter, College Station

expense under pressure of his desire to please his administrating officers. I admire such a man for his co-operation, and perhaps it is the best he can do because he has not been trained in this important phase (the F. F. A.) of his vocational agricultural work.

GROWTH OF STATE F. F. A. ASSOCIATIONS

Regions and States	Collegiate Chapters	Growth in F. F. A. Membership 1930-31	1931-32	1932-33	1933-34	1934-35
NORTH ATLANTIC						
Connecticut	No	0	27	0	0	378
Delaware	No	210	217	244	209	400
Maine	No	246	376	498	576	580
Maryland	No	142	869	772	660	407
Massachusetts	No	0	437	426	383	356
New Hampshire	No	0	67	0	108	151
New Jersey	No	405	470	387	526	477
New York	Yes	2,253	2,620	2,935	3,663	4,290
Ohio	No	3,351	3,689	3,310	4,715	5,567
Pennsylvania	Yes	1,243	1,459	1,908	2,040	2,048
Rhode Island	No	0	0	0	0	0
Vermont	No	86	125	0	340	357
West Virginia	No	702	624	767	839	1,224
CENTRAL						
Illinois	No	4,029	3,724	3,834	4,579	5,315
Indiana	No	287	273	466	659	890
Iowa	No	984	1,100	1,015	1,190	1,409
Kansas	No	1,076	1,348	1,341	1,693	2,191
Kentucky	No	464	672	1,081	1,290	1,637
Michigan	Yes	1,469	1,775	2,035	2,406	3,098
Minnesota	No	428	77	248	1,273	364
Missouri	Yes	1,285	1,533	1,250	1,600	2,333
Nebraska	No	1,008	1,069	1,021	996	1,315
North Dakota	No	0	565	335	642	842
South Dakota	No	418	445	457	568	766
Wisconsin	Yes	1,440	1,715	1,372	1,893	2,549
SOUTHERN						
Alabama	Yes	1,835	2,093	1,375	2,123	2,095
Arkansas	Yes	1,541	2,683	2,058	2,035	2,850
Florida	No	800	1,076	927	1,237	1,352
Georgia	Yes	1,433	1,390	1,544	1,787	3,400
Louisiana	Yes	851	1,694	2,066	2,327	2,650
Mississippi	Yes	0	0	0	0	1,096
North Carolina	No	3,745	3,000	4,150	5,260	5,934
Oklahoma	Yes	2,231	2,089	2,257	2,810	3,142
Puerto Rico	Yes	0	0	1,663	1,792	1,851
South Carolina	No	1,000	1,110	1,000	1,623	1,880
Tennessee	No	3,617	3,596	4,065	4,276	5,277
Texas	Yes	3,980	4,272	4,591	5,556	8,868
Virginia	Yes	3,526	3,856	4,111	4,784	5,238
WESTERN (PACIFIC)						
Arizona	No	296	191	118	113	321
California	No	3,064	3,087	4,021	4,903	5,215
Colorado	No	621	505	315	395	360
Idaho	No	981	949	955	957	1,210
Montana	No	443	719	789	934	1,077
Nevada	No	138	137	135	146	185
New Mexico	No	200	213	230	421	570
Oregon	Yes	1,084	1,090	1,034	1,207	1,283
Utah	Yes	1,248	1,282	1,388	1,518	2,153
Washington	Yes	1,501	1,505	1,385	1,611	2,086

Altho our study does not prove that a collegiate F. F. A. chapter is necessary to the success of the local chapters nor to the success of the state associations, there is a co-ordinated effort of all leaders in vocational education in agriculture, local instructors, and boys in the maintaining and developing of an efficient organization as a self-training device for pupils enrolled in vocational agriculture where there are effective collegiate chapters. There is also a large percent of boy participation and leadership in the program of vocational agriculture. The local adviser has been able to lead his boys to feel that they have a part in the development of the local community, school, and farming. In fact, they claim the program as their program and are delighted to assume leadership responsibilities in developing and carrying out these programs. (A most excellent attitude for learning.)



A. and I. Chapter, Kingsville

They are taught to build a long-time program and to realize that the completion of this year's program is a step toward the development and the accomplishment which contributes to the success of the long-time program. I am wondering if the trainee that has had participation and training in a live collegiate F. F. A. chapter does not realize more fully that he is a teacher of boys rather than of subject matter.

In Texas, teachers of vocational agriculture just out of colleges where active collegiate chapters are maintained are among the first to organize or reorganize their local F. F. A. chapters and participate in district, area, and state contests and meetings with considerable interest and enthusiasm. They seem to "get off" on the year's work in "high."

C. Luker Chapter, Lubbock

I am wondering if we do not find when we make a thoro study of the F. F. A. from the point of view of providing (1) a self-training device for boys enrolled in vocational agriculture; (2) a means of providing boy-teacher planned programs of work; (3) a greater opportunity for boys to get training for developing leadership, co-operative effort, thrift, self-confidence, winning the confidence of others in his work, providing recreational opportunities, char-

Whither Agricultural Education

(Continued from page 132)

apparent interest which the student has in his work and by such things as the neatness and dispatch with which he does his work. The existence of tentative- or scientific-mindedness may be judged by lack of dogmatism in statements, tendency to look on all sides of the question before acting, and tendency to make a number of hypothetical proposals which are thought thru to logical conclusions, before acting on any of them.

Much experimenting with scales and other methods of measuring "general patterns of conduct" is underway. A scale designed to measure attitudes toward "any occupation" has been devised by Remmers and Miller of Purdue University. The scale ranges from items indicating a very favorable attitude toward a vocation such as, "I'd rather work at this occupation than eat—I love to do this work—The most lasting satisfactions in life come to one in this work—This work fascinates me—I wouldn't mind working seven days a week on this job, etc.," to a very unfavorable attitude indicated by such items as, "This vocation can be buried for all I care—The best one can hope for from this occupation is a long life which will end one in the poorhouse—I have a feeling of hatred for this vocation—Under no conditions would I like this work—This is the worst occupation in the country, etc." Scale values have been experimentally determined so that teachers of agriculture may use the device in an attempt to determine a boy's attitude toward such a vocation as truck farming. Cromer and Young have worked out a scale designed to measure the attitude of boys toward the vocation of farming. Elliott has experimented with this scale in an effort to determine its validity. He states: "...it is reasonable to conclude that this scale may be used with considerable confidence that it measures the attitude of vocational agriculture boys toward the vocation of farming."* Teachers are advised to use such scales in an experimental way with full knowledge of their limitations.

In conclusion, the following somewhat dogmatic statements with respect to the direction which measurement of student growth should take in the immediate future are presented: (1) As a rule, let measuring be an integral part of the teaching and justified by its effectiveness in promoting learning. (2) Define goals of teaching objectively when possible, and in terms of pupil ability to be attained. (3) Do not attempt to test large and complicated units, such as "the effectiveness of the supervised practice program of a student," but rather break such large problems into smaller units for purposes of testing. (4) Leave largely to subjective evaluation, for the present, the measurement of such very desirable outcomes of teaching as attitudes, ideals, and other general patterns of conduct. We should encourage technicians to attempt to devise tests of these general patterns of conduct such as tentative-mindedness, and we should use their results experimentally when worked out. (5) We should not attempt to measure too much or too exactly. In many instances, a general impression of progress is all that is necessary for practical purposes. Some of the most valuable outcomes are not measurable and the results of attempting to measure them are not worth the effort. (6) Be sure that the results of evaluation or measurement are used. Measurement is an integral part of modern education because the systematic use of measurement of progress and attainments is a helpful means of increasing attainment. Mr. E. Salter Davies of Kent County, England, remarked to me last summer that much more measuring is done in the schools of America than in England, but much less is done with the results. I think that this is probably a valid criticism of many of our efforts to measure in this country. We do too much measuring for the sake of measuring and we do not use the results of our measurement often enough in modifying our practices.

Massachusetts Chapter Holds Science Exposition

The Essex Chapter of Massachusetts hold a science exposition in the month of November. One hundred twenty-five Future Farmers exhibited in the fields of applied agricultural science. Various collections and displays emphasized the ways in which science makes modern agriculture possible. "Science Marches Hand in Hand With Vocational Agriculture" was the theme of the science committee. The exposition closed with a joint assembly of the agriculture and home economics department.

Wisconsin Continues Radio Program

The Wisconsin Future Farmers, for three and one-half years, have broadcast help to the boys in the field. These broadcasts consist of semi-weekly presentations by local chapters, followed by the Bulletin Board of the Air given by the state adviser. These broadcasts are given over two stations with an

Methods

Report on Teaching Large Unit Disease Control of Economic Plants

DR. C. R. WISEMAN, Teacher Training,
Brookings, South Dakota

Dr. C. R. Wiseman

VOCATIONAL agriculture teachers are not merely responsible for the separate bits and parcels of agricultural information in their lessons, they are responsible for the systematization and integration of this knowledge. The experienced teacher sees the ineffectiveness and sometimes the futility of isolated information or lessons, and to rectify the condition he resorts to a series of related lessons on some significant phase or problem. Such organization of instructional materials is known as a large unit of instruction. The whole course is made up of a number of large units—just as each large unit is made up of a series of related parts or lessons.

The following is a brief report of teaching such a large unit in the Brookings, South Dakota, agricultural department. Ten lessons, comprising the large unit "Disease Control of Economic Plants," were taught consecutively on the school days from March 1st to March 14th to the field crops and soils class of 12 freshman boys. The work was carefully planned, and a rather complete record was made of each day's work. No claim is made to a highly superior job of organizing and presenting the work. This article is a report of how the large unit was actually taught and handled.

Large Unit Pattern or Outline

The new course of study in vocational agriculture in South Dakota has several large units outlined and in mimeographed form. The series of lessons reported therein was a faithful usage of the unit "Disease Control of Economic Plants." This pattern or outline is used for this unit as it is used for other large units.

1. *Specific Objectives*—A list of seven is given.

2. *Assimilative Material*—This is a brief logical outline to serve as a guide to instructors. A brief reference list goes along with this outline.

3. *Approaches to the Unit*—Five suggestions of practical approaches. These are alternatives.

4. *Activities*—These are bona fide activities or things the teacher might well have the class or class members *do* in the course of presenting the teaching units. The list contains 13 items. These are alternative. Probably the teacher an acitivity (No. 4). The mimeograph lists four case problems.

6. The mimeograph sent out also includes a more detailed analysis of two teaching units: one on "Identification and Economic Importance of the Barberry" and the other on "The Life Cycle of Stem Rust and Control Measures." Under each is indicated specific objectives, assimilative materials, illustrative materials, approaches to unit (in some detail), alternative activities. There are also provided a list of culminating activities and a number of non-standardized objective tests.

The following material shows how the large unit was broken up into the smaller units and indicates the sequence used. To conserve space a few are omitted.

Analysis Into Teaching Units
Large Unit—Disease Control of Field Crops

The Unit: The central theme for this plant disease unit is one of the general recognition of such diseases as one of several negative factors or enemies of the farmer resulting in economic losses. The cue for the farmer is to prevent such losses thru prevention or control of the disease. The key to intelligent control is to know the enemy and to know the techniques of handling control measures.

1. "The Farmers Fight on Crop Diseases." (About 30 minutes—introducing the large unit. Interest approach. Indicating what will be taken up for the next several days.)

2. "How can the Farmer Control Smut in Oats and Barley?" (This was really the type study lesson for other lessons of this series. The general title is smut in oats and barley.)

3. "Knowing the Barberry and Losses Due to Rust." (In this unit there was taken up the identification of the barberry plant—very briefly the relation to rust—the damages of rust.)

4. "The Work of Getting Rid of the Barberry." (In this lesson is taken up in some detail the life cycle of the stem rust and the control measures of the barberry—both practical and what the government is doing.)

5. "Barberry and Rust." (Slides shown and discussion by expert of government barberry eradication work.)

6. "How Can Corn Diseases Be Controlled on Your Farm?" (This will take up three or four of the most common and difficult diseases of corn as smut-ear rot and root rot.)

7. "How Can 'Charley and Frank' Prevent and Control Potato Plant Diseases on Their Projects?" (This unit is on diseases of the potato plant, such as Diseases?" (This unit is on diseases of the potato tubers such as scab, rhizoctonia, rots, etc.)

9. "Working Out a Program of Disease Control for the Home Farm." (This is a summarizing lesson and synthesizes the main factors of control brought out in the series of lessons and checks on culminating activities.)

10. "Testing Lesson." (About 30 mintues.) Objective test over large unit.

How the Separate Teaching Units Were Handled

Generally a large unit is presented thru the use of many methods and devices. With the teaching units in question the usual way was as follows, but variations occurred:

1. Arrange for an interest *approach* and get the problem before the class orally, such as mobilizing class experiences. The key questions are developed on the blackboard, and page references of what to study were given.

2. A period of supervised study.

3. A discussion period covering both boy experiences and the readings.

4. Points summarized as class proceeded or at end of discussion.

5. Essential points stated and briefly dictated by teacher, and boys place same in notebooks.

The following shows in outline form the approach and methods, visual means and activities employed for a few of the lessons taught. Omissions here are to save space

VII.

Check-up on Phases Carried Out

II. *Teaching Unit*—"How Can the Farmer Control Smut in Oats and Barley?"

Approach—Instructor experience related, "Walking thru grain field and noticed black dirty heads of grain." What were they?

Methods, Materials, Activities—Exhibited materials as smut in Riker Mounts. Used two simple arithmetic problems. Used bulletin study and discussion. Had formaldehyde specimens. Brief use of job analysis for seed treatment. Brief summary dictated for boys' notebooks.

VII. *Teaching Unit*—"How Can 'Charley and Frank' Control Potato Plant Diseases on Their Projects?"

Approach—Brief review of other crop diseases taken up. Identification and control. Experience question—"How many know any potato diseases when they see them?" What can they do to control possible potato losses. Diagram on board showing potato plant above ground and potatoes below the ground. Division of topic into two parts—diseases of the plant and diseases of tubers. To take up diseases on plants for *today* and diseases on tubers tomorrow.

Methods, Materials, Activities.—Names of plant diseases, description, treatments. Use of two bulletins. Discussion. Mixing of Bordeau spray in sample lot in class. Some job analysis of spray methods. Dictation of brief summary for boys' notebooks.

IX. *Teaching Unit—Final Synthetic Unit*—"Working out a Program of Disease Control for Home Farm"

Approach—Analogy by instructor, "How many of you have ever 'topped out' stack of hay or grain? That is our job for today—to bring to a top this series of lessons on crop diseases."

Methods, Materials, Activities.—Outlining on

home and on projects, such as: look for diseases, make collections of disease specimens, how to influence father to use treatments, etc.

X. *Teaching Unit*—"Objective Tests Over the Large Unit"

Approach—Instructor Comment. "Today we are going to have a little quiz over crop diseases. That will be all right won't it? If you boys can do as well in the test as you have in class I am pretty sure that you will get a pretty good grade. You know when a garage mechanic fixes a car he has to take it out and run it to see if it works. Well, that's the way with this test or quiz. We have been working on this large unit of Diseases of Our Crops for the past ten days and now we are to see how well we know it."

Activities: The test consisted of one page of 36 true-false statements, fourteen single word answer statements, and four enumeration questions with 13 missing elements. By weighing the two latter types this made possible on the test a total of 90 points. The usual activities of administering such a test were carried out. The papers were taken up and corrected for the next day. Distribution of scores and analysis of test elements as to difficulty of items was shown.

Since this was a try-out under actual teaching conditions of the practicability of this large unit outline, more than usual observation and check was made.

1. *Specific Objectives*—A list of seven were in the outline, and these were kept in mind in selecting the daily teaching units. They were also definitely in mind in the synthetic lesson No. 9 and in the testing period No. 10. Objective No. 5, "Appreciation of disease resistance of certain varieties of crops," received least attention and effort and was not represented in the test.

2. *Assimilative Materials*—The materials seemed adequate at all times for the problem undertaken. References were largely from various bulletins.

3. *Approaches*—These are found briefly stated in connection with each lesson. At all times the interest approach appeared to work out satisfactorily.

4. *Activities*—Several activities listed in the mimeograph were used—some several times and others not mentioned were used. Typical of activities are these:

(1) Showed shriveled wheat grains due to rust.

(2) Used barberry chart.

The economic importance of diseases was brought out thru the use of simple arithmetic problems.

Classroom Testing—On the tenth day 35 minutes were allotted to testing. As stated before a deliberate effort was made to make the test items line up with the objectives. Objective No. 5, "Appreciation of disease resistant varieties," had no corresponding test item. The boys performed quite satisfactorily on the test. A complete analysis was made of number correct on each item.

Culminating Activities—We expect our agricultural instruction to culminate in appropriate practical action. However, much of this must be deferred and not very much could be expected within the ten-day period. A seed-treatment demonstration on the farm was planned when the weather was more satisfactory. The snythetic lesson No. 9 brought up the question of recognition and control of diseases on their home farms. The boys were informed and were motivated and ready to go. Two boys had potato projects, others had corn, etc., and they planned to treat and prevent diseases. Tactful ways of influencing fathers at home came up in lesson No. 9. The supervisory visits of the instructor must follow up on the class instruction.

Using the large unit organization brings about a better systematization for the instructor and for the students as well. The use of the problem, the survey, the project, demonstrations, and visual means are all to be used as needed. The use of the large unit organization brings about a better systematization for the instructor and for the students as well.

The "Survey" as a Teaching Device

MALCOLM B. GALBREATH, Teacher,
Webster, New York

THERE are many methods and devices for the teacher to use in the different lessons taught. The selection of the methods and devices to be used depends upon the content to be taught, the training of both the teacher and the group, the facilities available, and many other factors. Most successful lessons employ a combination of several methods and devices rather than the use of any one.

The "survey method" refers to the using of all available information both general and specific that can be secured on a given job under discussion. This information is collected and assembled before the class, often by the group itself. Some of the more common facts can be established by the preparation of a simple table with a heading and conclusions. The information may be obtained by questioning the boys in the class, by a class trip, by individuals of the class each collecting some information and assembling it, or by the teacher collecting the information. Simple facts known to members of the class may be assembled in table form in a few minutes and give definite information that is more easily remembered by the pupils. The preparation of the summary of the information is just as important as the collecting of the information by the survey method. This point is often overlooked—a survey will be taken and the information discussed but not assembled. This leaves general rather than specific impressions in the minds of the boys. Preparation of a properly headed table, if at all possible, that is discussed and from which conclusions are drawn, will be remembered for a longer time by those in the class. This also gives something definite for the pupils' notebooks and carries the "survey method" to completion rather than omitting an important part.

If the lesson under consideration was "Becoming Established in Farming," one of the important points to consider would be the age at which farmers now farming became owners. All the information from surveys that have been taken in the state would be studied and a table made summarizing the data. In order to carry it to completion and to fix the point in the minds of the members of the class, a table of the ages at which their fathers became owners would be prepared. This would not be known in many cases by the members of the class and would necessitate an inquiry on the part of each boy at home. If a more complete table with enough cases to be significant was desired, each boy might be assigned to ask four neighbors the same question. This gives an excellent type of home bered longer than would study of the age at which some group of farmers in a state several hundred miles away became owners of their farms.

Whenever a new job is brought up for consideration in the class, the author has thought that a survey of what is done on their home farms at present or what they know about it, is an excellent way to motivate the boys and to indicate what amount of teaching need be done. Suppose "Feeding the Laying Flock" was the new job. A table would be prepared of the number of hens, kinds of grain fed, kinds of mash fed, amount of grain fed, amount of mash fed, and the time of feeding on the home farm of each member of the class. This would often necessitate weighing a certain container full of feed or checking on other practices followed at home and reporting the facts the next day.

The above examples are only two of many which the author has used during his 10 years of teaching experience but serve to make clear what is meant by the "survey method." It has been found that this plan vitalizes the lessons to both the teacher and the pupils. It gives opportunity for assignments that are different from the usual "pages 17-24 for tomorrow." It helps to keep the work of the class vocational in nature and aids the class to choose, prepare for, enter, and make progress in their vocation of farming. This method is valuable to all three groups which the teacher should reach—the all-day pupils, the part-time pupils, and the adult or evening school group. The survey might consist of a simple table taking a few minutes to prepare, as one extreme; or it might be a complete farm management survey showing the labor income of a representative group of farms, taking several years to work up all the various tables. This method has been found to be valuable and is recommended in whatever detail the teacher can find time to use it.

*Excerpts from a thesis written by the author on "The Collection and Use of Survey Data by Teachers of Agriculture."

Vocational Agriculture Field Day

RALPH E. BURDICK, Teacher,
McConnelsville, Ohio

F. F. A. boys in district number 11 look forward with eagerness to the annual field days which are held every fall at the two test farms that are located in this area. This year, a total of 750 boys and their instructors from 24 different departments made the all-day trip. They heard specialists from Ohio State University and the Ohio Agricultural Experiment Station speak on subjects related to hybrid corn, soil conservation, pasture improvement, poultry, and sheep.

Each boy that attended wrote essays about the trip. Outstanding papers were entered in an essay contest which was sponsored by the instructors in this district.

Students and instructors feel that the time and effort are well worth while. Such a field day provides an opportunity to observe practices in operation as well as to offer the privilege of hear-

Farmer Classes

The Streamlined Program

J. OSCAR BROWN, Instructor,
Webster, Kansas

J. Oscar Brown

THE spotlight is on adult education in evening schools. Fifty-two enrolled members of an adult school at Webster, Kansas, are ready to vote for more — more dramatic play, color, costumes, fun, and the free exercise of the imagination. Their vote for more indicates what can be done in the field of adult education if we streamline our teaching methods and keep pace with industrial progress.

The agricultural evening school at Webster arrived at the conclusion that education in co-operation is the most important factor in the success of co-operatives. A desire for such education, spontaneous with the group, was expressed in the spring of 1936 at the last session of an evening school course on farm management. The group wanted another evening school for the purpose of studying co-operation.

As group leader, I felt unprepared for the task of teaching agricultural co-operation, and so decided to spend the summer in school at Kansas State College. There I could secure the help of Professor A. P. Davidson in the building of an evening school course of study and I could check the subject matter with Professor George Montgomery of the department of agricultural economics. I had the advantage of the helpful criticism made by other members of the class. These experienced vocational teachers voiced a very thought-provoking question, "How are you going to get away from the lecture method?" My classmates pointed out the fact that very little of the subject matter of a course on co-operation could come from the group; the conference method would not work. And the lecture method catches too much wind to compete successfully with other attractions in a modern community. Truly enough, my problem was to find a way to present brand new subject matter to busy farmers without lecturing to them.

To help solve this problem, we reviewed many sources of information until we had a long list of teaching methods and devices, such as: the open forum, the informal discussion, the demonstration, the symposium, the panel discussion, movies and slides, charts and mimeographed sheets. At last we stumbled upon the idea of the dramatization of subject matter. Combining dramatic play with the panel discussion and the use of colorful charts and following the spread of the Rochdale system to other countries—the story of the Rochdale method after 1844

tion, "How are you going to get away from the lecture method?"

The dramatization of a lesson was reasonably simple. It was just a matter of composing a short play and duplicating it on the hectograph. My course of study outlined certain objectives and suggested good questions for informal discussion.

Co-operation in Agriculture

I. Learning some facts which Webster did not know about co-operation
   1. Definition of co-operation
   2. Current achievement in co-operation
   3. Possible function of education in the co-operative way of solving economic problems
II. Investigating the efforts which have been made at co-operation
   1. Searching by trial and error for a successful co-operative method
   2. The story of co-operation before 1844
III. Appraising the value of a particular form of co-operation—co-operative marketing
   1. A good idea, if some one would just try it out
   2. Group interested in it is too small to allow control of all factors
   3. The story of co-operative marketing
IV. Studying an effort that succeeded, the Rochdale system
   1. Methods used at Rochdale and the reasons for their origin
   2. Modern uses of the Rochdale principles
V. Following the spread of the Rochdale system to other countries—the story of the Rochdale method after 1844
   1. Growth of the co-operative method in England
   2. Use made of the system in other countries
VI. Learning the social, economic, and legal foundations for the organization of co-operatives
VII. Studying the various forms of co-operative organizations
VIII. Determining the causes of success and failure in co-operation
   1. Factors of success
   2. Factors of failure
IX. Analyzing the relationships between co-operatives and other established institutions, and appraising the factors of social and economic progress
   1. Relationship to government
   2. Relationship to private industry
   3. Relationship to education
   4. Relationship to other factors of progress
X. Looking ahead in co-operation
   1. Review of previous discussions
   2. Appraisal of the co-operative method
   3. What we should do to learn more about co-operation

This outline was the starting point for the composition of the play. Next we needed a plot about which we could weave the subject matter to be presented. The plot was necessary from the standpoint of dramatic appeal. But a mock trial *B. I. G. Business* vs. *W. E. Co-operate*, or a romance from the story of the Rochdale Pioneers would answer the purpose. A drama does not have to have a very complex plot in order to excel a lecture.

The following more "streamlined" announcement was sent out after the official announcement. It gives the date, place, and time of each meeting. Because of limited space the first three programs are given to illustrate the type of announcement.

TEN COMMUNITY PROGRAMS
at
The Webster Rural High School
Webster, Kansas

Subject:
"CO-OPERATION IN AGRICULTURE"

Includes:
MUSIC! DRAMA! ADULT EDUCATION!
AND FUN!
7:45 P. M.
See Dates Below

October 14: Musical program by the Lambert Brothers. Group singing by all. Learning some facts which Webster did not know about co-operation.
Reading: "Napoleon's Farewell Ode to His Grandmother."—Felice Garcia. Finding the millionaires in the house.
October 16: Behold the teakettle! Tho up to its neck in hot water, yet it singeth! Do thou likewise, Miss Beadle will lead you. Investigating the past efforts which have been made at co-operation. Foot race for men (Older men have better chance than usual to win).
October 21: Musical program—Mr. Ed Anderson in charge. Also group singing. Appraising the value of a particular form of co-operation—Marketing Demonstration—"How to Move a Table" by the Future Farmers of America. "Eye Test." (Prize—best eye).
*Roehl—Farm Mechanics.

The dramatized programs were well received by the Webster community. We all liked the colorful costumes. Noah Webster was proud of himself. The men and women who dressed up in the quaint old fashions of the Scandanavian countries, to tell us of European co-op styles and to demonstrate co-operation in folk dancing, had a lot of fun. Needless to

say, the agriculture teacher had some qualified assistants. But every high school should have a dramatic specialist.

No one was better impressed with the worth of the performance than the actor himself. That is why I liked the plan of having a large cast. Moreover, into the lines of these actors I could weave brand new subject matter. Thus it was possible to present new material in an interesting manner. And, believe it or not, I had 10 to 15 of my pupils diligently "studying" their "lessons"—to the point of memorizing them several days before the "recitation."

And now what do these men and women think of me after I have made them work so hard? When I meet them, I feel a stronger bond of friendship because of their participation in the programs. The fact is they liked the programs. They will remember for a long time their impersonation of Uncle Sam, Iman Inventor, and old Miles Ashworth, hero of Waterloo.

Along with the dramatic features, we made free use of prepared discussions, community singing of co-op songs, playing of co-op games as well as the other teaching methods and devices already mentioned. Among these were 46 colorful charts, some of which were featured prominently in the dramatized lessons. For instance, chart number 24, figure 1, was used in a mock trial as "Co-operative Exhibit A" and was a center of interest for half an hour. Other charts were introduced as parts of social games at one session and then used as interesting and instructive wall displays at subsequent sessions.

These wall displays drew favorable comment from well-known co-operative officials who visited our school. Soon the news of our large attendance and interesting programs was carried to other states thru. the publications of the Consumers' Co-operative Association, central office at North Kansas City, Missouri. Now there seems to be a demand for information concerning our method of modernizing the adult school.

When an evening school attracts such a large crowd as to become a typical community meeting, a standardized program like the following will please more people than would be possible to please with a less spicy schedule:

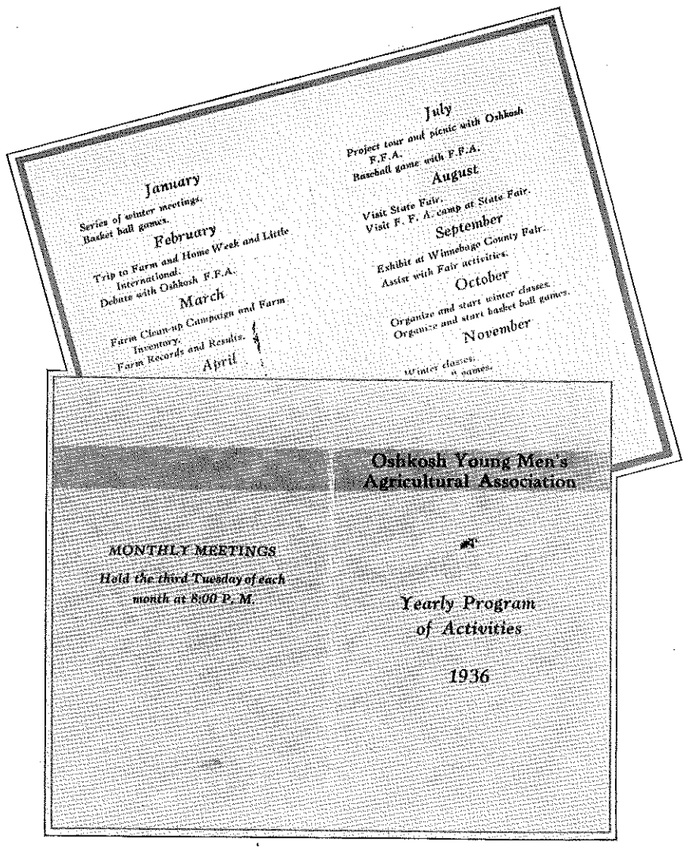
1. 15 minutes of real art in the form of music. Musicians should be notified weeks ahead. This plan will assure the group leader that the crowd will be on time.
2. 15 minutes of community singing, led by a good voice. If the songs are well chosen or well written for the occasion, they will be worth the time; they will focus group attention on the subject up for discussion. Special songs should be mimeographed for each particular course.
3. 45 minutes of dramatized presentation of subject matter. This plan is more effective than the presentation of new subject matter by means of a lecture. Besides, the actors who learn the parts will be group members who have studied their lessons; they will put life into the informal discussion which comes later in the program.
4. 30 minutes for informal discussion. It is best for the group leader not to start this discussion. A comparatively soon as the curtain is run down on the stage performance, start an animated conversation with a person far enough from him to make full voice necessary. Let the conversation be in regard to the high point in the dramatic feature. The group leader comes from the stage and sits a moment to listen to the conversation which is already started. Then he joins the conversation. The discussion is now properly started; it is *informal*. The leader may rise when necessary to control the group.
5. 15 minutes for fun.

But as we stated at the beginning, the homefolk are calling for more—drama, fun, information on co-operation—more programs. Since the close of our evening school, we have had other meetings which were initiated by those most

(Continued on page 144)

Progressively Continuing Agriculture Education

R. W. GREGORY, Specialist Part-Time and Evening Schools,
Washington, D. C.



The old conception of a standard part-time class is rapidly passing out of the picture. There was a time when to meet a class intensively for a short specified period fulfilled all of the requirements, both professional and administrative, for part-time education in vocational agriculture. Part-time really meant part-time and only a very small part at that.

Today we have the growing conviction that part-time education should be a continuing education, that once gram and that while it is certainly flexible, it is also permanent and progressive. Those taking advantage of what opportunities the program presents for learning may come and go (come in at the bottom, go out at the top), but the program "goes on forever."

Forward looking teachers tend to give stability and validity to what they are doing for young men, out-of-school and on farms, many times by some such device as shown above. Oshkosh, Wisconsin, has had, for several years, a progres-

Farm Mechanics

Principles Which Have Improved My Shop Program

J. ODIN CLAY, Teacher,
Gladys, Virginia

WHAT can we teach a boy that is more practical than good shop work? Regardless of the boy's selection of any type of farming in his farmer-training program, the need for some kind of shop work will present itself during the year. His experience will be valuable even if he should not become a farmer. This need should be met by having a definitely planned procedure and a well equipped farm shop.

Fitting the Shop Program Into the Schedule. A most logical time for the shop program is just after the class has completed its study of record keeping and supervised farm practice planning. At this time the boy's farming program is clear in his mind and he may more closely correlate his shop work with his farm enterprises. A definite period of time for the program should be decided upon and announcement made to the classes. From five to six weeks is usually long enough for the class as a whole.

Getting and Planning Good Jobs. Each boy should make a survey of his home farm for needed shop jobs. From this survey, the boy selects one job of major importance for his shop work and some minor ones. The job should be connected with his farm program, if possible, or if such is not possible, he should then make something for the farm home.

After this selection has been made the boy should draw or sketch his plan, giving dimensions and a brief description of the job. After the plan is approved, he should make out a bill of material, or if it is a repair job, have him make out a list of needed repairs and material. After checking this, the boy is ready for work if the necessary finances are in sight to cover all costs.

Instruction in the Use and Care of Equipment. When the boys start work on the farm jobs selected is a most appropriate time in which to teach the make-up, care, and use of each piece of equipment that will be used on the job. Thru demonstration by teacher or skilled students, the pupils can be prepared to practice individually the use of each tool. While at this practice each boy must be watched closely and his position, movement, or practice corrected.

Doing the Job. The members of the classes are divided into pairs. The pair finishes the job of one before they start on the job of the other. Experience of both is broadened and the work done more easily. Each pair should be assigned a place in the shop room to store their material. Books are checked to students for each daily period and at the end of the period they must check them back in, placing them in the cabinets before the class is dismissed.

Each piece of lumber or material used must be marked by the students and boy's shop problem, the individual must study his plan and after such study inform the instructor as to what is to be done next. After going into detail about what is to be done next and the best way to do it, the boy should be observed very closely to see that he makes the proper beginning. Some help in starting parts of some jobs may be necessary, but keep such help to a minimum.

When any part of a job is found to be poorly or improperly done the boy should repeat his task until it is done correctly. Encouragement for the boy in his progress is advisable. Quality at all times must be emphasized. The success of the individual job is, first of all, dependent on a complete and clearly drawn plan by the boy; second, upon tools being in good condition; and finally upon the skill of the boy.

During the period the instructor should be constantly in motion, moving from one job to another checking up the work, explaining, and demonstrating. He should have the boys feel that he is busy and is at work as much as they.

Closing the Program. Whenever a job is completed, the boy should be allowed to take it home as soon as he wishes, but a job should not be allowed to go until it is satisfactorily completed. Jobs that are not completed when the shop time closes may be held over and completed by the boy during vacant class periods.

Two days at the end of the period should be reserved for repairing, sharpening, and oiling all department equipment, and for cleaning up the shop. All equipment should be left in perfect condition and in its designated place. All trash should be cleaned out and burned. The shop should be "open for inspection" at all times.

Grading. A standard scoring system for shop work should be formulated. A perfect score or grade for both planning and doing each shop job can be assigned in the supervised farm practice program. The grade or score given would depend upon the nearness to which it approaches a perfect job.

A week is a good interval on which to give progress grades. These weekly grades may be averaged and this average having equal weight with a grade given the completed job. The average of these two will give the final grade for doing the job. Such a diagram or table may be kept on the shop blackboard so all students may see their progress.

General Weakness to Overcome. Quite often the boys lack the perceptive ability to plan jobs. Developing such ability is often difficult and requires considerable time and effort by the instructor. However, actually making plans and doing the job is a good way to develop this ability.

Securing additional equipment is a problem to be faced constantly. Deciding what equipment is needed most tor will have to work out according to his particular situation.

Creating Pupil Pride in the School Shop. It is a decided advantage to let the boys make all of the shop equipment that they can, such as work benches, forge, saw horses, and the like. Making these things gives them a personal feeling toward the equipment. Perfect order and constant improvement make the pupils feel proud of the shop

Make Farm Mechanics Educational

M. A. SHARP, Department of Agricultural Engineering, Iowa State College, Ames

LABORATORY work is of most value when its chief function is to enable a pupil to understand and apply a theory previously studied. Farm mechanics should require just as much concentration and mental effort by the pupil as any other school subject. Emphasis should be placed upon the scientific principles involved in the methods and procedures followed, rather than upon getting a certain amount of work done. If the farm-mechanics laboratory time is to be merely a physical training period, the boys would get more benefit both physically and mentally from organized athletics. It is very encouraging to note the efforts being made by many teachers to make farm mechanics educational.

There is no other subject in high school comparable to farm mechanics as a source of mental development for freshmen. In all other subjects they have had to follow a certain set outline, with very little opportunity for using their mental ability except for temporary memorization. Here is the boy's first chance to study theories and then try them. Here is his first chance to study and test ideas of his own. Here is his first opportunity to actually see the objects under discussion instead of trying to visualize them in the abstract. Will the teacher help the boy to make the most of the situation or will he deprive the pupil of his chance to develop his mental ability by forcing him to do a certain amount of manual labor each week, with little or no mental effort?

For many years most of our teachers have measured the efficiency of their teaching by the number of pieces of work turned out by their classes. Very little mental effort has been required, which may account for the attitude of many school officials that the shop is the place to dump all the pupils who cannot pass their other subjects.

Modern education requires mental development, and no subject which does not contribute measurably to this end should be allowed in the curriculum. Perhaps that is why shop work is being dropped in many of our schools. Briefly stated, the situation is this: "More brains and less bench, or no shops." What are

The Model Farm Shop

S. F. WILHOIT, Teacher,
Dadeville, Missouri

Getting boys to do necessary repair work at home, to reap a carry over, is our problem. If a boy has a shop of his own handiwork he will be proud of it and enjoy working in it. Wanting to work in it will cause shop work or needed repair work to actually be done. Knowing how to do something well and having the necessary equipment generally are all that are necessary to make one like to do a thing. But how to get the boy to establish a farm shop at home, or put an old one shipshape, is the connecting link between teaching shop skills and getting the boy to use these skills at home. Is it a joiner? Not entirely. I find the model farm shop the best means to that end.

By a model farm shop I mean just this—establish one in the end of the vocational farm shop building. And a very interesting and attractive addition it makes to the standard farm shop arrangement. It consists of arranging one end of the shop room—about 15 by 26 feet of it, exactly as a practical, convenient farm shop should be arranged, with reference to utility of both space and motion in working. In fact it can be so arranged that it would put the best arranged model kitchens to shame, for convenience. Further, it requires but one model farm shop work bench and tool panel in addition to the regular equipment needed in the shop. How? By arranging the units of shop equipment into the fashioning of the model shop. Example: the side delivery lumber rack, forge equipment, nail and screw cabinet, scrap rack, forge stock rack, grinding wheel, post drill, paint cabinet, etc. are necessary parts of the shop equipment anyway so they merely are arranged for greatest convenience in a centralized area which becomes a model of a farm shop.

But of what value is such a model farm shop? It is a visual, usable example of the home shop properly planned and equipped, before the boys all thru the year. They learn it detail by detail, by eye and hand. They take a home farm shop minor project and start building themselves a model work bench like the one in the "model shop" which was built by some other boy. "He did it, I can do it," they reason. Thus this model shop idea works wonders getting home shops established. For truly it is a pleasure to go to the heart of the model shop and start a repair job. Each tool at finger-tip reach—be it forge, post drill, emery wheel, metal vice, mechanical tools, carpentry tools, or stock.

I have established such model shops and really they are all and more than claimed. But this may I ask, instructors, please banish thought of making use of this idea unless you are fully convinced and will put it across to the last detail. Rather would I have not published this than have some half-hearted starts made to be never completely carried out—bound for failure and censure.

* * * *

Farm Mechanics

DALE G. MULLINS, Teacher,
Phoenix, Arizona

THE important part that farm mechanics plays in our modern agricultural high school curriculum is now clearly recognized. The object of the course in farm mechanics is not to make skilled carpenters, blacksmiths, harness-makers, or sheet metal workers, but on the contrary, to train farmers.

It is beyond the scope of an individual life to expect the farmer to be a business man, scientist, veterinarian, plant pathologist, and research specialist, not to mention mechanic. Yet some knowledge of all these are important.

The agricultural departments of the high schools have been seriously handicapped for years because of the guidance advice given to students of the lower mental brackets. They have been sent to us, and we, having less to work with, were not able to turn out the agriculture leaders it is our duty to develop.

Now with a period of greater integration and co-operation existing, as well as an understanding of the requisites of success in farming, we are receiving more capable students.

A knowledge of care and repair of tools may save a farmer many dollars every year, as well as prevent great losses of time, which is very costly during rush seasons. How does the average farmer behave? Does he bring in his machinery and equipment, and carefully check it over when he is thru with it for the year? Does he repair it then, so it will be ready to use next season, or does he leave it out in the weather unrepaired until the last minute when he needs it in a hurry and time is pressing? Does he hang his harness up in the weather? Does he throw down his hoe where he finished his last row of corn or cotton, and leave it there for the weeds to grow up and hide so that he must go to town and buy a new one next time there is hoeing to be done? Many farmers do just this.

HABITS and attitudes may be developed in a good course in farm mechanics that will tend to remedy much of the waste, loss, and rapid deterioration of equipment. In the farm shop, wall tool cabinets may be used with silhouettes painted where the tools hang, and boys assigned the duty of returning the tools. Credit may also be given for the developing of a shop at home with a place for everything and everything in its place.

The equipment of the boys' home shop need not be expensive. He can build his bench and tool cabinet in the farm shop. He can find plenty of old tool heads on the average farm, and these may be brought in and rehandled in the shop. Most every boy can find an old rusty saw that has been discarded probably because it was too dull for usefulness. This offers a very good practical job, which may take some time to teach but, if mastered, may be very useful. The boy may also make a handle, or buy one without the holes drilled in it, and fit it himself for small cost. The reconditioning and sharpening of this old saw give an excellent situation for training the boys to work

brick, and cement. For a blower, some of them rigged up an old hand emery grinder, running a belt from the stone to drive an old automobile fan. For an anvil, a short piece of railroad iron may be mounted on a suitable handmade stand at convenient height.*

The building of the boy's home shop, or the improvement of the present farm tool shed, may be said to be an important objective of the course. Other objectives are the training in care and sharpening of tools; the fundamental tool operations; the repairing of broken equipment; and the building of new equipment.

Frequently agriculture teachers are heard to say—"I dont know what to do about my farm mechanics classes. I can't seem to get the boys interested. They won't bring in anything on which to work." This is a recognized problem. A trip to the boy's farm by the teacher may solve it. There are few farms one could visit where work to be done in a farm shop is not much in evidence. If it cannot be solved in this way then interest is lacking. The stimulating of interest also presents a very difficult problem. It may require personal contact. The instructor will have to get thoroly acquainted with the boy. He must learn his likes and dislikes. This may open up the proper avenue of approach. Boys of high school age naturally have a desire to make something that they themselves can use. They fail to see the value of building articles and equipment that is intended for general farm or household use. The instructor, having become thoroly familiar with this period of mental development thru which the high school boy is passing, may suggest just the right article. A bridle, hackamore, martingale, bit, spurs, or quirt certainly could not fail to appeal to a boy who has a pony and a desire to raise cattle. If a boy, because of good teaching methods, has developed a desirable project in which he is interested, he may be encouraged to build equipment for his own enterprise. Sometimes even this is difficult to accomplish with the younger boys; however, the older ones grasp the idea quite readily. One might counter by saying that all the boys are too young. What is one to do then in such a quandary?

The answer to this problem may be found by the introduction into the class of a few older boys, who have registered for the specific purpose of building equipment for their projects. These boys may be out of school; they may be actively engaged in farming; they may be part-time students; or they may come in to work for just a few days or weeks, and they may not even be registered. At the present writing there are boys in the farm mechanics classes at Phoenix Union High School who are doing just this. The farm mechanics class is organized and equipped for the purpose of educating farm youth, of course, and to do the greatest good possible for the community.

People, like animals, are largely followers, and boys are no exception. It is much easier and infinitely more pleasant to lead than to drive. The instructor, with the aid of a few interested older boys, can change the attitude of an entire class in a remarkably short time.

Future Farmers of America

Chapter House Dedicated

IRWIN CLEMENT, Reporter,
Toyack F. F. A. Chapter,
Roosevelt, Utah

ON NOVEMBER 7, dedication ceremonies were held for the chapter house of the Toyack Chapter of Future Farmers of America. This is probably the first and only Future Farmer chapter house of its kind in America.

The dedication services were attended by school officials of Duchesne County, members of the Toyack Chapter, visiting agriculture teachers, guests from the state organizations, and a number of parents and representatives of various organizations who co-operated in various ways in the construction of the chapter house.

Harvey Natches, honorary Indian Chief of the Toyack Chapter, led the procession from the high school to the entrance of the chapter house where he welcomed the guests in his native tongue. The seal on the door was broken by Dr. W. T. Spanton, Federal Agent of the United States Office of Education, who also made the principal address.

Doctor Spanton reviewed the growth of the national association of Future Farmers of America thru the various state organizations and local chapters. He stated that the success of this organization is due to the fact that it is a functioning organization with a definite program for member participation. "It is an organization of, by, and for the farm boys," said Doctor Spanton. "It has a program in educational supervised farming, economic, recreational, and leadership activities," he said. He also emphasized the need of a scientific and practical training program in agriculture specifically adapted to meet the needs of the masses of farm boys thruout the country.

Walter E. Atwood, agriculture instructor, enumerated some of the special events incident to the planning and construction of the chapter house. This building is unique in that it is a house or home for Future Farmers, built by Future Farmers. The building is located on the grounds of the Roosevelt High School. Its erection was conceived by the Future Farmers while on a trip to Chicago. Ninety-one loads of rock were hauled a distance of 18 miles and hand chipped, by chapter members, ready to be laid up in the structure. To supply the 17,000 feet of lumber required in the building of the house, the Toyack Future Farmers cut logs in the forest on Moby Mountain, 50 miles to the north. These logs were sawed on a 50 percent share basis. The sawing expense was therefore paid by supplying additional logs. The trees were "logged-up" by the boys and hauled by team

Other building material, such as gravel, cement, lime, and steel, was gathered by members of the chapter from different parts of the vast Uintah Basin. Some of the plastering sand was hauled as far as 30 miles. The building is lined inside with adobe bricks made by members in their own mud mill. The whole inside is plastered with a new type of plaster finish. The reinforced steel used in the concrete foundation and wall cap was selected from abandoned farm implements and machinery.

A unique feature of the chapter house is the brick fireplace. One brick in this mantle was donated by the state association of nearly every state in the United States and by nearly every Future Farmer chapter in Utah. Each brick is properly identified by the name of the doner in carved letters and is made of stone characteristic of the locality from which it came. The bricks in this fireplace were laid up by the father of the first president of the Toyack Chapter.

The chapter house has all the modern conveniences of the day. It has indirect lighting, a large set of library shelves, disappearing blackboards, seating capacity for all chapter members, an electric stove for serving banquets. Oak tables, bulletin filing cases, and chapter cabinets are part of the furniture. The building is large enough to hold all the classwork of both agriculture and farm mechanics. Commodious quarters make it possible to house many of the chapter members overnight following a banquet in winter weather.

A hot-air furnace provides a well-heated home and laboratory as a basis for an efficient vocational agricultural program and encouragement for the development of leadership, and co-operative effort among the boys of this young farmers' organization.

Editor's Note: The Toyack Chapter of Roosevelt, Utah, was awarded first place in the National Chapter Contest in 1934.

North Dakota Sets Up Summer Camp

IN KEEPING with a growing practice in the country, Future Farmer representatives from the various schools of North Dakota held their annual encampment at Minot Fair Grounds during the state fair. The activities included recreation, judging livestock, and the exhibiting of farm products. Clarence Bengsgaard, state president, reviewed the state F.F.A. program.

Arkansas Builds Leadership Training Camp

The Arkansas Association of F. F. A. is investing $40,000 in a state recreation and leadership training camp. This project is a supervised practice project designed to develop abilities, attitudes

Chapter Poultry Pool

C. A. CAZALY, Adviser,
Delano, California

Members of the Delano Chapter of the California Future Farmers of America last year organized a poultry pool to purchase, fatten, and market roasters weighing three to five pounds. A pool was necessary to handle large numbers of birds and thus give the advantage of quantity purchasing and selling, both of which increased the margin of profit.

Six boys formed a poultry pool—electing a board of directors who drew up the following regulations: First, each member and his parent must sign a note for the amount of money to be borrowed. Second, a reserve fund was established to insure the pool against loss in shipping, individual loss, and any unforeseen accidents, this fund to be accrued by charging one cent extra for each chick, five to ten cents extra on feed purchased, and from shipping fees which were set at one and one-half cents per pound to San Francisco, Los Angeles, or places of equal distance. Third, all members must sell all their birds thru the pool or be penalized one and one-half cents per pound.

With these regulations agreed to by all the members, the poultry pool borrowed $2,600 from the Bakersfield Production Credit Association, built five open-air brooder houses and five electric brooders, purchased 5,150 baby chicks, one half Barred Rocks and the other half Rhode Island Reds. Mash was purchased in ton lots at a reduction; scratch was purchased from farmers in the field. All birds when fattened were sold to the highest bidder, whether it was in San Francisco, Los Angeles, Santa Barbara, Bakersfield, or Delano.

The average price received for all the birds was 21 cents per pounds; the average selling weight was three and three-quarter pounds. Loans were paid off and all bills settled with the net income per boy varying from $14 to $231, and a reserve in our pool of $185.

Increasing Treasury Funds

W. LYLE MOWLDS, State Supervisor,
Dover, Delaware

ONE of the best methods employed by the F.F.A. boys in Delaware to increase their chapter funds has been the raising of broilers. This year no less than five of the 15 chapters have considerably increased not only their finances but have gained much skill in and knowledge of broiler raising.

Delaware is one of the largest broiler states in the Union, one section of the state raising 100,000,000 broilers. At one school, the boys had over 25,000

schools, the losses for the past winter and spring amounted to only one-half of one percent. This outstanding feat was brought about primarily thru proper selection of stock, sanitation, and many hours of hard labor on the part of the boys. In the long run, however, the boys have found that it paid them an average profit of 24 cents per bird.

The chapters had various methods of selecting a place to house the birds, the three following ones being used:

1. At the home of a member
2. On the school ground (portable building)
3. In a poultry house owned by the vocational agriculture teacher.

Other means that have been used to raise funds are:

1. Rummage sales
2. Bakes
3. Moving picture shows
4. Sale of magazines and pencils
5. Seed selling
6. Tomato and cabbage plants (raised in school hotbeds)
7. Sale of eggs from class poultry project.

Money received was used by the boys in taking summer tours and camping trips, paying expenses to national and state conventions, and buying state farmer keys for local members who received the degree.

During the past year, the F.F.A. treasuries have shown a decided improvement directly proportional to the efforts put forth by the boys.

Chapter Loan Fund

D. A. LONGENBAUGH, Adviser,
Twin Falls, Idaho

ONE of the most pertinent problems that confronts the adviser of a Future Farmer chapter is finances. The Twin Falls, Idaho, Future Farmers have established a procedure of accumulating and handling funds that is effective in giving the boys training in financial matters and in improving the financial rating of the organization and its members.

The chapter assets were first established while Mr. C. L. Mink was adviser, largely thru conducting chapter crop projects and the winning of second place award in the National F. F. A. chapter contest. A chapter thrift bank was established, and a large share of chapter funds was delegated to it. The depository features of the thrift bank did not work out very well, because most members preferred to carry their own accounts in one of the local banking institutions. Student deposits, by six depositors, amounted to but $6 at the end of the one and one-half year period during which the thrift bank operated.

The old thrift bank was discontinued in November, 1935, and a chapter loan fund was established. This name is, perhaps, misleading because the loan fund board of directors makes few cash loans. Local financial institutions have expressed a desire to extend aid to Future Farmers who need it and who have a set-up that justifies borrowing. During the past year they have made

paid. These loans were used for the purchase of 57 feeder steers, 10 breeding ewes, and one bred sow. At a meeting in February, the boys who make up the loan fund board of directors voted to discontinue the policy of making cash loans to any great extent, because they felt that each Future Farmer should learn to use and establish a financial reputation with the local commercial financial institutions. However, the loan fund board of directors does function in an advisory capacity in regard to loans by the Production Credit Association, since the board must O. K. all student loans. The Loan fund holds $35 worth of "B" class stock in the local Production Credit Association in order that members can obtain loans. Possibly it would be well if the board acted upon bank loans also, but this has not been done.

The reader may well ask what the function of our loan fund is if it is not to make cash loans. The chief services that it performs are: (1) It enables boys without good credit rating to establish a better financial standing, and, at the same time, conduct profitable and worth-while programs of supervised farming. (2) It promotes chapter enterprises that result in increasing the chapter loan fund, increases the scope of supervised farming activities, and establishes practices that are of value to the community.

The directors decided that in cases where farm families have such a poor credit rating that they cannot get aid from the banks of the Production Credit Association, the function of the Future Farmer chapter and loan fund should not be to assume a risk that lending agencies will not assume but should be to help the student of vocational agriculture from such a family to establish his own credit by providing the boy with facilities for worth-while project work and encourage him to make proper investment of earnings by allowing him to grow crops or livestock on shares. During the past year three boys were provided with 42 head of feeder pigs and the feed with which to fatten them for market. Three other boys were provided with registered bred sows to be paid for by returning the two choice pigs from the litter to the Future Farmers, who expect to maintain about ten gilts as chapter property to be let out on contract to members. Three other boys received Production Credit Association loans, made possible thru chapter ownership of Production Credit Association "B" class stock. A few small emergency cash loans were made for feed, beet labor, onion seed, and the like, where the loan was a fraction of the value of the product, and the money was needed for a very short time. The boys plan to purchase some registered sheep to let out to members on a share contract.

The chapter funds are kept in two accounts: one, a checking account of $125 in charge of the treasurer, who collects dues and handles receipts from carnival stands, exhibits, etc., and the other, a savings account of $400 in charge of the secretary-treasurer of the loan fund board of directors.

The total chapter income during the

of net profit from Beano stand operated jointly by the Twin Falls Future Farmers and the Pomona Grange at the county fair—$93. (3) Stand at school carnival—$8. (4) Chapter's share of profit from feeding 42 hogs for market—$35. (5) Sales of hogs from sows out on contract—$30. (6) Chapter exhibit at county fair—$10.

In addition to the above, $12 was received from the sale of onion seed from a former chapter project. A seven dollar A. A. A. adjustment payment was received for a former chapter beet project. The chapter received some gifts, including $10 given by the Chamber of Commerce to help pay the expenses of sending the dairy judging team to Kansas City, and a champion fat lamb donated to the chapter by Mr. Beach of the Idaho Department Store. The lamb was roasted and served at the annual fathers and sons banquet.

The matter of chapter financial records cannot be too carefully handled. Each of the Twin Falls Chapter accounts are kept in regulation ledgers. A complete file of statements, contracts, check book stubs, notes, minutes, financial statements, and bills payable is kept for each account in a filing case used for that purpose alone. Even so the treasurer had considerable difficulty in balancing his books when making his semi-annual report. The boys are now working on their books in preparation for an audit by a certified public accountant, a measure suggested by the assistant state adviser for the protection of the boys who have charge of the funds and the chapter adviser, who may be severely criticised if the use of funds is questioned. One of the local banks has offered the services of one of their accountants for this audit. Other schools may be able to get their books audited at the time the school audit is made.

Twin Falls students are very much interested in their loan fund and are willing to co-operate in any way to increase its amount and services. They are very "Scotch" about expenditures from the fund, as demonstrated by their vote not to buy a radio from the funds even tho the chapter adviser voted with the minority.

A chapter trust fund, loan fund, investment corporation, or whatever it may be called, provides one of the best means any agriculture teacher may use to replace most of his unsatisfactory programs of supervised farming with larger, more worth-while programs, and, at the same time, teach some of the essentials of credit, banking, and thrift that the boys may otherwise never learn, or learn only thru costly experience.

The constitution and by-laws for the loan fund have proved quite satisfactory for our chapter except that they should provide for an audit by a competent accountant and should define in some way the limits of the use of funds for purchase of livestock to be put out to members on contracts.

Editor's Note: Space did not permit the inclusion of constitution and by-laws and contract forms, but no doubt these may be obtained by writing the chapter.

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The destiny of any nation at any

Evidences from Curriculum Researches

(Continued from page 133)

that our curriculum difficulties are becoming more numerous and more complex. Once upon a time, when education was synonymous with erudition and when the amount of information was not vast, there were no curriculum difficulties. Even when the amount of information became larger, the curriculum set-up was simple, the problems few. Most of us have had to cut loose from our belief in education as erudition. That not all of us have done so is proved by our continuing to attempt to measure learning in terms of information. (Some of us are going to have to throw away some of the things we believe if we continue to believe the other things we believe.) Somewhere some of us got the idea that training in vocational agriculture was development of manipulative abilities. Now, most of us see, or think we see, the necessity that our product possess many other abilities, some of which determine the success of the farmer far more than do manipulative abilities. And we have come to see that attitudes are tremendously important. With our enlarged concept of abilities, with our attempt to develop desirable attitudes in the learners, with our coming to see that information should contribute to abilities and attitudes, with our recognizing individual differences in learners and teachers, with the increased instead of decreased necessity for general education and our integrating vocational agriculture with it—we really *have* some curriculum difficulties. And every difficulty presents a need for study or need for application and dissemination of studies.

As a parting shot: We must somehow see the whole setup and its background. As Walter Pitkin says in the December, 1936, *Rotarian*, "It's like the setup of pieces in a chess game. Seeing one or two pieces won't help you. Seeing them all merely with an eye to your one next move won't help you. The chess champion sees series of movies—six, ten, or more." Curriculum building is much more complex than chess. In curriculum construction the pieces themselves move as you look at them. They move even while you are not looking at them. And they move after you think you have won the game. The game must always be in the process of being won.

Montana Exhibits Fat Lambs

The Future Farmers of Montana exhibited 100 fat lambs at the Montana Wool Growers Fat Lamb Show during the month of January.

California Adopts Loan Plan

The Brawley Chapter of California has developed a system for loaning a purebred brood sow, semi-annually, with the Future Farmer boy having the outstanding hog project. In this enterprise, the local Chamber of Commerce is assisting. In making the award, consideration is given to size of project, opportunities for development, accuracy and completeness of record book, improved farm practices, and efficiency

The Streamlined Program

(Continued from page 139)

interested. But these programs were for the sole purpose of talking business in regard to the things we had studied. The local teacher had other things to do and the work had to be delegated to local leadership, leaving the department of vocational agriculture as a parent organization, still sympathetic and ready to help when its offspring is in need of Dad's advice.

The Webster department is going to look into the possibilities of using "The Streamlined Program" in its next evening school where ever "actions can speak louder than words."

THE dramatized program is the type which is in demand everywhere. Whether it is a lesson on co-operation, on world peace, or on soil conservation, we believe more people will attend and better results will be obtained if the program is dramatized. In our modern society, hundreds of conscientious leaders waste energy by lecturing to a few when their message is comparatively ineffective unless it reaches the masses. So often we lecture to a few believers and fail to contact the hardened sinners. Would it not be better to spend a little time in streamlining our program if by so doing we could reach four times as many people, especially if the larger group includes the individuals who most need the instruction?

Modern critics of formal education say that educational methods are not keeping pace with our changing civilization. Trying to bring primary education up-to-date, the Atlanta schools are letting the children play, spontaneously, in the classroom. Would that system work with adults? The streamlined program? Yes, just try it.

Farm Mechanics

(Continued from page 141)

farm mechanics instructor if he could again take the course. He said he wanted no credit, but that he had a large poultry project that necessitated the building of a considerable number of mash hoppers. The instructor at Phoenix, where he was applying, recognized him as a problem case when he was a regular student and was reluctant to admit him. After an understanding was reached, he was admitted and went to work in earnest. That stimulus was all that was required to actively interest a large number of the class in the building of poultry feed hoppers.

Another boy, who had left school and had gone to work on a cattle ranch, returned and asked permission to work in the shop during a slack period. This boy was one who had taken a year of farm mechanics and had built up a reputation as a builder of bits and spurs. He was both clever and fast. The instructor was quick to grant the permission, and it was not long until quite a number of bits and spurs were taking form in the shop.

Another method of creating interest discovered by the use of a survey was suggested by Professor L. D. Klemed-

farm mechanics classes were interested in making money. One boy who had developed a fair degree of skill at saw filing obtained saws from his neighbors and sharpened them. Another boy who had spoiled a few handles in learning to fit them to tools, brought in axes, hoes, rakes, etc. and fitted handles. Still other boys did different jobs. One boy made a few lawn sprinklers with pipe and sold them for enough to pay for his material and made a good profit. Several boys made cotton chopping hoes out of old shovels, and drags for orchards and fields. Articles of all kinds from rope show-halters to sheet metal tractor funnels began to be made for sale. The building of these articles teaches skills and does not compete with commercial products. Many articles which have a boy-appeal are purchased by other members of the classes.

During the last few years, the Phoenix farm shop has experienced quite a revival of interest in leather work. Bridles, hackamores, belts, holsters, martingales, quirts, coin purses, gun cases, etc. have been made. The new leather work has the most appeal and seems to divide itself naturally into two classes, stamping and plaiting.

The fundamentals of leather stamping can be taught easily with just one filed nail head. This is all one needs to make a basket-weave design. Shapes to which the nail heads might be filed can be determined by inspecting a saddle or stamped article and shaping the heads to fit.

Some boys enjoy plaiting or braiding leather. The thongs may be cut from scrap leather to save expense. This is the method employed by the Boy Scouts, so some of the best boys in a class may be familiar with it.

The system of a student foreman has worked out satisfactorily, and, in the opinion of the writer, it is indispensable. Boys consider it an honor, and because of this honor and trust, they develop more rapidly in the acquisition of skills and leadership responsibilities.

In each farm mechanics class at the Phoenix Union High School are found six foremen and one general foreman. These boys represent the following departments — carpentry, blacksmithing and plumbing, sheet metal, rope work, leather repair and stamping, and leather plaiting.

Let us bear in mind the important part played by farm mechanics in the agricultural curriculums of our modern high schools; furthermore let us not fail to recognize the characteristics of human nature possessed by the boys of high school age. With all this in mind and seasoned with experience, so that one can anticipate the mistakes of the boys before they are made, and thus prevent them, the instructor is equipped to do a commendable job.

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Youth is beautiful. Its friendship is precious. The intercourse with it is a purifying release from the worn and stained hardness of older life.—N. P. Willis

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When we are out of sympathy with