

Young Farmers' Club Active

(Continued from page 152)

ties may be shown in the work of rebuilding the local farmer's institutes.

Previous to the organization of the club institutes had been held but were discontinued because of the inability to make it a financial and patronal success. It was re-instated in 1927 thru the efforts of the club and showed a reasonable success. The Young Farmers' Club took the leadership part in 1928 and made it a success far exceeding former years. The independent institute of 1929 was further increased to the extent that its total attendance, 2,800 at six sessions, placed it third in the state in rank and its total expenditures for programs, prizes, entertainment talent, and speakers, and so forth, exceeded \$450. The main source of funds paying these expenses were secured thru the selling of program advertisements altho the club has provided \$171.85 from its treasury. The source of the funds carried by the organization has been largely thru the giving of an annual play.

The club has further provided community leadership in a male quartet and an orchestra which provided musical talent for a number of school programs.

Another activity of the club was a Canada thistle eradication campaign introducing the sodium chlorate method. The club sold the chemicals to farmers at cost as a means of stimulating its use over a wide area.

An annual tour is held each spring. These tours include visits to widely known farms and industrial plants. The 1931 tour was a two-day event. Chartered busses transported the 31 individuals and they visited the Akron rubber plants, the dirigible hangar where the "Akron" was under construction, Firestone dairy herd, Ohio agriculture experiment stations at Wooster, state reformatory at Mansfield, and Harding Memorial at Marion, Ohio. It was the club's first attempt at a long tour and its success over the others prompts even longer tours to come.

The cure for any lapse of interest on the part of club members lies in the continual promotion of a program involving active participation of all members. Unless the organization holds as its goal the accomplishment of definite agriculture improvement and always holds the educational side of its program uppermost, it does not warrant the time and effort required for its continuance.

The value of an active agricultural organization of this type to a community cannot be estimated. It is providing leadership training to many of the younger group who in their day may occupy positions of real importance. It is creating a spirit of co-operation which will serve the community in good stead and above all is providing a respect and love for country life which will add much to the prosperity and content of our future farm homes.

Evening School Completes Program

(Continued from page 153)

greatly by co-operating closely with the county agricultural extension agent. A complete community program may be built about 4-H clubs for pre-high school boys, day classes in vocational

agriculture during high school and evening schools for graduates and adult farmers. The evening school can accomplish the objectives set forth earlier in this article. Group discussion and the use of local experienced farmers is the best method of instruction. The F. F. A. chapter can be used in securing attendance and conducting an evening school. Leading adult discussions keeps a teacher awake and up with the times and I think it is fun, I like to do it.

Making Lesson Plans for Farm Mechanics Class

(Continued from page 156)

torn and soiled. When job sheets are prepared in this way, they may be hung before the students who are using them, and will last several years. They are also very easily filed.

Job Operation Sheets:

Job operation sheets may be formulated or purchased which serve as a splendid guide to the student in developing shop skills. The following job operation sheet is taken from "Job Operations in Farm Mechanics," edited by Sherman Dickinson, Department of Agricultural Education, University of Missouri, Columbia:

Tinning the Copper

Object: To prepare the copper so that it will retain melted solder.

Material: Solder, soldering copper, flux, damp rag, blow torch.

Tools: Flat file, vise.

Procedure:

1. Clean the copper by filing each side of the point while hot. This will remove any corrosive material which may have accumulated. If the sides have become pitted, they should be hammered out smoothly. A clean bright surface is necessary.

2. Dip the copper into the flux especially prepared for this purpose. This will make it possible for the solder to adhere.

3. Rub the heated copper on some solder. The copper must not be too hot to burn it off. A copper not hot enough will cause an excess of solder to be retained. Wipe off any surplus solder with a damp rag.

4. Before using the copper for any soldering work it must be examined to see if the tinning is still effective. Remember that exposed parts of the copper will corrode, making it impossible to make solder adhere.

Questions:

1. What causes the copper to corrode? Explain.
2. Why should the copper be hot while filing the surface smooth?
3. What devices may be used to facilitate the tinning processes?
4. How does zinc chloride affect the copper?
5. What is the best weight soldering iron to use?
6. Why is copper used in making soldering irons?

References:

1. Cornell Ext. Bul. No. 57, Soldering, pp. 21-27.
2. Smith, Agricultural Mechanics, pp. 249-250.
3. Crawshaw and Lehmann, Farm Mechanics, pp. 224, 227.

Other Shop Plans:

Frequently the only lesson plan necessary will be a list of the jobs to be done with certain boys assigned to do the various jobs. Such planning is essential in order to accomplish best results. There may be several pieces of farm machinery to repair, a hay rack, several self feeders, and other projects to construct or repair, but much time will be saved if the instructor makes out a list of the jobs and assigns certain individuals to them before the class enters. This is especially true when the class is taken away from the shop to work on some group project, such as a garage. Every boy must be assigned a definite job and everyone put to work immediately, otherwise, little may be accomplished. Bystanders may wonder if the students are out for business or a good time.

Two Helpful Books

Making Farms Pay, by Cornelius J. Claassen; Macmillan and Company, 1931, xvi, 126.

This little book, according to the subtitles, is "a way out for owner and tenant, a narrative of personal experiences in managing 1,000 farms." The author is in charge of the Farmers' National Company, an organization furnishing group farm management service. The accomplishments of such company and the advantages of such services to farm owners and tenants are described. The materials presented are of most interest and value from the standpoint of the possibilities of such services. The discussion of methods is incidental and the one who wants to know how it is done will find this question only partially answered. "This book . . . is solely intended to show how the knowledge obtainable from books, from agricultural colleges, from government institutions, can be put to work in the cause of the landlord who doesn't operate his own farm."—W. E. Grimes.

Swine Enterprises, by Arthur L. Anderson; J. B. Lippincott Company, 449 pp., 195 well-chosen illustrations, 27 chapters, appendix, and index; price \$2.50. A well organized rather complete text on swine production. The author has included a number of features designed to make the book especially helpful in teaching as well as in carrying out practices in swine production: that is, Job analysis and problem method of setting up subject matter; Statistical methods of proving teachings; The latest station findings on all swine practices; New feeding standards; Standardized swine practices; Production tests; Local inquiries and activities; Debates and discussions; Available reference materials; Illustrations selected for definite purposes; Calculations to clinch points driven home. This text will prove decidedly helpful to vocational agricultural teachers who teach swine production, and will prove of special value to vocational agricultural students carrying swine projects.—A. P. D.

My Last Editorial

As my last official words, I urge you to continue your support of Agricultural Education so that it

Agricultural Education

WHAT IS A BOY?

He is a person who is going to carry on what you have started.

He is going to attend to those things when you are gone which you think are so important.

All your work is going to be judged, praised and condemned by him.

Your reputation and your future are in his hands.

—Alva A. Swain

Learn to review carefully and without prejudice evidence against your own opinions.

EDITORIAL COMMENT

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THIS MAGAZINE

THE March issue of this paper was edited by Sherman Dickinson. This issue is edited by the new editor; he assumes all blame. The financial report for 1931 is about complete and will probably appear in the May issue. Mr. Dickinson is turning over the magazine in the very finest condition. Following the policy established with the retirement of the first editor, Mr. Dickinson remains on the staff as associate editor. He will continue to serve *Agricultural Education*.

During the past few months the editor has come more fully to a realization of what it has meant to get *Agricultural Education* where it is today. The names of Hamlin, Smith, Hunnicutt, Fox, and Dickinson must inevitably and perpetually be remembered in connection with our magazine. The editor is not unmindful of the contribution made by the present business manager, Mr. W. F. Stewart, and by the special editors who carry the burden of producing the magazine.

There has been only one change in special editors. Mr. M. A. Sharp, of Iowa, resigned as Editor of Farm Mechanics in order to devote more time to committee work with the American Society of Agricultural Engineers. Mr. Sharp has put the Farm Mechanics section on a very high plane. Mr. Lester B. Pollum, Kansas Supervisor of Vocational Agriculture, finally accepted the appointment as successor to Mr. Sharp. Mr. Pollum has long been interested in farm mechanics and will continue to improve this section of the magazine.

If *Agricultural Education* is to continue to grow it must have three things: (1) a continuous stream of contributions representing progressive thought in vocational agriculture, (2) a continuous stream of subscriptions, (3) constructive criticism of its management. The editor assumes that numbers 2 and 3 will come along. He is especially asking, just now, for the stream of contributions. In the editor's (Mr. Dickinson's) report at the A. V. A. Convention in New York City in December, it was recommended that efforts to secure more teacher contributions be continued, that reports of current researches be increased, and that more articles of a "problem raising" nature be secured. An effort will be made to carry thru all of these recommendations. The editor is hanging out a sign—"Wanted Articles by Teachers of Agriculture." If you do not believe that articles are wanted just read the appeals made by some of the special editors. Any special editor will be happy to receive a contribution from you. Send your article direct to the editor of the section. If you are in doubt as to where your article

METHODS APPEAL

HAVE you heard about the depression? Most of it seems at present to be centered in the field of methods of teaching agriculture.

As far as contributions are concerned, the editor's desk is now as bare as Mother Hubbard's cupboard. Don't think you have to write a powerful long article. Just tell in plain English the story of how some specific thing can be successfully taught. Let's give the new editor of *Agricultural Education* a real thrill. Send your contribution to the special editor.—A. M. Field.

CONTRIBUTIONS

TEACHERS of vocational agriculture, as well as supervisors and teacher trainers, are invited and urged to contribute articles for the Farm Mechanics section of the magazine. Results of studies of shop problems, ideas bearing on methods, articles that are in any way helpful in solving the shop teacher's problems, will be welcomed. The mechanics section is what the contributors make it. Send contributions direct to the Farm Mechanics Editor.—L. B. Pollum.

THE EVENING SCHOOL CUPBOARD IS BARE

WE GREATLY appreciate the co-operation that we have received from teacher-trainers, supervisors, and teachers, but we would remind you that a lot of copy is required if this section is to be kept up to standard, and tell you that the cupboard is bare.

When submitting copy please keep in mind that we have just one objective—to help teachers do a better job of teaching evening schools—and that your material should contain suggestions, experiences, accomplishments, results, devices—*do's* and *don't's*.

Please note on your calendar of things to be done: Send evening school material to C. L. Davis, Austin, Texas.

RESEARCH ARTICLES

AT THE request of our new editor, may I reiterate two or three suggestions I made on this page eight months ago:

As agricultural instructors, supervisors, and teacher trainers we are determined to build our programs and arrive at our best judgments and convictions thru facts. Let us either in *Agricultural Education* or other magazines turn a friendly ear to pertinent articles based upon research. No one of us wants our professional diet limited to such writings. Just a fair proportion is desired. "Every profession carries or creates its own disease." All of us are in danger of *Superficiality*. A very valid corrective is for us to resolve to be intelligent consumers of research on problems vital to us.

As one of the special editors (North Central and Pacific Regions) of this new feature of our splendid magazine, I have met with a reasonable response. Within the last eight months we have been able to submit to our general editor for publication four good articles based upon research work. Others are in sight and forthcoming. Since so many of our readers are vocational instructors, articles based upon researches of the problems of managing and teaching in a vocational department will be favored. If it is your own research, you are probably looking for a publicity medium. Write us. Where you are directing research or know of timely research let us know of it and we will solicit its preparation for publication.

Such articles should be written in a somewhat popular style, lucid and include brief statements of procedures, data and conclusions. They should appeal to our readers yet

Professional

The New Day in Agriculture

DAVID LAWRENCE, Editor United States Daily

ON EVERY side people are asking: "When will the depression end; when will business take a turn for the better?" I feel sure we will know the answer to such questions only when we begin to measure from time to time the actual progress being made by every one of our major industries toward a balanced position. And if we are to take up each one of these activities, let us now examine the progress of agriculture, in which \$58,000,000,000 of capital is invested and in which 27,000,000 persons are engaged.

An important industry, you will say. Yes, and that's why the government of the United States today spends a good deal of money in an effort to help agriculture. For the welfare of 27,000,000 persons engaged in agriculture is not alone involved. These people represent a huge segment of the nation's purchasing power. And unless agriculture is prosperous, the rest of the nation feels the effects of adversity.

It is a notorious fact that agriculture is unlike any industry such as railroading, or steel, or automobile manufacture, or the utilities in that agriculture has not been organized into companies with immense capital behind them and with corresponding opportunities to raise billions of dollars by floating bonds or selling stocks to the public, as industrial corporations have done in the security markets of the world.

Agriculture is essentially an individualistic business. Only since 1913 has there been a gradual extension by the government of credit facilities to the farmer. Today there is a farm loan system as well as a federal farm board—two separate institutions involving a system of agricultural corporations, land banks, intermediate credit banks, and other instrumentalities of credit, mostly ranging from 60 days to three years. All this has been the result of constant agitation by the farmer to secure what he described as a position of equality with industry.

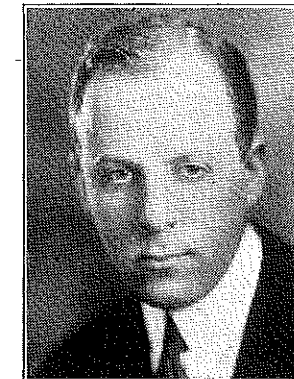
"But wasn't the Farm Board an utter failure," you will ask? Well, if you listen to those interests which have been damaged in one path of its operations or to those who misrepresent the actual facts, you will hear many fantastic things. For one you will be told that it lost \$500,000,000. Now that isn't true and could not be true unless every single loan outstanding is not repaid. To predict such an eventuality is to admit sheer ignorance of the credit capacity of American agriculture and the remarkable record of financial integrity it has made with commercial banks.

Well, you will inquire, wasn't all this money lost in so-called stabilization operations? Not at all. The Federal

These hectic days of economic readjustment necessitate thoroughgoing study on the part of those engaged in the preparation of youth for entrance into vocation. Thru this department of the magazine we have sought to bring to our readers the opinions and counsel of leading men in America in adjusting our content of teaching to present needs. In the accompanying article Mr. Lawrence presents statements of far-reaching significance in the future of agriculture. His declaration with respect to governmental policy will serve to clarify many misconceptions regarding the efforts of the Farm Board. Much of the statement here made was presented originally by Mr. Lawrence in a radio talk.—A. K. Getman.

than half of it and is being repaid regularly on the loans it has made. The other half was invested in large quantities of two commodities—wheat and cotton. If all the wheat and cotton now held by the Farm Board were to be sold tomorrow, it would command a forced sale price and it would depress prices. So it is being held for eventual disposition over a period of at least two years more. When the holdings in these two commodities are ultimately sold, a final financial statement can be made. If you can tell what prices are going to be on wheat and cotton during the next two years, you can estimate the exact amount the Farm Board will receive. If we took prices of today, it would mean a total shrinkage of about \$180,000,000, so any rise in prices will tend during the next two years to diminish that total amount.

Supposing, for the sake of illustration, that the Farm Board shows a net loss of about \$125,000,000 when it finally closes its books. The operation thus far has been on a two-year basis, so we would have to divide that sum into about \$62,500,000 a year.



David Lawrence

When you consider that the \$500,000,000 revolving fund is not going to

present fund is deemed sufficient by the Farm Board to take care of future loans and commitments, then it all comes down to an expenditure of \$62,500,000 a year during each of the two worst years of the present depression.

What did we get for that \$62,500,000 per year? The Farm Board report presents an amazing story of agricultural experience. In the first place, you will find that the Board itself does not approve of stabilization—the buying and selling by the government of surplus crops so as to keep up the price level. The Board announces that practically all of the money it spent for that purpose came after the depression began and was solely an emergency measure.

Many hundreds of commercial banks which had loaned money on wheat and cotton in the South and Middlewest were in danger of collapse when the Farm Board stepped in. Naturally, it did not announce from the housetops that it was engaged in the business of saving private banks, because to have done so would have undermined confidence, but the record shows that it intervened at psychological moments and bought wheat and cotton so as to prevent a further drop in prices, which in turn would have wiped out banks holding agricultural collateral and caused incalculable damage to millions of depositors, including farmers themselves.

For nearly six months the stabilization operations of the Farm Board kept farm prices above the level paid in other countries of the world; in other words, above a natural level. The farmers of America received the benefit of that action and it cannot be definitely estimated what the money value was of the emergency measure, but the Farm Board estimates it at hundreds of millions of dollars received by American farmers.

The Farm Board says stabilization except for extreme emergencies is wrong. Groups plead with the Board to enter the market and buy crops, but they never want the Board to sell what it has bought for fear that dumping large quantities will depress prices. So the Board thinks stabilization as a farm program is not justified except in an emergency, just as the National Credit Corporation is justified in the commercial banking field only in emergencies such as we faced early this autumn.

Still, just because stabilization was unique, because the wheat and cotton purchases caused so much discussion, the other phases of the Farm Board's work have been obscured. Stabilization was, after all, an emergency episode, valuable in the experience it has given, but of secondary importance when we consider what has been accomplished

It is the long-time features of the new farm law on which the Farm Board has been intensively working that constitute the most hopeful picture American agriculture has faced in the present generation. From unorganized agriculture we are slowly turning to organized agriculture. Co-operative marketing associations are being formed with active sales agencies. There are six big national farmers' corporations which act for large numbers of farmers in disposing of their crops. Thus, we have these corporations for grain, cotton, livestock, wool and mohair, pecans, fruits, and vegetables. Then there are numerous regional and state associations for dairy products, fruits and vegetables, poultry products, potatoes, beans, sugar beets, and other farm products.

When I tell you that the total business transacted by the 11,950 co-operative associations amounted to \$2,400,000,000 in the farm year and that about 2,000,000 farmers are members of these co-operative organizations, you will probably wonder if that is an increase over other years. Well, if we compare it with the value of products in 1927, for instance, we would find that the business handled would have increased 41 percent for all products. As a matter of fact, notwithstanding the lower prices, the actual increase in the value of products handled by these co-operatives was about \$100,000,000.

The revolving fund has helped the co-operatives in providing the necessary finances for capital turnover and in the improvement of facilities. The Board says:

"Such loans when granted, have been made at the requests of the co-operatives involved. The co-operatives are, however, independent business units, owned and controlled by their farmer members, and doing business in their interest. It is the hope of the Board that eventually all co-operatives will become strong enough, financially and in other ways, to operate entirely without outside help, except possibly for such informal research and advisory assistance as the Board can give. It is the intent of the Board that all its relationships with co-operative marketing associations and all financial and other aid now given shall work toward this end."

Here we have an important pronouncement of policy. A government board with government funds announces that its purpose is to put an industry on its feet so it will be self-sustaining and profitable. That is precisely what the federal government announced with respect to shipping when it loaned money for ship construction and operation of shipping lines. It is what the government did to foster the growth of the airplane industry. It is what the government did in lending money to the railroads for equipment in the war emergency. It is what the government has considered its primary function to be—to pioneer in fields where private capital will not, or cannot, venture. And this is motivated by the traditional desire to promote the general welfare.

If this principle is wrong with respect to aid to agriculture, it is wrong with respect to every single industry or activity ever aided by the federal government. It was ingrained in the American

protective tariff as a means of aiding and fostering infant industries. If there were no tariff, goods would flow in from abroad and the American people would buy certain articles more cheaply than they do today. But that might mean, it is contended, the destruction of American industries and payrolls. Thus, the protective tariff system means that the American people as a result of government action pay to American producers higher prices so that the American factory worker will be protected, as will the American captain of industry.

The policy of the federal government in agriculture has been to protect the farmer against those who would exploit him, those who would seek to profit by his lack of marketing outlets, by his disorganization and inability to command capital and credit in the marketing of his products. Because agriculture could not get such help, indeed was bitterly fought in its efforts to develop co-operatively, a majority of both houses of Congress voted to give the farmers the necessary funds to get started in the business of co-operative selling. It has affected nearly every important farm commodity. It has meant a re-organization of agriculture. And while it appears to be a five to seven-year program of re-organization—a gradual growth of the co-operative idea—the important fact is that notwithstanding the emphasis on stabilization, American agriculture is making substantial progress in adjusting itself to the new circumstances.

"Errors in business judgment," says the Board, "have been no more frequent or more costly than in the business world generally."

And, of course, if we examine the record of industry in the last two years we know it has, in many instances, suffered more losses in proportion to capital invested than has agriculture. We cannot forget that agriculture is a \$58,000,000,000 factor in American national wealth. Hence, the relatively small expenditure made to save agriculture from greater losses and the lessons that have been learned in this most trying period in a hundred years has either been in the public interest or else we must assume that the protection of a \$58,000,000,000 investment and of an average annual output valued at ten billion dollars is not truly a government function or responsibility.

The government of the United States, under the Constitution, is charged with the promotion of the general welfare and when after ten years of agitation, more than two-thirds of the membership of both houses of Congress, irrespective of party, decide that a revolving fund should be set aside to help the farmer, there can be little doubt that the trend of government is toward a full and complete assumption of responsibility for the advancement of agriculture.

Virginia Holds New Type Group Conference

H. W. SANDERS,

Associate Professor, Agricultural Education, Polytechnic Institute, Blacksburg, Virginia.

DURING the fall of 1930 the supervisory staff of Virginia, aided by the teacher training department, held

approximately fourteen instructors attended each of these conferences. The meetings began on Thursday evening and extended thru Saturday morning. The programs were arranged by the district supervisors and designed to cover certain problems raised at the state conference that needed further study, as well as special problems presented by the individual groups. This plan possessed a number of obvious merits but the conferences were expensive to the instructors in attendance and required the loss of nearly two days by each instructor, except the ones at whose schools the meetings were held.

The district conferences have now been suspended in order to give the group conference method a trial. Under this plan a smaller group of instructors, usually from four to six, are called together at the most central point. The entire program is devoted to one important problem and each man becomes a "worker" and an active participant rather than a mere listener. As an example of the procedure followed and the nature of the problems considered, the case of the group conference held at Chatham, Virginia, on October 19, 20, and 21 may be cited.

The instructors, five in number, assembled in the afternoon immediately following the teaching of their last class. "Planning the Supervised Practice Program" had previously been selected as the major problem for consideration. Members of the group then set up the following jobs for detailed study:

1. Selecting the Farming Type.
2. Setting Up the Ideal Training Program.
3. Setting Up the Practical Training Program.
4. Estimating Prospective Returns.
5. Financing the Supervised Practice Program.
6. Making the Final Selection of Enterprises.
7. Analyzing Enterprises and Evaluating Jobs to Be Planned in Detail.
8. Planning Jobs in Detail.
9. Securing the Agreement.
10. Setting Up Standards.

A brief survey was made as to the accomplishments of the instructors to date on the jobs included in the list. Teaching plans and procedure to be followed were then set up for the next day's classes. Each instructor then followed the unit as outlined, teaching his own group of students. The district supervisor and teacher trainer who were in attendance observed two classes on the following day. The instructors met as a group again for the afternoon of the second day. A thoro discussion of the difficulties encountered was entered upon and suggestions made for improving the procedure. This was followed by further planning for the third day of teaching. The same procedure was followed with the supervisor and teacher-trainer observing at different schools. By this time all members of the group had acquired at least a fairly good working knowledge of the various jobs and were prepared to summarize the procedure for carrying them out.

Division superintendents and supervisors like the group conference plan because it saves travel money and enables their instructors to secure the



Evening Schools



A Survey of 847 Evening Schools

B. H. FLEENOR, Professor of Education, Kansas State College

[This article is one of a series summarizing researches in the field of agricultural education.]

[Contributions to this series should be sent to the Research Editors: Mr. Wiseman for Pacific and North Central; Mr. Magill for the Southern and North Atlantic Regions.]

IN 1931 the writer completed a rather exhaustive investigation of 847 agricultural evening schools taught by 518 instructors in 21 central and southern states. The chief purpose of this study was to discover, in as objective a way as possible, significant facts concerning (1) the evening-school instructor, (2) the organization of evening schools, (3) character of students enrolled, (4) effectiveness of prevailing methods of teaching, (5) the extent of supervised practice, (6) the general and specific results of evening-school work.

This investigation was made under the direction of Dr. Sherman Dickinson of the University of Missouri. After spending several months visiting evening schools and conferring with many teachers and a number of state supervisors, the writer sent out printed information blanks to all the 1930 evening-school teachers in 21 states, calling for specific information on their evening schools. This information blank carried the endorsement of Mr. J. H. Pearson, evening school specialist, of the Federal Board, and had the approval of agricultural supervisors in the several states.

Returns of information blanks were secured from 518 teachers, or 72 percent of the total evening-school teachers listed by state supervisors, and represent 847 evening schools in 21 states.

The Instructor

Ninety-four percent of the evening-school teachers were "reared on the farm." The teachers had engaged in actual farming from 0 to 21 years, averaging 7.9 years. No farming experience was shown by 15.4 percent of the teachers. The teachers had engaged in teaching school from 0 to 30 years, the average being 7.8 years. Only 3.5 percent were teaching their first term of school. The number of years engaged in teaching vocational agriculture ranged from 1 to 14 years, 6.8 percent teaching their first year. Experience in teaching evening schools ranged from 0 to 10 years, the average being 3.9 years. Six percent of the teachers reporting were teaching their first evening school. There were 10.8 percent of the evening-school teachers who held the master's degree, 88.5 percent held only the bachelor's degree, while 7 percent held no degree. Three hundred fifty-two of the teachers had complete graduate hours ranging from 4 to 80 each, with an average of 18.6 hours. No graduate credit was shown by 166 teachers. The age of the

annual salary paid was \$1,800; the highest was \$4,300; the average was \$2,588. Teachers holding the master's degree averaged \$288 greater salary than those not holding this degree. The most important factors in the teacher's preparation for his evening-school work ranked as follows: (1) experience teaching vocational agriculture, (2) actual farm experience, (3) teacher-training courses, (4) conferences with state vocational department, (5) technical agricultural courses.

Organization of Evening Schools

Experts and experienced teachers are agreed upon the necessity of organization for evening school work. Recruiting and organizing the class are strategic. Our returns show these practices for recruiting and organizing ranked in this order: Personal farm visits, "key" farmers, all-day agricultural class, circular letters, local newspapers, farmer organizations, rural teachers, general meetings, telephone calls, school boards, county agents, posters, school paper, school rally. The following chart shows a wide variety of activities of organization. The percentages are to be read as percentages of all teachers reporting in the survey, the base number being 518:

Item or Activity	Percentage
1. Definite farm or enterprise surveys...	72.8
2. Farmers asked for schools...	84.0
3. Choice of course subjects by class alone	8.5
4. Choice of course subject teacher alone	12.5
5. Choice of course subject both class and teacher	64.9
6. Choice of course subject by previous class	5.2
7. Choice of course subject by farmer committees	8.9
4. Place of meeting—	
(a) In teacher's all-day classrooms...	40.0
(b) In rural school buildings...	22.0
(c) High school assembly rooms...	10.0
5. Had class organized with officers...	21.0
6. Cost of operating evening school—	
(a) No expense reported...	34.0
(b) Average \$31.20 for cases...	66.0
7. Completion certificates issued...	12.5
8. "Feeds" and social features—	
(a) Food served at all meetings...	5.0
(b) Food served at some meetings...	35.3
(c) Closing school with social feature as banquet	44.0
9. Newspaper publicity—	
(a) Teachers used it...	94.0
(b) Teachers used before first meeting of class	77.0
(c) Used during the course	86.5
(d) Used at close of course	77.6
(e) Prepared own publicity	71.0
(f) Had some assistance	15.6

Enrollment

The enrollment and the social composition of those enrolled are of interest. Ten weeks was the most common length of evening school, with 12 weeks ranking next. One meeting a week was most common and 90 minutes was the most common length of class period. The following chart shows the most

Items Considered	No. or Pct.
1. Enrollment—	
(a) Total number of schools	847
(b) Total enrollment	30,395
(c) Average evening school enrollment	21.3
(d) Oklahoma average	15
(e) Illinois average	66
(f) Percentage enrollment were women	14.5
2. Schools taught per teacher—	
(a) Average number	1.6
(b) Taught one school each	57
(c) Taught two schools each	30.7
(d) Taught three schools	7.1
(e) Taught four or more schools	A few
3. Average attendance—	
(a) For all schools studied	59.5
(b) For truck crop courses	73
(c) For cotton	71
(d) For swine	65
(e) For soils	60.9
(f) Members attending all meetings	52
4. Average classroom hours per teacher	24.2
5. Age of students—	
(a) Median age, years	35
(b) Ages 16-24	16
(c) Ages 25-35	36
(d) Ages 35-54	40
(e) Age over 54	8
6. Formal education of students—	
(a) Less than elementary school education	24
(b) Had only elementary school education	48
(c) Had some high school education	24
(d) Had attended college	4
7. Owners and renters—	
(a) Lived on own farms	60
(b) Lived on rented farms	34
(c) Were farm hands	6
8. Previous contacts—	
(a) Had attended evening school before	27
(b) Had one or more boys in all-day department	15

Methods of Teaching

The survey shows a number of significant facts concerning the prevailing methods of teaching in evening schools. Of the 518 teachers reporting, 47 percent conducted all of their lessons without aid of assistants. Fifty-three percent of the teachers had assistants who taught a total of 936 lessons; college extension specialists taught 27 percent of these; county agents, 25.5 percent; local farmers, 22.2 percent. All but 3 percent of the teachers reported that their class discussion was based on local problems. Ninety percent of the teachers reported that their lesson units were planned in job outline form. An average of 60 percent of all the students participated actively in class discussions. On the whole, satisfactory class discussion by students did not come until the second meeting of the group. The most valuable means for securing class discussion were shown to be, in order, (1) a local problem, (2) talking with students before and after class, and (3) calling on students by name. Three-fourths of the teachers made use of the results of all-day vocational classes in teaching their evening schools. Two-fifths of the teachers reported that they made much use of college experiment

in teaching their evening classes. One-half of the teachers reported that they encouraged study between meetings. Sixty-two percent of the teachers reported using some form of entertainment or recreation in connection with their school; films led, followed by music, talks, readings, plays. The number of hours spent by the teacher in preparing for the class ranged from 30 minutes to 8 hours, with an average of 2.4 hours; poultry classes averaged 1.3 hours; cotton, 2.3 hours; dairying, 2.5 hours; soils, 2.6 hours. Only three teachers reported any relief from all-day teaching during the evening-school course. There were 6.5 percent who reported giving final examinations at the close of the course, while another 6 percent gave objective questions to the class occasionally.

Supervised Practice

Only 24 percent of the teachers secured student agreement to adopt the approved practices taught; the remainder suggested only that supervision would be desirable. Out of the total 30,395 students enrolled, 13,174 conducted supervised practice. This is 43.4 percent of the total enrollment. Three-fourths of the teachers visited their class members on their farms during the time of the course, in order to give help on lessons, while one-half of the teachers gave demonstrations on the farms during the time the class was in progress. All but four of the teachers reported doing some supervision of practice work within six months after the close of the evening school. Seventy-three percent visited farms to check up personally to see if practices taught were being carried out. One-third of the teachers published data showing results of approved practices adopted by class members. Seventy-four percent reported securing satisfactory student records of practices adopted. The greatest problem of supervised practice, as reported by the largest number of teachers, was "securing records." This was followed by "lack of time," "inability to get farmers to carry out practices," and "failure to arouse sufficient interest."

General and Specific Results

The greatest benefits to the community, reported in this study, were (1) "economic results" and (2) "improved relations between school and community." The greatest benefit of the evening school to the all-day class was in increased enrollment. Development of local leadership was also shown as a direct result of the evening-school program. Eighty-three percent of the teachers reported that at the close of the course their students had asked for another evening school the following year. Fifty-eight percent of the teachers reported that there was evidence that the evening schools had stabilized their teaching position in the community; 20 percent reported increased salaries.

Some specific results are shown in the following chart:

Item Considered	Number
1. Total number specific approved practices (446 teachers)	65,622
2. Approved practices adopted, per teacher	126.7
3. Approved practices adopted, per	

	Number per Course	Per Farm
6. Soils	18,005	3.99
7. Poultry	12,300	3.47
8. Dairying	12,200	3.88
9. Cotton	8,271	5.14
10. Truck crops	3,700	5.59
11. Swine	3,600	4.05
12. Corn	1,500	3.52
13. Small grains	1,015	3.02
14. Miscellaneous	5,005	2.16

Conclusions

On the basis of the facts brought out in this survey, the writer feels justified in making the following conclusions:

- (1) The evening-school teacher has a solid background of rural-life experience and is well trained for his work; he is, on the whole, in the prime years of life; he receives a substantial salary.
- (2) The most effective way to organize an agricultural evening school is to make a definite survey of the enterprise in the community in order to determine the needs of the farmers and then to follow up with personal visits especially to influential or "key" farmers. Newspaper publicity concerning the school is also effective as a means of organization.
- (3) Only the more successful teachers should attempt to conduct more than one evening school during the year.
- (4) In the most successful evening schools, four-fifths of the students attend all the meetings of the class.
- (5) Where possible, the teacher should also employ in his teaching significant data from the local farm community and from college experiment stations.
- (6) Teachers should strive to secure student agreement to carry out the improved practices as taught in the evening class.
- (7) It is recommended that, where the subject matter is appropriate, the teacher make farm visits to class members and give farm demonstrations during the time the school is in progress.
- (8) Arrangements should be made to give the teachers more time to supervise practice work.
- (9) Those teachers who are unable to arouse sufficient interest to get their farm practices adopted should be marked for special assistance by state specialists or itinerant teacher-trainers.
- (10) The choice of the subject for the evening school should be determined by the class and instructor together.
- (11) Evening classes may well be held in the teacher's all-day vocational schoolroom if the evening school is located in his immediate community. If located in other localities, the rural school building is frequently found satisfactory.
- (12) The distance which the teacher must travel to the evening school in outlying communities should not be so great that he will be unable adequately to supervise the practice work.
- (13) A formal organization of the evening-school group with officers is not necessary altho a secretary has been found helpful in many cases.
- (14) Ways should be found of meeting the expense of conducting evening schools so that all teachers would be relieved of meeting any part of such expense personally.
- (15) Many teachers have found it expedient to close their evening school with a banquet, picnic, or similar event.

so at the last meeting of the class.

(17) The best results are secured in classes having an average attendance of 30 or under; ordinarily, the instructor will not have sufficient time adequately to supervise the practice work of a larger number.

(18) On the whole, the evening school is held during the farmer's dull season of work. Satisfactory results have come from intensive courses meeting from three to five days a week, and equally satisfactory results have come from courses covering a much longer time.

(19) The particular methods and devices used in classroom instruction depend much upon the nature of the course. However, the conference method of teaching, on the whole, is the most commonly used and seems the most effective.

(20) Blackboards, bulletins, and films are useful devices for making teaching effective.

(21) The successful teacher should have 60 percent or more of his students participating in class discussions.

(22) Reports of results of local farm methods or reports by pupils in the all-day vocational class serve to arouse and maintain interest. Farm tours, farm demonstrations for the entire class and the use of a capable outside farm leader are valuable aids in maintaining interest in the work. Charts, films, and slides based on local situations are effective in convincing farmers of the need for adopting improved farm practices. All of these, and more, are a part of good teaching methods.

Personal Contact Essential

W. S. CARPENTER,
Grants Pass, Oregon

HAVING conducted evening schools with moderately good results I have very naturally changed my sights somewhat since my first one. Any setting that I may do from now on will allow for considerable "windage" in any direction. However, there is one feature of my earlier conception of the job about which I have not changed my ideas. This is in the matter of securing an actively functioning enrollment of the right kind of farmers.

Circular letters, newspaper stories, announcements at farmers' meetings, and so forth, are pretty generally used and are too strongly depended upon sometimes to get evening-school attendance. Useful as these devices are they do not go far enough. Better results are possible if more direct and personal methods are used.

After talking with a few key men it is an easy matter to make a tentative list of most of the men who should attend the evening school. The next step is to call at the farm of every man on the list to get acquainted with him, explain your plans for a school and invite him to attend the meetings. If the right kind of contact is made on these visits the teacher can find out a few facts about conditions and practices on each farm and learn what some of the man's problems and interests are. This will show the teacher's interest in farm problems and help to enlist the farmer's interest in the teacher's job. This kind of procedure takes time and effort but if properly done it gets the kind of enrollment that you can work with later. If

as they appear at the first meeting and being more or less acquainted with them you can get right into actual conference-basis work promptly and easily. Your knowledge of their background puts you in a favorable position to organize a follow-up program and talk improved practices with them.

This way of organizing an evening school may not be quite so necessary for a teacher who has served successfully in the same school for a number of years and has a mailing list following that functions but for a teacher who is just starting in a new field it is certainly a dependable and effective way to begin and has advantages that are far-reaching.

Well Spent Tax Money

EVENING schools are one of the most effective means of selling our program to taxpayers. During this trying period when farmers are having such serious difficulty in meeting their taxes, retrenchment and curtailment of budgets are being considered on every hand. It is at this time peculiarly necessary that we keep the public informed, that we may have their support for vocational agriculture.

Of untold value for the entire program is such an excerpt as this: "We sent our committee to attend the evening schools taught by the teachers of vocational agriculture. I can truthfully say that we were astonished at the remarkable work these young men are doing. We are satisfied that our tax money could be spent in no better way, and that the teachers of vocational agriculture of this district are giving us a return on our money that we never anticipated."—From a letter written by Mr. George Lillienstern, Chamber of Commerce, Mount Pleasant, Texas.

Evening schools afford an important means of serving one's community. For the taxpayer they afford a concrete example of the service which his tax money is rendering. We suggest that if you are not already teaching an evening school that you start serving your community in this way now, and that you keep the public informed of your efforts in this regard.—C. L. D.

Taking Stock of an Evening School

WILBUR E. SKINNER,
Teacher of Vocational Agriculture,
Susanville, California

TUCKED away in the Sierra Nevada Mountains, farmers of Honey Lake Valley, California, are nearly 250 miles from the nearest marketing center for surplus produce.

Consequent marketing difficulties of these farmers were seized by the local teacher of vocational agriculture as a means of organizing a successful evening school on turkey problems.

Preliminary arrangements for the school included enlistment of the support of key men in the community, together with visits to leading poultry producers to determine their problems of marketing and production.

Problems covered in a series of ten meetings, from September to November, including selecting, killing, picking, grading, and packing; feeding and managing grown stock; culling; making post-mortem examinations of birds.

turkey eggs and poult; and determining best type poultry house and equipment for local conditions.

Interest was maintained thru personal visits, mimeographed letters, news stories in local papers, and by assistance of the local F. F. A. chapter. In order to bring the school nearer to all the farmers, part of the meetings were held in each of the three communities into which Honey Lake Valley is divided. Attendance averaged 24.6 persons.

Methods of killing, dressing, and packing were demonstrated by a recently appointed county poultry grader and experienced farmers. A local veterinarian directed the meeting on post-mortem examination of birds. All other meetings were conducted by the teacher of vocational agriculture on a conference procedure basis.

Observations in regard to the school were:

(1) Operative jobs drew more interest and better attendance than meetings dealing with strictly managerial jobs.

(2) Afternoon meetings, when properly arranged and sufficiently advertised, met with greater success than evening meetings.

(3) Definite improved practices were noted in the community during and immediately following the meetings.

(4) Close contact with the members and follow-up work by the teacher were necessary in order to insure the successful adoption of many of the improved practices.

(5) Farmers appeared to participate more freely as a result of the meetings being held in their respective community centers.

A turkey grading and marketing association, now affiliated with the state organization, was formed soon after and largely as a result of the evening school. An egg grading and marketing association was formed later. A permanent poultry grading and marketing specialist is now employed by the county board of supervisors.

Poultry Improvement Thru Evening Class

H. A. MILLER,
Atlantic City, New Jersey, Vocational Schools

[Editor's Note: Mr. Miller offers new thoughts on the place of a survey as the correct method of determining the outlook for poultry in his community and for determining course content.]

THE organization for an evening course in vocational agriculture should center around the economic needs of the farmers of the section. The subject material should be directly associated with the farms and problems of the farmers in the class in a specific, detailed manner instead of being generalized. These two statements can be exemplified by a concrete case of a vocational evening course in the Pleasantville section, Atlantic County, New Jersey. The profitable, growing type of agriculture in this section is poultry production. Studied from all viewpoints and substantiated by our experiment station economists, poultry farming in this section is bound to expand and is sound economically. Thus a long-range program in poultry expansion is warranted.

Expansion must be based on profitable results as noted by poultrymen of the section. The first step to secure this working material has been for the instructor to make a detailed survey of the poultry conditions of the section. Such a survey if properly conducted brings out the weak points and the changes needed for more rapid, profitable expansion. In this section the survey revealed that the breeding stock needed more attention, that the losses due to diseases were too high for best results, that instruction was needed on many management problems of feeding and housing. As a result of this information a program was developed to build up these weak features of the poultrymen. Last year our meetings dealt with disease control work, with the idea of reducing mortality thruout the year. Such problems as chicken pox inoculations, B. W. D. control, worm infestations, and coccidiosis control were considered in the evening meetings and formed the basis for specific programs of work thruout the season for home farm projects or enterprises being supervised.

This year the program calls for stock improvement and management. A survey and discussion with the poultrymen has indicated that flock averages were relatively low. A more definite breeding plan has been presented to the men. A few men in the section have been trapnesting breeding stock for a few years and are now supplying stock to the poultrymen in the section. A program will be arranged whereby each man will be personally supervised on the renewal of stock for the coming year. A few additional men will, no doubt, enter the field of trapnesting. All breeding stock will be blood-tested and pedigree cockerels will be advised in the meetings. The program of stock improvement, while it has been under construction for many years in the section, will no doubt make more rapid strides at this time because of the economic conditions and the desire of the men to meet the lower egg price level. The meetings on management will include such phases as feeding, housing, equipment, and so forth. The underlying thought in the entire program is chiefly a larger egg production at a lower cost, thereby insuring a greater margin of profit. Thruout the entire discussion during the meetings, detailed problems on local conditions will be analyzed. Birds of known records are used for demonstration, local feed formulas are analyzed, costs as found in the section are used as examples. The specific examples are far more convincing than generalized statements.

Arkansas Selects Master Teacher 1931

MR. AMOS MUSGRAVE, teacher of vocational agriculture in the Hatfield High School, has been designated Master Teacher for 1931. The selection was made by a committee of former Master Teachers, who by the rules are ineligible to compete in the contest. The official rating card was used as a basis for making the award. Mr. Musgrave has made an outstanding record in the Hatfield community and Polk County since he entered the service.



Part-Time Courses



Cresco, Iowa, Has Fourth Part-Time Course

D. J. ROBBINS,
Superintendent of Schools,
Cresco, Iowa

(Abstract of address before Agricultural Section, Iowa State Teachers Association, November, 1931.)

CRESKO has conducted a part-time school for the past four years. It was chosen in preference to an evening school program to complete the teaching load of the agriculture teacher because it was believed that such a school would serve the particular community better. Four or five evening school centers would have been necessary in various parts of our large territory to have served all well. One part-time class, given at the central school, is adequate for all of the boys, 14 to 25, who are eligible to attend.

The part-time school appealed as well to the community's sense of fair play. Our American school system is supposed to be democratic in nature and our people point to it with pride as such. However, in the Cresco community, as in many others, conditions operate to thwart the democratic ideal. The Iowa law provides for compulsory elementary school training thru the eighth grade or until the child reaches his sixteenth birthday. High school training is optional. Two boys living on adjoining farms may complete their grade education in the same year. One boy may be in a position to attend high school because his parents are financially able to send him. The other boy may be just as desirous of attending high school and may be more capable than the former but because his parents are poor and need help he is forced to stay at home. The first boy has his tuition paid by his rural school district and receives an education at public expense. The boy with parents on a lower financial scale remains at home to augment their income and indirectly helps to send the more fortunate boy to high school.

The course has been very much appreciated by the rural people served by our school and the business men of Cresco appreciate the favorable relationships with the rural people which have developed as a result of the school. It is definitely popular, perhaps the most popular undertaking of the entire school.

Our part-time school course requires three years of satisfactory work and attendance for its completion. Classes begin at 10 a. m. and continue until 4 p. m. The superintendent and the teacher of agriculture teach the agriculture subjects. An extra instructor is hired, part-time, during the winter months to teach the non-vocational subjects. No tuition is charged tho it is allowable under the Iowa law. Students are given the same privileges and are subjected to the same discipline as the regular high school group. The quality

dents are brought as closely as possible in contact with the high school pupils. High school activity tickets are sold to them at cost.

We have found that it is more necessary to use textbooks with this group than to use them with the regular day students.

Each boy carries a project which is about equivalent to the project carried by a typical day student.

The boys particularly enjoy their physical training classes and their athletic activities.

The group is organized with officers and regular meetings devoted to their own affairs.

Commencement exercises are held each year with a program arranged by the boys. Certificates are awarded at the close of the first and second years to those passing all of their work. A diploma is granted at the end of the three-year course.

The first year the course was offered there were 11 pupils; the second year, 17; the third year, 18; this year an enrollment of 20 to 25 is anticipated.

The outline of the three-year course follows:

First Year	Periods per week	Minutes per period
1. Agriculture (animal or crop enterprise. Unit course of prime importance locally)	5	90
Dairy management	5	90
2. Farm shop	5	45
3. English	5	45
4. Farm arithmetic	5	45
Second Year		
1. Agriculture (animal or crop enterprise. Unit course of prime importance locally)	5	90
Swine management	5	90
2. Farm shop (continued)	5	45
3. Farm business correspondence	5	45
4. Farm law	5	45
Third Year		
1. Agriculture (animal or crop enterprise. Unit course of prime importance locally)	5	90
Soil and legumes	5	90
2. Farm management and marketing	5	45
3. Rural betterment and citizenship	5	45
4. Public speaking—debate	5	45

(Note: Cresco is a town of 3,100 in north-eastern Iowa. Its high school has an enrollment of 305.)

WANTED— Part-Time Articles

THE following types of articles are wanted for the Part-Time Section:

1. How a part-time course was conducted. These articles should give number of boys in class, ages, years out of school, subjects given, kind of supervised practice, how boys were located, social activities, and so forth.

2. Achievement articles. These articles should tell of group or individual achievements in supervised practice, co-operative effort, and so forth.

3. Promotional articles. They should tell of the need, how class was organized, and publicity given.—R H T

Part-Time Survey in North Carolina

ROY H. THOMAS,
State Supervisor of Vocational Agriculture

WE HAVE just completed a study of 1,000 farm boys (500 white and 500 Negro) out of school in North Carolina.

Following are the findings for the white farm boys:

1. The distribution of the boys surveyed by schools, counties, and sections of the state is such that the data on the 500 boys should be representative of conditions thruout the state.

2. Findings concerning the boys at the time they left school:

a. The average North Carolina farm boy left school at about 16.5 years of age with a 7.5 grade education.

b. Over half the boys left school at 15, 16, and 17 years of age while in the sixth, seventh, and eighth grades.

c. There is little difference in the median age at which boys in the Coastal Plains, Piedmont, and Mountain sections of the state left school. This indicates that the schools thruout the state hold their pupils until they are approximately the same age. However, a marked drop from 2.6 percent leaving school in the thirteenth year to 11.6 percent in the fourteenth year when the compulsory school attendance law ceases to be effective, is noted.

d. Over one-third or 36.2 percent of the North Carolina farm boys continued into the high school. One might expect an unusually large variation in the number of boys who leave school in the seventh and eighth grades. However, the data show a variation of only 6.4 percent—27 percent leaving school in the seventh grade and 20.6 percent in the eighth.

e. Of every 100 boys who left school about forty left on account of being dissatisfied with school work, while about twenty of every 100 were compelled to leave to help with the work at home.

3. Findings concerning the boys at the present time:

a. The average North Carolina farm boy out of school between the ages of 14 and 21 is about 18.5 years of age with a 7.5 grade education. Over three-fourths or 80.2 percent of the boys are in the 17, 18, 19, and 20-year-old group with a sixth, seventh, and eighth grade education. About one-fifth of the boys are included in the 14, 15, and 16-year-old group.

b. From the standpoint of present ages and the amount of schooling there is not enough difference in the "boys on the farm and now farming" thruout the state to present any difficult administrative problems in providing courses. The principal difficulty will be in providing the type of instruction suited to the boys' needs in each community.

c. Nearly two-thirds of the boys or 64 percent now on the farm work as helpers, 28.3 percent get a share of the

months younger than the share crop-pers and part owners.

d. The location and distribution of the boys from the central high schools are such that they could attend part-time courses at the central schools. Forty percent are within the immediate vicinity of the central high schools, and 92 percent of all the boys live within a radius of six miles of the central high schools.

e. Of every 100 farm boys included in the survey 78 are at home farming, 4 are living at home but not farming, and 18 are listed by the school census as being at home but they are really working away from home at something other than farming. The latter two groups were about one year older than the first group when they left school.

Following are the findings concerning the 500 Negro boys:

1. The distribution of the boys surveyed by schools and counties is such that the data should be representative of conditions thruout the state.

2. Facts concerning the boys at the time they left school:

a. The average Negro farm boy in North Carolina left school at about 16.3 years of age with about a 4.5 grade education.

b. Over three-fourths of the boys left during the ages of 14, 15, 16, and 17.

c. Over half or 60.2 percent of the boys left with less than a fifth grade education, and only one boy out of every 100 surveyed entered the high school. None of those who entered the high school went beyond the second year.

3. Facts concerning the boys at the present time:

a. The average North Carolina Negro farm boy out of school is about 18.5 years of age with a 4.5 grade education.

b. Over three-fourths of the boys or 78.6 percent are in the 17, 18, 19, and 20-year-old group.

c. Over half or 55.2 percent of the boys left school to help at home, not quite one-third, or 30.2 percent left to make money, and the remainder, 14.6 percent, left on account of being dissatisfied.

d. Of the 500 boys surveyed and listed as being at home only 77 of every 100 were on the farm, while 23 of every 100 were working away from the farm. This means that only approximately two-thirds of the Negro boys are on the farm altho all of them are listed by the school census as being there.

Texas Part-Time Course Effective

W. O. COX,
Teacher of Vocational Agriculture,
Georgetown, Texas

THE Smith-Hughes law provided for one phase of vocational education which in the majority of the states is yet undeveloped; that is, the instruction of young men and boys, who for a number of reasons are unprepared for gainful pursuit of the occupation that they have selected and started. We can go into almost any community and locate a large number of boys of high school age who are not attending all-day classes, but who realize the necessity for additional information in solving their problems. Such was the situation which presented itself to the vocational agriculture teacher

stimulate him to organize a part-time class.

This class met for the first time October 7, 1931. It was necessary for the teacher to visit a number of the prospective students and explain the purpose of the course. The names of the prospective students were secured thru the assistance of the all-day agriculture students and by making an announcement to the student body at assembly concerning the objectives of the proposed course, and enlisting its aid in getting in touch with desirable persons. Eighteen young men were present for the first meeting, at which time the instructor attempted to gain their confidence by giving them a little insight into a more prosperous and diversified farming program. The group set up a list of problems which they wanted to study by discussion. These problems were centered about the feeding and care of livestock. A total of 17 problems was suggested; others have been added at different meetings.

One particularly interesting feature of the organization meeting was the selection of agricultural arithmetic and business English as desired subjects for study. In order that the students might have a working knowledge of the relation between agricultural arithmetic, business English and the farm problems that they had set up, the instructor decided to spend a short time during each meeting on these subjects. It was soon discovered that the keenest interest in subject matter was manifested when the point being made was stated in a problem form. For instance: The instructor desires to impress upon the students the necessity of supplying a sufficient amount of feed to a dairy cow.

The students are at once challenged and impressed with the information if he should ask them to solve the following problem: "How many pounds of feed will a dairy cow weighing 900 pounds consume in one day if she produces 24 pounds of milk that tests 4½ percent butterfat?" Write the following information immediately after the problem: "Supply a dairy cow with one pound of concentrates for each three pounds of milk produced per day and two pounds of roughage for each 100 pounds of live weight."

The local Future Farmer chapter adopted as one of its activities the sponsoring of a part-time class. A committee of third year agriculture students was appointed with the instructor as chairman. Charts, illustrative drawings, and so forth, are prepared by this committee for use with each lesson. Two members of the all-day class are allowed to attend each meeting.

The part-time class decided to meet each Wednesday night at 7:30; to begin promptly and continue the discussion until definite conclusions were reached. This usually makes the meetings about two hours in length. These boys are young and desire longer meetings than are ordinarily adopted by the adult evening school members.

Enrollment Increases

The enrollment has increased to 38 young men with an average attendance of 26 at each meeting. The students are encouraged to pass a notice of the next meeting date and subject thru the community. Local newspapers and public gatherings are used as mediums thru which meeting announcements are conveyed to those interested. Nine boys of the original 18 charter students have not missed a meeting. Interest has been kept up by use of challenging problems, illustrated material (in the form of charts, and drawings), and descriptive discussions.

The part-time student has a more inquisitive mind than the adult student and desires more detailed information. He wants to know the "why" before a definite decision is reached.

In the majority of cases these boys are working as partners with their fathers; however, a few are operating farms of their own. Following up this

zealous about making immediate changes concerning his farm operations. This follow-up work has been carried out by personal visits of the instructor to the students' farms, and by a survey form inquiring about a practice which has been decided upon by the class. A job sheet describing the practice is attached to the survey inquiry; this refreshes the student's memory and stimulates him to greater accomplishments. These inquiries are mailed out about three weeks after the discussion to each student registered. A number of students not present at a particular meeting, after receiving the job sheet, have asked questions about decisions reached by the class.

A subject for the next discussion is decided upon by majority of those present from meeting to meeting. The problems that were set up by the class are written in a convenient place on the blackboard and the instructor leaves the selection of the next subject for discussion entirely with the group. This gives the students a sense of control of the meetings which is essential for continued interest.

The part-time student must be made to feel that the course is his and that his attitude toward the work will make a success or failure out of the class. The exchange of ideas is more commonly noticed among part-time boys than is observed among evening school adults. This is an advantage to the teacher, where group discussions are being practiced. However, the teacher must not let the situation develop into a heated debate with an argumentative type of boy.

The local Future Farmer chapter adopted as one of its activities the sponsoring of a part-time class. A committee of third year agriculture students was appointed with the instructor as chairman. Charts, illustrative drawings, and so forth, are prepared by this committee for use with each lesson. Two members of the all-day class are allowed to attend each meeting.

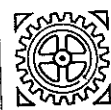
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A Successful Part-Time Course in Agriculture

L. J. COWART,
Agricola Consolidated School, Mississippi

DURING the spring, summer, and fall of 1931, the boys of the Agricola Community carried out a successful part-time course.

As is the case in most communities at this time, the boys out of school are faced with the problem of either going into some form of farming, business, or merely doing odd jobs. Since farming proved to be the only thing these boys could engage in to earn a living, they were asked if special study on their work would be of any help to them. All of them agreed that it would not and that they would not devote any time to an agricultural course. This feeling existed in the early spring when the



Farm Mechanics



Summarization of a Farm Shop Inquiry

SHERMAN DICKINSON, University of Missouri, Columbia

THE inquiry was filled in and returned by 65 teacher trainers or supervisors from 44 states; this includes all states in North Central Region, all but one each in the South and Pacific Regions, and all but two in the North Atlantic. I sure appreciate such an unusual return.



Sherman Dickinson

1. Practically without exception it appears that most students in vocational agriculture get some work in farm shop or farm mechanics. In the large majority of states, all vocational agriculture students receive such training.

2. Nine states teach farm shop "as a course by itself." Thirty-one states teach farm shop "in connection with some production course" or courses. In four states the practice is not uniform, some schools following one practice, and some the other.

In studying the returns, however, it appears that in the majority of cases, shop "taught in connection with production courses" is not usually an integral part of such courses, but that the connection exists in giving a portion of the time allowed for the course, to shop work. For example, of the five 90-minute periods per week allowed for the animal husbandry course, one 90-minute period is used for farm shop work. This arrangement may be carried on with succeeding production courses as well, spreading farm shop training over several years.

"Separate courses" in the inquiry meant shop work taught as a unit course and for which credit was given as such. So far as can be told, the inquiry was so interpreted by those replying.

3. Thirty-five states report that the farm shop course is taught by the vocational agriculture teacher.

The other nine report that some of the courses are being handled by manual arts teachers, in most cases with the agriculture teacher acting as consultant. California is the outstanding example of the use of farm mechanics teachers, reporting shop taught by 66 of these teachers and by 33 agriculture teachers.

4. Seven of the states teaching shop report that it is usually the first course which the vocational agriculture student takes.

The other two states say that there is "no special order."

5. When taught as a separate course, eight states require 90 minutes five days

In the states where some courses are taught separately, two give the course 90 minutes daily and two require 90 minutes twice weekly.

6. There was considerable variation in the amount of time given shop weekly when combined with production courses. In some states no stipulated amount is set because "time is dependent upon pupil and supervised practice needs."

The clock hours were stated vary from 1 to 7½ per week. The average appears to be about two hours.

7. So far as determining the amount of shop time devoted to recitation-discussion, study, and laboratory, practically all persons frankly indicated that their replies were merely estimates or guesses.

It is evident that by far the largest amount of the time is devoted to "laboratory," meaning by this, manual activity in the shop. The time estimated ranges from 50 to 100 percent, with 32 of 37 states attempting an answer estimating over 80 percent. Supplementary statements indicate that in the majority of cases, "practically no time" is given to study and recitation-discussion in connection with the farm shop course. Where stated, the proportion of the time given to study and recitation was estimated as equally divided between the two.

8. The nature of the beginning course was not specifically stated in all replies. Some returns included such statements as "repair and construction," "wood, rope, and so forth," "guided by supervised practice," "varies," and "wood mostly." In other statements of content only the most common elements in such courses were mentioned.

A tabulation was made however, of those replies which seemed to be at least fairly complete on this point and included 34 states as follows:

Woodwork	34	Plumbing	4
Sheet metal	26	Electricity	3
Rope	22	Home equip.	3
Tool care	20	Iron	3
Concrete	14	Drainage	3
Machinery	14	Buildings	3
Hot metal	12	Fencing	2
Gas engines	12	Water	2
Harness	11	Light	2
Leather	9	Auto	2
Painting	8	Heat	1
Drawing	5	Surveying	1
Belts	5	Sewage	1
Glass	5	Tractor	1

Comments indicated a certain amount of dissatisfaction with the course content, especially in connection with the large proportion of the time given to woodwork.

9. Thirteen states replied that an ad-

states which organize shop work in connection with production courses, a certain amount of "advanced" shop work is included with the later courses in the curriculum.

Included in these advanced courses, according to statements returned, are the following activities: Gas engines, tractors, farm machinery, concrete, plumbing, power transmission, babbitting, large woodwork, auto mechanics, farm structures, farm and home conveniences, motors, forge, pumps, power, trucks, electricity, radio, lighting, and sanitation.

10. Typical statements of "recognized purpose of farm shop work" include the following:

(a) To teach the farm boy those skills, ideals, and appreciations which he will need to become proficient in doing the farm mechanics work on the farm.—Montana.

(b) To fit boys to do repair and construction jobs on the farms of the community.—Wyoming.

(c) To fit boys to use understandingly mechanical aids to farming and to keep these machines in order and make simple repairs.—Vermont.

(d) To give prospective farmers enough training (and confidence in themselves) to guarantee that necessary repairs will be made on the home farm.—Maryland.

(e) To develop the knowledge, skills, and attitudes essential to efficient operation and repair of farm machinery and accessories, and the maintenance of construction of farm buildings, implements, and so forth.—West Virginia.

(f) (1) To develop farm shop skills essential to the type of local farming.

(2) To organize and equip a home shop.

(3) To know how to select, care for, and use the tools a farm shop should have.

(4) To develop confidence and a liking for repairing and maintaining farm equipment and buildings.—Virginia.

(g) To train boys to do the farm mechanics jobs that can be efficiently and economically done on the farms of the area.—Texas.

(h) To meet the farm and home needs in repair and construction work in which common tools are used.—Arkansas.

(i) To assist the student in getting information and acquiring manipulative skill for the purpose of performing satisfactorily the farm shop jobs on his farm.—Indiana.

(j) To teach the construction and repair work which farmers may be expected to do, including managerial phases.—Kentucky.

(k) Enable boy to care for mechanical problems incidental to his production project work, make his home environment more livable, his farmstead

Drawing Up a Suggestive Curriculum for Farm Mechanics

CARL G. HOWARD,
State Supervisor for Agricultural Education,
Cheyenne, Wyoming

THE conference procedure offers a means of curriculum construction in farm mechanics. Where the conference group is composed of teachers of vocational agriculture, all of whom are experienced farm mechanics teachers who have surveyed their local communities and, with these surveys as bases, have drawn up curricula which they have deemed suitable for their own local communities, a compilation of these various curricula seems to point out a suggestive curriculum which any teacher of vocational agriculture within the state may use as a check on his own farm mechanics curriculum. This, of course, would be limited somewhat by the size of the conference group and how well the members were distributed over the state.

At the three weeks' short course, offered at the University of Wyoming last August, there were enrolled 16 teachers of vocational agriculture including representatives from every section of the state. Professor L. M. Roehl acted as conference leader during the period given over to curriculum construction. He was assisted by our teacher trainer and myself. Farm mechanics was roughly divided, with the approval of the entire group, into 15 enterprises which, with slight changes, might be suitable to any two- or four-year farm mechanics course.

Each member of the conference group was asked to distribute his program of farm mechanics over as many of the 15 enterprises or divisions as he saw fit, setting up each division on a percentile and on a clock-hour basis. The results obtained from each man working on his own program were summarized to show averages on the basis of all of the teachers present. Since this number was approximately one-half the farm mechanics teachers in the state, it was assumed that this average was fairly typical of the state.

The conference group was then divided into two groups, one was given the task of setting up a two-year farm mechanics program as a suggestive state curriculum, while the other group was assigned the task of setting up a four-year program for farm mechanics. At the close of these two committee meet-

ings, a summary of the steps by which the two- and four-year programs were set up was presented.

The whole conference group then criticized the two curricula as outlined, finally arriving at a suggestive two-year farm mechanics course and a suggestive four-year farm mechanics course set up on the basis of clock hours.

All material which was deemed of particular value was compiled and sent to all teachers of vocational agriculture in the state with the suggestion that it be used by them as a yardstick to ascertain how far their departments were from an average of the farm mechanics work which might be expected of any school in the state. There follows the suggestive curriculum in farm mechanics for departments of vocational agriculture in the high schools of Wyoming as set up by this conference group.

Keeping the Shop Neat

ELMER J. JOHNSON,
Teacher of Vocational Agriculture,
Fort Morgan, Colorado

IT HAS always been my custom to have my boys take complete charge of the shop in regard to its cleanliness, arrangement of tools, and the development of such needed equipment as they are able to make. It seems to me that a student should be taught these principles just as thoroly as any shop job that we may require of him.

In going about the community calling upon my agriculture students and supervising their projects, it has always been my aim to note the home farm shop and its conditions. Usually it is found to be in a deplorable condition, especially from the standpoint of arrangements and replacing of tools in the proper place as well as the cleanliness of the shop.

In my shop I have each class clean up the shop before they are permitted to leave so that each new class entering the shop will find it clean and they are expected to leave it in the same condition for the class to follow. In my way of thinking, this is an excellent job—if you care to call it a job—to put across to the student, and I have found that it is bearing some fruit, in that many of the boys have greatly improved the condition of their home shops.

The janitor approves of this method because he never needs to worry about cleaning up our shop which, if not taken care of by the students, would be the

worst room in the building for him to take care of. I find this to be one of the many good points of my method. If at any time it so happens that one class does not properly clean up the shop or return the tools to their proper places, the next class is sure to inform me of this matter and it is then very easy to check back and find the neglecting party. This checking is easily done because each and every boy has a known task to perform in the shop for a certain period of time.

This method also prevents the loss of tools, as the boy in charge realizes his responsibility to see that they are in place before he leaves the shop. In five years I doubt if over \$2 worth of tools have been lost from our shop, which is not so bad when you consider that our average attendance in this department is over fifty.

Class Repairs Machinery

O. B. CAMPBELL,
Agriculture Instructor,
River Falls, Wisconsin

THE farm mechanics class has just completed the overhauling of three mowers. It was a problem to get the mowers for repair work. No member of the class would furnish them for reasons which seemed plausible. An advertisement in the local paper stating that the work would be done free of charge if the owner furnished the parts did not bring any response. A personal trip by the agriculture teacher to several farmers of his acquaintance brought three mowers; each one a different make.

The work consisted of re-alignment of sickle bar, straightening a sickle bar, testing the sickle for register, replacing sickle guides, wearing plates, sickle caps, ledger plates, guards, wrist pins, crankshaft bushings and pinions, counter shaft pinion and bushings, heating guards to expand and draw out plates, and miscellaneous adjustments.

The cost of repairs on the mowers was \$5.67, \$8.37, and \$6.16. The labor if done at a repair shop would have amounted to more than the cost of repairs. One of these mowers was about to be discarded by the owner for a new one, but it was too good to discard. Rebuilt as it is now a dealer would sell it for \$25 to \$35 and it is certain to give many more years of good service.

The mower is probably one of the best of farm machines for class work. It is simple in construction, easily accessible to all working parts, and compact enough so that it can be taken into the ordinary school shop.

The principles of repair work are such that once mastered they will apply to almost any machine.

The environment in which one works undoubtedly has an influence on his attitude toward his work. It seems inconsistent to expect accurate painstaking effort in an untidy, disorganized, disheveled-appearing shop.—L. B. P.

Neither the quality or quantity of work turned out in the farm shop is necessarily a true index to its educational value. If the job has caused the worker to exercise some initiative, if it has involved the application of a principle, if it has

SUGGESTIVE CURRICULUM IN FARM MECHANICS FOR DEPARTMENTS OF VOCATIONAL AGRICULTURE IN THE HIGH SCHOOLS OF WYOMING

ENTERPRISE	Clock Hours in Two-Year Shop Course			Clock Hours in Four-Year Farm Shop Course				
	I	II	Total	I	II	III	IV	Total
1. Carpentry and woodworking	44	34	78	77	56	33	27	193
2. Saw fitting	8	7	15	10	4	4	..	18
3. Soldering	5	3	8	7	7	..	1	15
4. Cold metal work	6	6	12	6	9	8	..	23
5. Tool sharpening	15	12	27	17	16	9	10	52
6. Forge work	7	15	22	4	21	17	18	60
7. Harness repair and leather work	14	11	25	20	14	10	15	59
8. Rope work	6	6	12	7	4	4	5	20
9. Concrete work	8	6	14	..	5	11	10	26
10. Field machinery	15	7	32	4	12	14	25	55
11. Power machinery	6	6	12	2	2	16	16	36
12. Power transmission	1	4	5	..	3	7	..	10
13. Plumbing and water supply	3	7	10	..	3	4	6	13
14. Leveling, irrigation, drainage	3	6	9	16	10	26
15. Electricity on the farm	3	4	7	2	..	3	13	18
TOTALS	144	144	288	158	156	153	133	590



Methods



Good Project Planning

S. S. SUTHERLAND,
Cadet Supervisor, Bureau of Agricultural
Education, San Luis Obispo, California

THE reason that most of us fail to get our pupils to make good project plans may be summed up in one sentence: We expect 14 and 15-year-old boys, who have had neither the opportunity nor the training to do much thinking for themselves, to do one of the most difficult types of thinking of which the human mind is capable—original planning.

The result is the carelessly worded, generally stated, paragraph length project plan with which all of us are more or less familiar.

There are four distinct levels of thinking that may be required of a boy in making the project plan, and we might well compare these levels with four speeds in an automobile. Expecting a boy to turn out a clearly stated, complete plan with the amount of training and help that most of us give him is comparable to attempting to drive a car thru a sand hill in high gear. The motor is very likely to stall somewhere during the process.

When a motor stalls, the logical thing to do is to shift to a lower gear before it stops entirely, and so when pupils find the going too difficult in their project plans, the teacher may well require a less difficult type of thinking of them. This "intermediate gear," if we may continue the analogy, consists of placing in the hands of these pupils a list of questions which the project plan should answer. These lists of questions, different of course for each type of project, may well be set up by the class as a whole in a discussion led by the teacher.

Cadet teachers at the California Polytechnic School at San Luis Obispo, the practice center for vocational agriculture teachers in California, have found this "intermediate gear" to be a very practical method, and thru its use, have secured very excellent project plans from the pupils in their classes.

Sometimes, however, second gear may not pull us thru, and it may be necessary to shift to a lower gear. Many mature minds may not be capable of original planning without something definite to guide that planning; some boys may not be able to produce a suitable plan even with a definite guide to follow; but most of us are able to choose rather wisely between two courses of action or between two plans. Thus the placing of project plans made by other pupils carrying similar projects in the hands of the boy who is in difficulty, and allowing him to use these as patterns, choosing the one which he wishes to follow, constitutes the "low gear" in project planning.

Modern motors and modern teachers should have very little use for a "low gear" which in project planning, consists of the teacher doing most or all of

Below is a list of questions that illustrates this "second gear" type of thinking that cadet teachers have found practical. This guide list was worked out in a freshman class in vocational agriculture under the guidance of Gilbert Hutchings, cadet, for use by pupils carrying hog feeding projects.

Planning Hog Feeding Projects

When your project plan is complete, it should answer these questions:

1. Why did you select this project?
2. When will your project start?
3. How many pigs will you have, and where will you get them?
4. What breed will you get, how old will they be, and what will they weigh?
5. Will you get purebreds or grades?
6. Where will you keep them, and what buildings and equipment will you use?
7. Where will they be fed?
8. Will you use self feeders?
9. Where will you get the feed, and how will you pay for it?
10. What ration will you start feeding them?
11. What changes will you make in your ration, and when will the changes be made?
12. When and how often will the pens be cleaned?
13. What diseases need you watch for?
14. Will you immunize these pigs against cholera?
15. When should the pigs be ready to market?
16. How heavy should they be?
17. How will you finish them for market?
18. How and where do you expect to market them?
19. What records will you keep?
20. How often will you make entries in your book?
21. Do you expect to exhibit these pigs at any fair or stock show? Where?
22. When will the fair be held? When should entries be made?
23. When will you start fitting them for show?
24. How will you fit them?

Your project budget should answer these questions:

1. What will these feeder pigs cost you?
2. What will be your total feed cost?
3. How many hours of labor (your own and others) will be spent on this project?
4. How much will it cost to market the hogs?
5. What will be your total expenses?
6. What do you estimate your total income on this project to be?
7. How much net profit will you make?
8. What will be your labor income?
9. How much will it cost to put on

with many theories as to what project planning should be, but it works.

Are We Educating?

EVERY now and then we are obliged to stop and inquire whether the things we are doing in the schools are contributions to education or something else. This year, when proposals for the curtailment of our school programs are in the air, is forcing us to make careful distinctions between real and pseudo-education.

One distinction, which helps us in the department, is a very old one. Education, rightly conceived, is concerned with giving tools, methods, principles, and attitudes, which have wide general utility. There can be no question about the classification as education of the teaching of reading or the fundamental processes of arithmetic or the ability to study effectively. These are all time-saving tools, useful in a wide variety of situations and thruout life.

What is there in vocational agriculture which corresponds to the fundamental abilities which sound elementary education imparts? It certainly is not the acquisition of detailed (and subsequently to be displaced) information about farming. Fundamental abilities are not given in an attempt primarily to "cover the subject of agriculture." Professor Lancelot has suggested some of them: (1) The ability to cooperate in agricultural affairs, (2) the ability to find and use agricultural information, (3) the ability to solve typical farm managerial problems.

Perhaps it may be necessary, in order to center our attention on these fundamental and permanently valuable abilities, to re-organize the units of our curriculum, making these and others like them the unit objectives. But whatever our course organization, it is possible for us to teach so that these primary outcomes will be primarily emphasized.

Perhaps it will be found easier to give these fundamental abilities and attitudes well than it is to do well the job of teaching a vast mass of agricultural information. It would seem that it might take less time, for we would feel under no obligation to deal with the almost infinitely wide field of agriculture.

We should be very much interested in reports of attempts to revise our agricultural curriculum in terms of the broader and more fundamental objectives we should be seeking.

When the school board makes that inevitable check next spring, it will be easier to defend ourselves if we are sure that what we are dispensing is education, in a long-accepted sense of that term, and not something else.—H. M. Hamlin, Iowa Monthly Bulletin.

Fifty years ago there was one-half horse power of mechanical power for each individual in the United States. Today there are 7½ horse power. A very

Ohio Teacher Produces Ton-Litters by the Dozen

W. F. STEWART,
Ohio State University, Columbus

W. W. SMITH,
of Pittsburg,
Darke County, Ohio,
has supervised the
production of 35
ton-litters during
the past three years.
In 1929 nine all-day
boys produced 10
litters; in 1930 six
all-day students and
six part-time stu-
dents produced 12
litters; and in 1931
eight all-day pupils
produced 8 litters
and three part-time students, 5 litters.
Twenty different individuals partici-
pated. The heaviest litter was produced
in 1931 when 16 pigs were brought to a
weight of 3,448 pounds. The average
weight of the 35 litters was 2,296
pounds.



W. W. Smith

The instruction that preceded and accompanied this excellent record was introduced by a community survey of practices in swine management which showed room for marked improvement. The enrollment the first year was entirely from the all-day class. As a result of the achievement the first year, a course in swine management was offered the following winter to the part-time group which led to the organization of a ton-litter club project for 1930 with a membership of nine all-day and nine part-time students. During the winter of 1931 a second course in swine management was offered and the resulting club enrolled 20 students from the all-day and part-time groups. So in the three years, the activities in the direction of ton-litter production have resulted in 52 enrollments with 32 of them successful in producing litters.

The cost of producing these litters, the less interesting as general news, was of even greater importance to the students. During the three years the costs of production varied, of course. Of especial significance to the young men was the variation in costs in any one year. This element introduced the competitive spirit effectively since economical gains were especially dependent upon good judgment in the selection of feeds and other practices.

When teaching situations have their source in home and community practices and carry over into improvement in the direction approved by producers and economists, then that teaching is approaching closely our ideal. We need more teachers who make use of the procedure followed by Mr. Smith.

Charts of Farm Prices Used in a Vermont School

GEORGE E. BOND,
Chester, Vermont

AT THE beginning of the year there seemed to be some interest in, but a much greater need for some information on prices of farm products and their seasonal and other variations. Boys wondered when to sell the products grown as projects. They questioned the policy of holding for a better market,

their own problems, and that is the object of the agricultural course, the freshmen and sophomores were started on a plan of charting current prices for future use. Using various farm papers and local dealers as sources, the boys have made weekly entries on charts which cover more than a year. These charts include potatoes, apples, beans, butter, milk, livestock, and other products. Being mounted so that each chart partly overlaps the one below and so that one or several may be lifted up to reveal the chart of particular interest, these charts make a quick reference to past price changes. One may tell at a glance the seasons of high and low prices, and the degree of variation, and can more easily determine the worth-whileness of holding produce for a better market.

These charts have aroused considerable interest among the members of the class and ideas as to the best season to market are already being formed by these farmers of the future.

Faculty Psychology, Formal Discipline and the Transfer of Training

ACCORDING to the theory of mental faculties (faculty psychology) attention, memory, perception, reason, imagination, and sometimes others such as the will, judgment, and discrimination are powers or faculties of the mind. Usually the faculties are held to be mainly, if not wholly, independent of each other. The mind is the sum of the actions of the several faculties. The faculty is a general power or capacity, moreover, which operates indiscriminately in all lines and on all kinds of material. Individuals are assumed to have good, medium, or bad memories, judgments or wills; it is implied that these traits are about equally good or bad in all situations. Memory, to be concrete, is the power of acquiring facts. If you have a good memory everything is easily learned; if your memory is bad all facts are acquired with difficulty. Those who held this view usually made the assumption that the various faculties could be improved by training, and when this opinion was held, it was necessary to make the further assumption that the faculty or power is trained as a whole. If memory was improved by training of one sort or on some one material, it would be improved for work on other kinds of data and in other situations.

"Opposed to the faculty theory is the view that the organism deals primarily as a whole with each of the innumerable situations, problems, and classes of data that it encounters. In this view, attention, memory, perception, reasoning, and so forth, are conceived merely as aspects of the whole process of dealing with a particular situation. Attention, perception, and so forth, do not refer to powers or faculties but rather they are to be thought of as abstractions, that is, not as real entities, which can exist alone but merely as integral phases of a larger process, namely, the adjustment of the whole organism. According to this view, learning is reacting in a complex way to some situation or data. What one learns is to react to or deal

Books! Books!

Practical Methods in Teaching Vocational Agriculture, McGraw-Hill Book Co., by H. E. Lattig; price \$2.50. Experienced teachers, as well as beginners should find many valuable suggestions in this timely publication that covers in the relatively short space of 360 pages a large number of the major problems confronting teachers of vocational agriculture. "Putting Over the Lesson" is a chapter that should help every individual to improve his classroom teaching. Supervised practice, farm shop, the evening school, the Future Farmer Chapter, publicity, exhibits, and community work are systematically discussed. Test questions, problems, and bibliographies constitute an important part of each chapter. The author stresses methods based on sound educational principles that are applicable to actual farm conditions rather than theory. Not everyone will agree with the recommended procedures in every instance but *Practical Methods* justifies the hope that the various states are gradually approaching a uniformity of practice that is generally acceptable and more usable under the varying conditions found thruout the United States.—H. W. Sanders.

Practical Poultry-Farming, L. M. Hurd; the Macmillan Company, 1931. \$2.50. 454 pp. During the past few years there has been an oversupply of poultry text and reference books. At least there have been more than the average teacher of agriculture could hope to use to advantage. Despite this fact *Practical Poultry-Farming* will probably earn a place as a helpful reference book on this important enterprise because it is both practical and up to date, being a revision of the book published under the same title in 1928. Many new developments have taken place in the industry during the past three years. These are discussed in the closing chapter which is entitled, *Recent Developments in Poultry Keeping*, and is a feature that will commend itself to all who wish to keep up with the times. All the important jobs in the chicken enterprise are satisfactorily covered and chapters are devoted to the other domesticated birds. The author is extension instructor in poultry husbandry, Cornell University, and the editor, L. H. Bailey.—H. W. Sanders.

Handy Andy on the Farm, Farm Mechanics Magazine, Chicago, Illinois, paper covered pamphlet, 64 pages, well illustrated, price 25 cents. Sixty-four handy devices are presented, applicable to shop, barn, field, yard, garage, chicken house, and farm home. Should prove helpful to farm mechanics teachers.—A. P. D.

Fundamentals of the Woodworking Trades, John Wiley & Sons, by John F. Reid and Gordon H. Higgins, 244 pages, 21 chapters, 240 illustrations, price \$2.75. Designed primarily to meet the needs of the woodworker desiring to become a skilled mechanic. Of value to vocational agricultural teachers in con-



Future Farmers of America



Future Farmers of America Help the Needy

FROM several states come reports telling how local chapters of F. F. A. have helped the needy during the past few months. Surely this is a worthy chapter activity.

L. F. Lee of Newark, New York, writes as follows:

"The F. F. A. of Arcadia, acting upon the suggestion made by The American Agriculturist last fall, organized and carried thru a campaign to help the needy of Newark.

"The Newark Cold Storage Company donated storage and the Community Chest took charge of distributing the food.

"A total of 54 contributions was secured, including 17 bushels of beets, 33 bushels of turnips, 11 bushels of apples, 60 bushels of potatoes, 3 bushels of onions, 17 bushels of cabbage, 6 bushels of carrots, 3 bushels of pumpkins, 2 bushels of squash, 13 bushels of beans, and 1 bushel of mixed vegetables.

"The largest distribution was made just before Thanksgiving. Others were made from time to time thruout the winter. Such a project greatly increases the scope of the welfare organization. The products collected represent a large sum of money if they had been purchased.

"The success of this campaign was due largely to the fact that it was put on in the autumn, when food products were plentiful, and the farmers were asked to contribute largely in terms of something they possessed—food. If the solicitors had asked for money the contributions would have been smaller."

From the January issue of the North Dakota F. F. A. Monthly, we quote the following:

"A practical demonstration of the method by which three local F. F. A. groups in North Dakota co-operated in giving worthwhile service was shown in their recent donation and distribution of two carloads of potatoes to needy persons in the drouth-stricken areas of western North Dakota.

"The potatoes were collected from farms in the neighborhood of Park River by the Wm. A. Broyles Chapter at the Walsh County Agricultural School. They were loaded and shipped by the boys, then distributed to needy persons in the communities of Stanley and Columbus by the F. F. A. Chapters in the local high schools.

"Before securing the potatoes," writes Charles Lee, reporter of the Park River group, "the Chapter members

made a survey of the community to find farmers who were willing to make donations. Some of the potatoes were dug, and some we had to dig. We obtained the services of two trucks, one belonging to one of our members, and the other to the Mutual Oil Company of our city. We were also able to secure the services of a digger and horses to operate it. Most of the chapter members living near Park River made contributions. One member donated two truck loads. It took us two days to get the cars ready to ship. We had two carloads, totaling around 2,200 bushels.

"The cars were transported thru the co-operation of the Red Cross. One load went to the chapter at Stanley, North Dakota; the other load was sent to Watford City where it was distributed by the Red Cross of that place. Several letters of appreciation were sent to the boys by those who received the potatoes."

"The car which was received at Stanley and distributed by the students of vocational agriculture, was of great help to the farmers in that community," according to Richard Chambers of the Stanley F. F. A. Chapter.

"Our boys worked in shifts of six and eight until the car was unloaded which took a day with the aid of the Red Cross representatives. On the sacks of potatoes distributed we placed tags reading as follows: "Donated by the Future Farmers of America Chapter of Park River; distributed by the Future

Copy for the F. F. A. section of AGRICULTURAL EDUCATION should be sent to H. O. Sampson, Special Editor, College of Agriculture, New Brunswick, New Jersey. Teachers, especially, are urged to send articles. These articles should be timely and should carry ideas that other teachers can use. When practicable, have pupils write articles, but be sure to edit them. State supervisors and teacher trainers should, of course, continue to supply the special editor with articles. Send in news notes from the state chapters.

Farmers of America Chapter of Stanley High School.

"Boys were excused from classes," writes Gordon Helgeson, of the J. A. Walters Chapter of Columbus, "in order to take turns in helping unload the cars. Our local newspaper had notified the farmers in the community of the arrival of the car. In order that only those who actually were in need of food would get the potatoes, each family or person receiving them had to make a personal application thru the Red Cross key man in their district. The F. F. A. members checked out the amount allowed each family, on special order blanks furnished by the Red Cross. About two bushels of potatoes were allowed each person. The farmers came directly to the cars."

Several of the New Jersey F. F. A. chapters have done their bit in helping

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The Lambertville, New Jersey, Future Formers of America, donate produce to needy families

F. F. A. Programs of Work

W. A. ROSS, National Executive Secretary, F. F. A.



W. A. Ross

A DEFINITE program of work is absolutely essential to the success of any organization. When carefully worked out with worthwhile activities and reasonable goals of accomplishment, the program is as valuable to the organization as chart and compass are to the navigator on the sea. It shows the course to follow and the direction in which to proceed in order to reach definite objectives.

In the F. F. A. organization the local chapter, State Association, and the national organization each formulate programs of work annually. Local programs of work which really function must be built largely around the idea of training for leadership, developing individual talent and contributing to the agricultural, economic, educational, social, and religious needs of the community in which the chapter is located.

The chapter program of work should be more than a working program in name. It should embody constructive activities and a balance—that is, a variety of activities, which point toward the idea stated in the preceding paragraph. Programs can easily become overbalanced with social and recreational features for the F. F. A. members and thus often lose the earmarks of service, constructive effort, and real accomplishment. "All work and no play makes Jack a dull boy," contains a world of truth but all recreation and no constructive work makes a poor F. F. A. program of work.

Co-operation is one of the keynotes in the F. F. A. organization. Chapter activities offer the best opportunity for members to learn co-operation in fact as well as principle. The activities set up in a chapter program should, therefore, provide as far as possible for a maximum of member participation. Group activities and group action develop chapter consciousness which usually means the highest type of co-operation.

In addition to the activities appearing in local programs of work based on the needs in the community, there is another phase of program building which calls for consideration by the local chapter. Certain important objectives are set up annually in State Association programs of work as well as in the program of the national organization of F. F. A. To reach some of these worthy goals often requires chapter action. Such items should be adapted and worked into local programs of work in order to assist the F. F. A. in functioning on a local, state, and national basis.

At the fourth national convention of the Future Farmers of America, held in Kansas City in November, the following national program of work for 1932 was set up and adopted:

assist recently organized states to perfect their state associations.

2. Have every state chartered by the national organization of F. F. A. by November, 1932.

*3. Encourage every State Association and local chapter of F. F. A. to participate in George Washington Bicentennial Celebration during 1932.

4. Conduct a full-hour F. F. A. national radio program monthly in co-operation with the National Broadcasting Company.

5. Issue an official publication of the national organization of F. F. A.

6. Publish a F. F. A. directory of all affiliated State Associations and chapters.

7. Have 100 percent state delegate representation at the Fifth National F. F. A. Convention in 1932.

8. Elect the quota of 75 fully qualified candidates for the "American

item on the conservation of natural resources (soils, trees, wild animals, and so forth), and to recommend this item to local chapters for their programs of work.

13. Encourage State Associations to hold conferences or leadership schools for officers of local chapters.

14. Encourage State Associations to publish periodicals describing F. F. A. activities and to arrange for exchanges with other states.

15. Encourage State Associations to use limited standardized report forms in securing necessary information.

Items 3, 11, and 12 which are preceded with stars are splendid examples of items which call for definite objectives to be incorporated in local F. F. A. Programs of Work for 1932. In adapting them a local chapter might include some objectives set up in the following form:

ITEM	GOAL	WAYS AND MEANS	ACCOMPLISHMENT
1. George Washington Bicentennial Celebration.	Prepare and give three Washington programs between February 22 and Thanksgiving.	1. Study and discuss in chapter meeting types of programs possible and decide on a general plan. 2. Decide on tentative program dates. 3. Appoint committee to be responsible for each program. 4. Co-operate as far as possible with the school and other local organizations preparing special Washington programs.	(Note here extent to which goals were reached at the end of the year.)
2. Conservation of natural resources.	Start an F. F. A. forest tract by securing and planting 500 to 1,000 seedlings or small trees.	1. Discuss in chapter meeting and formulate a plan for securing a tract of waste land. 2. Co-operate with state forest department in securing the plantings. 3. Secure information and training on approved methods of planting and care of forest tract.	

Farmer" degree at the Fifth National F. F. A. Convention.

9. Provide suitable awards for the following events:

a. The F. F. A. Public Speaking Contest.

b. The F. F. A. Star Farmer Contest.

c. The F. F. A. Chapter Contest.

d. The F. F. A. State Association Contest.

e. The American Vocational Dairy and Poultry Convention (judging).

f. The National Congress of Vocational Agricultural Students (judging).

10. Encourage state associations to urge local chapters to provide radio facilities for chapter and classroom activities.

*11. Encourage State Associations to assist local chapters in providing proper equipment for conducting meetings.

*12. Encourage State Associations to

Local F. F. A. officers are urged to study their programs of work and to build and improve them year by year. Certain long-time items may appear year after year and progress will be noted annually thereon until finally the ultimate goal is reached. Some new objectives appear yearly while others drop out, having been accomplished. Developing leadership plus, meeting the needs of the community plus, assisting upon the important objectives in the state and national F. F. A. programs of work are thoughts to keep in mind in local chapter program building.

The Chaffey chapter of Future Farmers of America, at Ontario, California, has a membership of 166 energetic students.

Secure a copy of the F. F. A. Creed,

Virginia Holds New Type Group Conference

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class time. Instructors like it for the same reasons. In addition they feel that it provides an opportunity for using the conference discussions in a practical way and furnishes a basis for further comparison and exchange of ideas after the meetings are over. Moreover, the teacher trainer is afforded an excellent opportunity for effective field work supplementing that done in the teacher training classes.

The training department became convinced that certain weak spots in the Virginia program could not be remedied until intensive effort was made in a limited number of localities in the state. When one of these field training projects succeeded then that group would "sell" the idea to the instructors. In reality it became a living demonstration. Several months later a member of the training department returns to make certain that the improved procedures are being utilized. The training projects or group conferences so far conducted are "Planning Supervised Practice Programs," "Planning Evening School Courses," and "Setting Up Standards for Supervised Practice." Another project planned for is "Adjusting the Farm Program."

A Successful Part-time Course in Agriculture

(Continued from page 169)

Many of the boys were invited to use the school shop on rainy days to make and repair things on the farm. Eight responded and not only did good work but really added to the shop. Meeting them at odd times offered an opportunity to understand them better. All the boys were located from this source. It was found that they were more interested in baseball than farming, and that they wished to "get up a team." This was causing them much worry as to how to go about getting together.

They agreed to let the teacher get them together to organize a baseball club. The names of 46 boys had been given in and a card was sent to each one

peat that feed pretty often. They then decided to meet regularly and carry out several kinds of work, the main things being: Athletics, educational tours, recreation, civic and school improvements, and a co-operative agricultural spirit. At this meeting the officers were elected and committees appointed to get the work started. The baseball club came under the management of athletics and a manager and coach were elected.

The club was a success in many ways. The boys gave a Negro minstrel to help buy baseball equipment, made an educational tour in Alabama, paid dues to the club, and put on such a good community fair that the whole county co-operated in its success. The community had not put on a fair in five years and there was very little interest due to depressed conditions. By getting the aid of the business men over the county, \$75 was raised for cash prizes. The fair featured a live-at-home program as well as emphasizing the desired farming program for this section.

By working together the club offered an opportunity to start a class in some phase of agriculture. The boys decided that they should try to put over a demonstration in truck growing co-operatively. In order to do this they decided to meet each week until a set-up had been worked out for the crops to grow. At the first class-meeting we had a college graduate and experienced truck grower to meet with us to offer suggestions that would help decide what to do. After this we met each week and each one decided to grow an acreage of turnips for the early winter market. Eighteen boys agreed to plant 24 acres. When the time came to plant, it was so dry that only six boys were successful in completing their agreements. These, however, sold to good advantage and made a fair profit. This small experiment stimulated so much interest that there are now 23 boys active in various phases of farming. They meet only to study farm problems and business. The club was discontinued after it had served its purpose, due to the time being taken up with other things and to the cost.

A summary of the work completed to date is as follows:

	Charges	Net Profit	Labor Income
10 boys, 55 acres of cotton.....	\$401.45	\$ 729.62	\$ 895.72
1 boy, 2 acres of sweet potatoes.....	36.00	74.00	102.40
1 boy, 4 acres of corn.....	21.00	79.00	87.00
1 boy, 15 head of hogs raised.....	45.00	35.00	44.80
6 boys, 8½ acres of turnips.....	52.00	145.25	171.25
19 boys, 5 enterprises.....	\$555.45	\$1,060.00	\$1,802.17

a few days before the first meeting that explained its purpose and the time to meet. In the meanwhile all the boys were interviewed concerning the setting up of a social club. Practically every boy favored this but he could not offer any suggestions as to how to go about it. Different types of clubs were discussed and something probable was agreed upon.

When the time came to meet, three of the boys and one of the local business men prepared a "feed." After a discussion of the purpose of the meeting

Meetings were held twice each month while taking up the duties of the club, each meeting 120 minutes. When class work started club meetings were held only once each week for a 20-minute period. All meetings started at 6:30 p. m. The average attendance during the club meetings was 36. The average attendance during the regular classes was 17.

Altho some time was lost in getting started by using the club to stimulate interest, that seemed the only possible

Future Farmers of America Help the Needy

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the needy. The following extracts are from letters received by the state supervisor of agriculture:

"Two weeks before Christmas at a regular meeting of Lamffa (Lambertville) Chapter, one of the boys suggested that we do something to help those less fortunate than ourselves. A motion was soon passed to this effect and everything was brought to the schoolhouse two days before Christmas. Fifteen members of the chapter brought in 5 bushels of cabbage and potatoes, 8 chickens, 11 dozen eggs, 8 pairs of pigeons, 15 quarts of canned fruits and vegetables, 3 pounds of butter, 12 pounds of cottage cheese, 2 pumpkins, and small quantities of beets, carrots, turnips, onions, and apples. It took two trips with a Ford half-ton truck to get everything to the headquarters of the Associated Charities to which organization the chapter donated the food. Much of this food came from the boys' own projects."

"As to relief work carried on by the Salem Chapter, our boys have been delivering eggs each week to needy families for the past four months. The school nurse informs us of the families seriously in need. Also, we are trying especially to take care of poverty in the homes of the boys enrolled in the department."

"The boys of the Vineland Chapter donated to the Vineland Welfare Association, an organization that is looking after the poor and needy of our community, the following: 3 bushels of sweet potatoes, 2 bushels of Irish potatoes, 1 bushel of carrots, 1 large box of canned goods, 4 large packages of clothes."

"Cape May County F. F. A.'s report that following a farm products show, staged jointly by the county agent and the teacher of agriculture, there were several bushels of sweet potatoes, yams, and Irish potatoes available and the F. F. A. boys conceived the idea of distributing them to needy persons. Accordingly, they got in touch with the county nurse, who acts for the Welfare Board in discovering needy families, bagged the produce, loaded it in her car and helped to distribute it."

Note: The F. F. A. special editor will be glad to learn of relief work done in other states.

Faculty Psychology

(Continued from page 173)

will not necessarily result in general improvement of attention, memory, or any other power, but in improved adjustment to some situations or in increased ability to deal in some given way with one type of data. If there is a transfer of improvement from one type of work, or from one situation, to others, it must be due to the presence of some common or identical elements among the several types of work or situations. This view may be called the theory of mental functions.**

*Suggested by G. A. Schmidt and taken from Elementary Psychology, pages 445-446; 447 and 454, Arthur I. Gates,