

Give fools their gold and knaves their power; let fortune's bubble rise and fall; who sows a field, or trains a flower, or plants a tree is more than all.

— WHITTIER



The Agricultural Education Magazine

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

MANAGING EDITORS

H. M. Byram, East Lansing, Mich. Editor
Roy A. Olney, Ithaca, N. Y. Associate Editor
F. E. Moore, Des Moines, Iowa. Consulting Editor
W. F. Stewart, Columbus, Ohio. Business Manager

SPECIAL EDITORS

A. M. Field, St. Paul, Minnesota. Methods
A. P. Davidson, Manhattan, Kansas. Book Reviews
A. K. Getman, Albany, New York. Professional
R. W. Gregory, Washington, D. C. Research
G. S. Anderson, State College, Pennsylvania. Future Farmers of America
L. R. Humphreys, Logan, Utah. Supervised Practice
H. H. Gibson, Corvallis, Oregon. Farm Mechanics
Lester B. Pollom, Topeka, Kansas. Part-Time Schools
J. B. McClelland, Ames, Iowa. Evening Schools
O. C. Aderhold, Athens, Georgia.

REGIONAL REPRESENTATIVES

North Atlantic, E. R. Hoskins. Ithaca, New York
Southern, M. D. Mobley. Atlanta, Georgia
Central, G. F. Ekstrom. St. Paul, Minn.
Western, William Kerr. Boise, Idaho

EDITING-MANAGING BOARD

F. E. Armstrong, Hawaii; E. R. Hoskins, New York; M. D. Mobley, Georgia;
Roy A. Olney, New York; R. W. Gregory, Washington, D. C.; A. K. Getman, New
York; William Kerr, Idaho; J. A. Linke, Washington, D. C.; F. E. Moore, Iowa;
G. F. Ekstrom, Minnesota; W. F. Stewart, Ohio; H. M. Byram, Michigan.

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

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

CONTENTS

Evaluating a National Program of Agricultural Education. Ray Fife.	223
How Progressive Are We?	223
A Father's Toast to Future Farmers.	223
The Modern Use of the Advisory Council. H. M. Hamlin.	224
Impressions of the North Central Regional Conference. R. M. Clark.	225
North Atlantic Regional Conference. Earl H. Little.	226
Annual Conference on Agricultural Education in Negro Schools. F. M. Staley.	227
Do Things Differently in Vocational Agriculture. A. H. Thalman.	227
Materials of Instruction: What They Are and How They May Be Located and Used. W. A. Smith.	228
Promotion of Farm Forestry Thru a Forestry Field Day. R. W. Whiting.	229
Teaching Boys to Budget. L. C. Schank.	230
Planning, Teaching, and Supervising Farming Programs. R. B. Jeppson.	231
Vocational Agriculture—A Continuous Educational Process. G. S. Dowell.	232
Kaufman, Texas, Farmers and Their Wives Ride to School in Busses. Bob Thurman.	232
Wyoming Teachers Aid Out-of-School Farm Youth. Sam Hitchcock.	233
Certificate and Membership Card for Young-Farmer Classes. R. W. Gregory.	233
Mechanics for Farmers in a Machine Age. A. H. Hollenberg.	234
Keeping Shop Equipment Up to Date. Mack M. Jones.	234
Rural Electrification and Its Possible Effects on Courses in Farm Mechanics. James F. Merson.	235
Planning Instruction in Rural Electrification. H. L. Price.	235
The Place of the Future Farmers of America in the Improvement of Agriculture. Clayton Young.	236
Growth Under Adversity. Alvin Bauer.	237
Raising Certified Seed for Experience and Profit. Russell Jouno.	237
Putting on a Large Farmers' Banquet. Clark Pierce.	238

Editorial Comment

Evaluating a National Program of Agricultural Education

FOR several years there has been a strong demand from certain national leaders in business and agriculture that vocational education set up definite methods of evaluating its own program. The idea has gradually taken form and in the 1938 convention of the American Vocational Association, the Vocational Agriculture Section of the Association made a formal request to Mr. J. A. Linke, Chief of the Agricultural Education Service, that a National Committee on Standards be appointed. The request was promptly considered, the committee was selected, and an early meeting was held. At this first meeting, tentative plans were drafted. These plans have gradually evolved into the national proportions which the study has now assumed.

Since the National Committee on Standards in Agricultural Education has now progressed to the point in its work where the training of evaluators and the actual evaluation of local departments of vocational agriculture are being conducted, it is very important that there be general understanding of this evaluation program.

At the outset, it should be emphasized that the results of the local evaluations in this nationwide study *are not to be used for administrative or supervisory purposes* so far as individual departments are concerned. The summarized results of the entire national study should, of course, have a very valuable place in administration, supervision, teacher education, and teaching. Some states have already expressed an intention to extend the evaluation to all departments within the respective states, in which case very valuable state summaries can be made. The point to be emphasized is that no individual teacher of vocational agriculture need fear that the survey will be used either for or against him. The survey is concerned with summarized facts, not with individual teachers. Any other use of the survey results would not only be unethical but from a purely selfish point of view it would destroy the confidence and freedom which should prevail in this or any later investigation.

A second fact which should be understood is that the "evaluative criteria" are not solely a committee product. Many experimental evaluations have been made in all sections of the country during the past year. Thus, the "evaluative criteria" which have been developed represent a cross-section of the thinking of teachers, teacher-educators, state supervisors, state directors, and Federal agents, in agricultural education. Such a procedure is more laborious and more expensive, but it is also more democratic.

It is recognized by the committee that the "evaluative criteria" will find their major use as an instrument by which teachers or groups of teachers may evaluate their own programs. The summarized results of the present national study should also be very helpful to Federal and state administrative and supervisory officials in the formulation or revision of standards. Fear has been expressed in some quarters that this study may result in increased Federal or state standardization of programs. Both the Smith-Hughes and the George-Deen vocational education acts definitely recognize the local community as it is represented by its board of education. Certainly there is nothing in a national self-evaluation of our program of vocational education in agriculture which will interfere with local initiative or local control.

Some questions have been raised as to why the national committee did not adopt evaluative criteria which would measure outcomes rather than ways and means; this is the problem which always confronts an evaluating committee. Shall an educational committee evaluate ways and means as instruments of progress toward objectives or shall it attempt to measure outcomes and assume that such outcomes are the result of its own instructional program? In the writer's personal opinion both types of measurement have their place. We are not faced with a situation where we must choose one or the other in a long-time self-evaluation program. As our program of vocational education in agriculture continues, it is probable that we shall develop both types of measures.

Due to the informal nature of the program in vocational agriculture and the number of concurrent agencies in agricultural education, the measurement of outcomes will be very difficult so far as any single agency is concerned.

Teachers of vocational agriculture should understand that, in addition to the criteria which are used to evaluate the local department, the committee plans to develop evaluative criteria for supervision and teacher education, as well.

From the teachers of vocational agriculture who are in charge of programs which may be evaluated in this first phase of the national study, we solicit the heartiest co-operation. Such co-operation will not only insure an accurate cross-section of our program in the United States; it will result in many constructive criticisms of the "evaluative criteria" which may be useful in further revisions. A profession which participates in a thorough, accurate evaluation of its own program is providing the basis for continued growth and development.

—Ray Fife, Columbus, Ohio.

How Progressive Are We?

"A WORD of caution needs to be given from the progressive education standpoint in that some of the problems, while real for adults, may not be the most valuable problems for the boy. . . . Too much insistence upon projects which improve practice, for example, may force the boy into an enterprise which, while most valuable for the community, is less productive for him than an experiment with existing materials, such as grade stock, would be. The emphasis should no doubt be placed upon improvement of the boy rather than improvement of the livestock and some progressive education leaders would view with alarm the tendency to give prizes for the best purebred pig rather than for the boy who has done especially fine work with the grade pig.

"If any enterprise is carried beyond the point where it ceases to be educative and becomes really community service, the burden of proof for its educational validity rests on the school."—From "How Progressive is Vocational Agricultural Education?", *The Ohio Vocational Association News*, IV.

A Father's Toast to Future Farmers

"IN BEHALF of the dads that you boys have invited to this banquet, I wish to thank you for the opportunity you have given us to meet with you and enjoy this fellowship.

"Social gatherings like this are essential to promote greater co-operation between father and son, for we must work together. We need you to push things along and you need our counsel and guidance. By getting together, farmers can talk over their experiences and profit by each other's mistakes in these uncertain times. Old farming practices must be changed to meet the loss of world markets and the demand of home markets. In a world that is changing so fast that it is finding itself unprepared to meet the difficulties of present-day living, there is a ray of hope shining from the spirit of our young farm folks who are preparing themselves to deal with the problems of rural America as it enters a new era.

"A great help in this development of the spirit of farm youth is being given by such organizations as the F. F. A. and others who encourage the farm boys to carry on. Often an attitude of indifference and a lack of ambition are changed into a definite, worth-while life dream. Boys prepare for the future, learning to do by doing, and showing the older folks what the younger are able to do.

"A leading educator has said, 'The kind of person demanded by our social order must be possessed of the spirit of independence and self-reliance, and must be capable of initiative and free co-operation with his fellows.' The F.F.A. is one organization that gives the boys just such training.

"As good leadership is one of the most essential needs in our land today, it is up to us dads to encourage our boys to do their best. They believe in us and it is our privilege and duty to be a good moral and spiritual example before them, that they might become the right kind of leaders."—Albert Weisinger. (Given at a Hazlett, Michigan, F.F.A. Banquet.)

The Modern Use of the Advisory Council

H. M. HAMLIN, Teacher Education,
Urbana, Illinois



H. M. Hamlin

ADVISORY councils have been in use almost from the beginning of our efforts in agricultural education. In some states they have long been required in each community receiving Federal and state aid. In recent years there has been a renaissance of interest in these councils mainly because of their proved usefulness in adult education in agriculture. F.F.A. advisory councils have also come into use with good results in recent years. New procedures in choosing and using councils have been discovered.

Few teachers, either of part-time or of evening classes, would now attempt to get along without councils. It has been found that a good council in itself practically assures successful adult work. If the council is effective, the enrollment and attendance will be satisfactory. If the teacher cannot do his part satisfactorily, the council will assist him to meet his responsibilities or will insist upon having a teacher who can meet them.

Guides for the Use of Councils

As a result of trial and error in the choice and use of advisory councils, a few general principles are becoming widely accepted.

1. There should be a general council and also a special council for each part-time and evening class. There may be a special council for the F.F.A. chapter or for the day-school program as a whole or the general council may serve for these enterprises. Close correlation of these councils should be secured thru interlocking memberships. Councils for special purposes should be set up and appointed with the approval of the general council.
2. The general council can exist only if it is provided by the community board of education. Its members should ordinarily be nominated by the teacher of agriculture and the head of the school system, and appointed by the board of education. It is usually advisable to have at least one school-board member on the general council to bring about co-ordination.
3. Councils should be relatively large so that they represent accurately the opinion of the community as a whole and so that their members will have personal contacts with most of the people in the community whose interests they are supposed to represent.

Councils should seldom have fewer than seven members; often they should have nine or more members.

4. Definite membership terms, usually of three years, should be provided if the council is a continuing one. A portion of the council members should be retired annually. Those retiring should not be immediately eligible for reappointment.

5. It is usually advisable to emphasize the advisory character of these councils. They may assume certain other responsibilities, such as recruiting the membership for adult schools, but they have no authority to take over functions which have been delegated by the community to the board of education unless they are requested by the board of education to take them over.

6. Part-time and evening-school councils should be composed of participants in the classes these councils serve. Councils made up of persons who are concerned only with adult education for other people are a handicap rather than a help.

7. Frequent council meetings are needed if the councils are to justify their existence. The most effective evening-school councils, for instance, meet nearly every month thruout the year and weekly following class meetings when classes are in session.

Special Councils

There has been a common tendency to have only one evening school or one part-time school per community. This has led to the setting up of councils for each with members whose interests are very diverse. Evening-school courses designed to satisfy such councils have usually been lacking in unity. There will probably be a need always for one evening school each year of general interest to the community. As soon as possible, however, we should begin to develop special councils for special courses to supplement these general courses. For example, a council of dairymen might be set up to plan an evening school in dairying and recruit members for it. Such a course might continue for one year only and the council might be disbanded at the end of the year, or it might continue indefinitely. Similar special councils may be needed for specialized part-time schools.

In some communities council members are elected by the classes they serve. This makes the procedure more democratic but, if care is not exercised, the legal lines of authority may be disregarded. The community board of education has been elected to manage the schools, including their departments of agriculture. Some boards may prefer to allow evening or part-time class mem-

bers to choose their own councils. An intermediate procedure, which has been used successfully, is to nominate temporary council members who recruit the members of their classes and then to ask the entire membership to elect a more permanent council. Usually the members of the temporary council are chosen to serve on the permanent council. One variation of this procedure is to divide the evening class into groups or squads and have each squad recruited by a member of the temporary council elect a member to represent it on the permanent council.

How Many Councils?

The increasing use of various kinds of councils in agricultural education presents certain problems. Is there a possibility of having too many councils and too much advisory machinery? Will the teacher's initiative be curbed? Are councils only for beginning teachers or do experienced teachers need them also? What would be the result if all departments of a school set up series of councils paralleling those now in use in some agriculture departments?

While urging that we proceed thoughtfully, the writer is not greatly worried by these questions. He believes that all teachers of agriculture and all other teachers could gain much from the wise use of advisory councils. We all need counsel; we are in danger of not getting it systematically or from the best sources unless special provisions are made. A system of councils gives our constituency a different attitude toward our work. The greatest business executives commonly have their boards of directors. The most capable school superintendents have their boards of education. Teachers of agriculture need groups of laymen to assist them in making their more difficult decisions, in planning their programs and policies, and in interpreting their work to the public.

Youth and Money Management

"YOUTH and Money Management" will be the subject considered at the annual Summer Session Conference of Cornell University on August 8-10, 1940. A general session will be devoted to the subjects of planning, saving, borrowing, and insuring. The final session will be devoted to a consideration of how to teach money management in the schools. Speakers already secured include: H. E. Babcock, founder of the G. L. F.; B. H. Francis, American Institute for Economic Research; and President Edmund E. Day, and Professors Helen Canon, Whiton Powell, Mark Entorf, and F. M. Thurston of the Cornell faculty. Outlines of speeches and bibliographies will be distributed at the opening session, and there will be a discussion period following each major presentation.

Impressions of the North Central Regional Conference

R. M. CLARK, State Supervision,
Lansing, Michigan

THE North Central Regional Conference for leaders in vocational education in agriculture met in Chicago, March 20-23, 1940. Mr. J. H. Pearson, Regional Agent, U. S. Office of Education, Dr. O. E. Baker of the U. S. D. A., and Chief J. A. Linke of the U. S. Office of Education set the background for the conference during the first session. Mr. Linke listed a number of problems which need to be met in order to maintain the present program in agricultural education and to bring about improvement. Among these is that of providing suitable training for teachers and for supervisors to keep them informed so that they may help teachers in the field on the newer trends in vocational agricultural education.

Dr. Baker presented statistics on population trends with implications for agriculture. Dr. Baker believes that there will be a decided trend toward smaller farms and toward a "live-at-home" type of agriculture which will necessitate a greater amount of emphasis on the contribution of the farm for family living and less emphasis on the commercial aspects of farming as we have at present. He also pointed out that there will be increasing competition for land. It is already true that there are many more farmers than farms in a number of midwestern states.

Significant Factors

Dr. J. H. Kolb of the University of Wisconsin made a plea for a consideration of the total program of education for all the people of the community. The discussion from the group emphasized that the teacher of agriculture should have a part in this community plan for education, but that he should not be expected to shoulder the entire burden. The program as a whole should be planned and administered by the local school administrators with the help of a local council or other agency which seems desirable in the area.

Other discussions concerning the characteristics of all-day, part-time, and adult students were presented. It was pointed out that we must study the characteristics of the group and base the instruction on their needs and characteristics. The alert teacher will be able to capitalize on these needs and interests and therefore do a more effective job of teaching.

Establishment in Agriculture

One-half day was spent in a discussion of problems of establishment. Agricultural occupations open to vocational agricultural students were presented, as well as a number of studies showing how graduates in vocational agriculture had become established. The problems encountered in becoming established were brought out. Much work needs to be done in helping these young men to become established. Instruction which will aid them in this problem needs to be provided and an adequate follow-up

program needs to be carried out. A good deal of organized instruction in part-time and adult classes is essential for successful, progressive establishment in farming.

Supervised Farm Practice

Supervised farm practice was discussed by supervising teachers, teacher-educators, and supervisors. Conclusions which might be drawn from the discussions indicate that supervised practice for day and part-time students should provide experiences which will make them more proficient farmers, and should help them accumulate as much capital as possible to aid in establishment in farming. In addition, the supervised practice work should help to improve the farming and farm living conditions on the boys' home farms. The teacher should capitalize on situations as they appear on the farms of his boys for teaching purposes and develop a supervised practice program to improve undesirable situations.

The supervised practice for adults should help them to improve their farm practices and improve their living conditions. Such improved practices as better feeding of livestock, soil-erosion control, or installation of a bathroom should result from properly conducted and systematically supervised adult classes.

Older Youth and Adults

Systematic instruction for out-of-school young men and adult farmers is becoming a more important part of the vocational agricultural program. Formerly we "talked short courses and taught short courses." The time is rapidly approaching when plans for a long-time vocational agricultural program will be made up by the local school administrators. Such a program will provide for a continuing program of vocational agriculture including day-school, part-time, and adult instruction. The part-time and adult instruction will provide for 12 months of instruction each year rather than the 10, 15, or 20 meetings which have formerly been in vogue. The program in vocational agriculture should provide for placement and establishment, it should be student-centered, integrated with a community program, and should provide for putting the classroom instruction into action.

Courses for part-time and adult classes should be made up of definite, concise, and specific units of instruction. The units should vary in length and frequency and should be based on the experiences and needs of the students. Each unit should be organized to meet the needs of those in the class. Such courses will result in improved practices on the farms and will provide for progressive establishment in farming for those who are in the classes.

Courses should be planned by a council of farmers and others in the community rather than be handed to

the students by the teacher. The council should plan for a long-time continuous program so that there will be continued and progressive development in the community.

Conclusions on Teacher Education

One of the major problems in teacher education is to provide the students with all of the experiences which they will need for satisfactory work in the field as a teacher. The trainee needs to visit farms, supervise boys in their directed practice program, meet parents, conduct project tours, study home farm situations of the boys, and supervise other activities which successful teachers do.

The number of teachers of vocational agriculture being trained in the United States has increased greatly in the past four years. At the same time the turnover has been very rapid, so that at the present time one half of the teachers of agriculture in the United States are those who have been graduated within the past five years. One of the major problems in this connection is trainee selection. Teacher-trainers and supervisors need to develop techniques and criteria for the selection of trainees so that supply and demand may be kept in proper relationship. Research should be started to find criteria for selection.

In-service teachers need to continue their education. One phase of this training has been provided in in-service courses in course building. Teachers who have taken such courses have used basic information such as census data, survey data, farm-management summaries from state colleges, soil surveys, and other data for a basis on which to set up their courses. They have then formulated their objectives and organized their course to meet the problems which will arise in their communities, in the areas indicated by the basic data. Supervised farm-practice programs in the areas represented by the basic data will make it advisable to base the course largely on the supervised practice needs of the boys in the classes.

Such courses as these will be a distinct aid in helping teachers to improve their instruction and will help teachers to build their vocational agricultural courses on the needs of the boys in their supervised practice programs.

Research

Quite a number of research studies are under way in the region. These studies include work in establishment in farming, out-of-school youth surveys, part-time farm studies, evaluation, and others. Research work will provide vocational agricultural workers with a scientific basis on which to work. It is an important part of agricultural education, it will help determine the value of our past contribution, and will point the way toward future activities.

Future Farmers of America

F.F.A. programs need to be improved and members need to be encouraged to study their organization and to co-operate in improving its weaknesses. Members should be carefully trained to work together in their organization. They should study their responsibilities as members, their duties as officers, and their abilities in leadership activities.

North Atlantic Regional Conference

EARL H. LITTLE, State Supervisor,
Concord, New Hampshire

RESEARCH, programs for out-of-school groups, farm mechanics, and teacher education were featured in the annual conference of executive officers, state directors, state supervisors, and teacher-trainers in agricultural education for the North Atlantic Region held March 19-21, 1940, at the William Penn Hotel, Pittsburgh, Pennsylvania.

In the opening report of the regional agent it was pointed out that teacher-training institutions were qualifying an increasing number of men for positions during the current year, which indicates a surplus of men who will be seeking positions for the coming school year. There has been a material increase in the number of part-time and evening schools in the region during the year, and four states have amended their state plans so as to provide for vocational guidance.

Implications of Population Trends

Dr. O. E. Baker, of the Division of Farm Population and Rural Life, U. S. D. A., held the conference spell-bound on the subject, "Trends in Rural Population and Their Significance." The population movement to and from rural areas with the present decline in birth rate, both urban and rural, prompted the question, "What are the implications for workers in agricultural education?" This was answered by Dr. Baker, saying that he could see two as follows:

1. "There are more pupils available in schools at present than there will be in the future.
2. "There will be an increase in the number of youth living on farms during the next decade, resulting in the difficulty of obtaining suitable farms to operate. These youth will be looking for and need guidance in occupational opportunity."

Problems in agricultural education were discussed by J. A. Linke, Chief, Agricultural Education Service, who stated that, "The problem of the future is not one of promotion but of improving our present program." Mr. Linke touched on teacher training, supervision, and the F.F.A. Some of our problems in teacher training were listed as: (1) Providing a genuine resident teacher-training program. The job of the teacher should be carefully analyzed and made the basis of the training program. (2) Providing participation training. The student-teaching center should have a well-rounded program, an active chapter of F.F.A., and all-day, part-time, and evening classes in order to provide participating experience for the trainee. (3) Assuring farm experience of trainee. Each trainee should be given a series of tests to ascertain if he can perform to a desirable degree of proficiency all of the essential farm skills. (4) Adaptation of technical courses in the college of agriculture. The content of the required technical courses should be carefully scrutinized from the point of view of meeting the needs of the trainee for public service.

Progress in Research

The states of Ohio, Vermont, New Hampshire, West Virginia, and Pennsylvania reported long-time programs of research under way. The problem areas in these states had been selected and defined at a conference attended by representatives in charge of the state program, and by Dr. Lane and Dr. Lathrop. The number of problems in each state varied from 18 to 27 and included nearly every phase of the program in vocational agriculture.

Dr. Lathrop reported on the national evaluation study and outlined the following three purposes of the study: (1) Provide a basis for revision of standards. (2) Tabulate data for summarization of programs. (3) Assist teachers and others to evaluate their own programs.

A preliminary survey showed that 11 studies were completed during the year with an additional 15 being reported as in progress. The problem of occupational opportunity and placement was reported as the one study of greatest popularity. Undoubtedly there are many other valuable studies that have been made in the region, said Dr. Lathrop. These may not have been reported because the author was not a candidate for an advanced degree or because he did not sense the general worth-whileness of his contribution.

The problem of developing part-time and evening schools thru providing participating experience for every trainee during the training period came in for discussion. The prevalence of short practice-teaching periods was cited as a factor justifying a great deal of in-service training. Dr. H. G. Kenestrick, Ohio, presented the following four phases of the program for preparing teachers for teaching part-time classes. (1) Each trainee must be provided with an opportunity to find and solve the problems of young farmers thru personal interview and contact. (2) He must have an opportunity to lead young farmers in a group so that they themselves may solve problems. (3) The group plans should be personalized to the point where their solving will involve individual problems. (4) Every trainee should have an opportunity to see that the individual plans are put into action.

Improvement of Instruction in Farm Shop

During the half day devoted to discussion of farm mechanics, the subjects of equipment and facilities for instruction, pre-employment instruction, upgrading teachers in service, effective organization, and the status of the work in the region were discussed by representatives in this field from Ohio, Pennsylvania, New Jersey, and West Virginia. D. C. Sprague of Pennsylvania State College reported an effective in-service education program dealing with electricity, which included such simple jobs as splicing wire, with progression to the more complex electrical jobs of reversing motors and converting motors from 110 volts to 220 volts. There was a direct relationship between the amount

of work of this type taught in the departments before and after the in-service training program. It was brought out that we need to make a critical review of the farm-shop courses offered trainees in our teacher-training institutions to determine (1) if they are being taught in the best setting available at the institution; (2) if the training, background, and experience of the instructors are adequate; and (3) if trainees are being taught those skills necessary for effective and efficient farm-shop instruction. The amount of time devoted to farm mechanics in the departments of the region varied from none to more than one half the total time allotted for systematic instruction in vocational agriculture. It was the consensus of opinion of the conference that shop jobs of an exercise nature and small projects of industrial arts type have no place in a well-planned farm-mechanics program, but that the instruction should be based on the supervised farming program of the members of the classes and the type of agriculture practiced on the home farm.

Survey of Student-Teaching

In teacher education the conference centered its discussions around the supervising teacher. F. E. Heald of Massachusetts made an outstanding contribution with his study of "The Functions of the Critic Teacher." A list of 40 experiences which a trainee might encounter were duplicated and separate lists were sent to supervising teachers and student teachers. Each was asked to check the 40 experiences on a scale of importance. Returns were secured from 66 supervising teachers in 11 states, and 159 student teachers in 10 states. The list of experiences was wide and included courses of study, lesson planning, supervised farm practice planning (all phases), departmental record keeping, conducting field trips, discipline problems, F.F.A., and general school co-operation, as well as many others. Supervising teachers reported, for example: preparation of plans for teaching lessons as very important for student teachers, yet the experiences of supervising project accounting, following up former pupils, and recording placement were rated relatively low. Many interesting problems were outlined by the trainees themselves with a large majority favoring a longer apprentice-teaching period. The practice period in the region varies from approximately three weeks to 11 months, with financial assistance to the trainee varying from nothing to a yearly salary. Some trainees receive travel allowance only, others travel and subsistence. This study points to the necessity and desirability of conferences for supervising teachers. It also challenges the best effort of resident teacher-trainers and supervisors in the region.

Schools of philosophy for agricultural workers were outlined by Morris B. Storer, of the U. S. D. A. Bureau of Agricultural Economics. Thru group discussions these schools develop the question: "What is a desirable national agricultural policy?" Such programs are organized for the purposes of (1) encouraging and stimulating individual thinking on underlying social problems; (2) assisting to a better understanding of current problems out of which have developed the present national, state,

diversion of thought so as to contribute to the individual's perspective; (4) helping leaders to prepare for a planned agricultural program. The staff members of these schools are selected entirely on a basis of individual excellency and represent widely differing trends of thought.

Visual education was given its round during the first evening when moving pictures showing "Vocational Education in Georgia" and the "Green Hand" were shown. Between films the Trinity, Pennsylvania, chapter of F.F.A. inspired

Annual Conference on Agricultural Education in Negro Schools

F. M. Staley, Teacher Education,
Savannah, Georgia

UNDER the direction of W. N. Elam, Federal agent for agricultural education (special groups), United States Office of Education, the conference of state supervisors and teacher-trainers for agricultural education in Negro schools for the southern region was held at the Agricultural and Industrial College, Nashville, Tennessee, March 25-29.

In order to take advantage of the presence of national experts, the members of the national board of trustees of the New Farmers of America were also called into session to make plans for the annual conference which will be held in August at the Arkansas Agricultural and Mechanical College, Pine Bluff, Arkansas, and to participate in a leadership-training school, which was conducted daily under the direction of W. A. Ross, national executive-secretary of the Future Farmers of America.

In attendance at the conference were supervisors, teacher-trainers, deans of agriculture, and national and state experts in agricultural education who had gathered from the 16 states in which vocational agriculture is taught in Negro schools.

Current Problems Discussed

The activities of the conference centered around the theme, "Efficiently expanding the services of the teacher of vocational agriculture in the community." The activities of the conference this year, more so than ever before, were characterized by sincerity, determination, and earnestness.

During the conference, reports were made by teacher-trainers on the following:

- "The self-improvement plan for teachers of agriculture"
- "Our state program of work"
- "Farmer training by co-operative agricultural agencies"
- "Suitable objectives in a state program of work"
- "Improving farm homes thru a farm-shop program"
- "Expanding agricultural education thru a farm-shop program"
- "Expanding the supervised farming program with P.C.A. loans"
- "Farmer training thru part-time classes"
- "Laying the basis for expanding the

brooding chicks, on vs. security. These were exceptionally well done and the congratulations of the group go to this chapter for being among the three highest scorers in the Pennsylvania Farm Products Show.

The 1941 North Atlantic Regional Conference will be held April 8-10 in New York City. By a majority vote Pittsburgh, Pennsylvania, was added to the regular list of meeting places, the order designated to be as follows: Boston, Pittsburgh, New York City, Washington.

- program by improving the methods of teaching"
- "The N. F. A. pig-feeding contests"
- "Progress report in teacher training"
- "Accomplishments of the N.F.A."
- "Publicity, or keeping the public informed"
- "Expanding agricultural education service to the small rural school"
- "Progress report of agricultural education in Negro schools"
- "Securing suitable farm experience for prospective teachers of vocational agriculture."

Contributions by Federal Officials

The annual report of the region, submitted by W. N. Elam, Federal agent for agricultural education (special groups), was interesting, educative, and challenging. W. A. Ross, specialist in agricultural education and executive secretary of the Future Farmers of America, Washington, D. C., inspiringly and enthusiastically discussed the topics: "Getting the N. F. A. to function" and "Organization and use of subject matter in agricultural education." Under the direction of F. W. Lathrop, specialist in agricultural education (research), U. S. Office of Education, Washington, D. C., a demonstration was given in evaluating a local program of vocational agriculture.

Other speakers on the program included: D. M. Clements and H. B. Swanson, U. S. Office of Education; Charles S. Johnson, professor of sociology, Fisk University; Jiles Hubert, agricultural economist, F. S. A., Washington, D. C.; and C. F. Clark, economist, A.A.A., Washington, D. C.

Joint Meeting With Home Economics Leaders

Realizing the necessity for co-operative effort in promoting a program to further develop a satisfying farm family life, a joint meeting of teacher-trainers in home economics and agriculture was held during the conference. A report of the committee on the joint program from the Southern Region (white) was submitted by Miss Elizabeth Todd, teacher-trainer, Georgia. Immediately following the report the discussion centered around problems involved in a joint program and how they may be met.

It is not often that a man can make opportunities for himself, but he can put himself in such shape that when . . . opportunities come, he is ready to take advantage of them.—Theodore Roosevelt.

Vocational Agriculture

A. H. THALMAN, Teacher,
Graysville, Indiana

"WE DO things differently here" might be a characterization of any successful organization, including a department of vocational agriculture. "That department is going somewhere" is often said of the better departments.

Teachers of vocational agriculture and other agricultural workers have in their hands the strings to possibilities beyond number.

Tho we may lack the personality, the ability to sway audiences with addresses, and the sales talk of professional businessmen, we can still help our fellow-men. One becomes noble, great, and valuable by giving of one's self to others. By that I mean that if we have, for example, a good evening school of adults and really put across sound principles, we not only help others but we boost ourselves. Hence, when we can cause others to become successful, we ourselves will become successful.

You, teachers, sit down with your head in the palm of your hand and consider how you can really put over sound agricultural principles in your community. Sponsor a corn experimental plot on some farmer's field near town on a main road. Collect sheaf samples for your classroom and display them attractively. Add to this some practical articles in the farm shop like poultry feeders—even tho you have meager equipment. Remember that it is the unusual or unexpected that will count.

In other words, try to discover how you as Mr. Teacher can best teach boys and other people how to live more happily and completely. Individual differences should be respected in teachers as well as in students. You must spend your time where you can do the most good in your community agricultural work. If you cannot train a demonstration team, do not spend too much time trying. There are numberless things you can do.

Try to keep every aspect of your work at as high a level as possible. We have too few famous teachers of vocational agriculture, but we can all move toward "the upper ten percent" bracket. Try doing things differently!

Book Review

The Consumer Investigates, by Zuta-Tavern & Bullock, 525 pp., illustrated, published by the H. M. Rowe Company, Baltimore and Chicago, net price \$1.50. The text is accompanied by a workbook which is priced at 66c net. This book is designed to teach people to determine for themselves the ways in which their money will bring the greatest real value. All the details of formal economics and business organization that are of no direct aid to the consumer are omitted. Individual products, the very nature and value of which change constantly, are not analyzed. The whole emphasis is on developing good judgment in buying for personal use. The book is designed for the secondary school level but should prove helpful to other persons.—A.P.D.

Materials of Instruction: What They Are, and How They May Be Located and Used

W. A. SMITH, Teacher Education,
Ithaca, New York

THE expression "materials of instruction" is variously used. Some curriculum makers use this phrase to mean the problems or units of instruction which make up the courses of study and the curriculum. A discussion of methods or procedures in teaching is quite likely to include reference to materials of instruction as either confined to or including those physical properties commonly spoken of as equipment and which facilitate or retard the teaching process, depending upon their adequacy, availability, and use. This interpretation would include such items as tables, chairs, apparatus, blackboards, and the like. A third meaning which may be applied to materials of instruction lies somewhat between these two extremes, limits the term to those instrumentalities in teaching which serve as the vehicles or sources of information and meanings necessary in the solution of the problems around which instruction is centered. Some examples are books, bulletins, and other printed aids, and pictorial and illustrative materials. It is this latter interpretation, somewhat arbitrarily determined to be sure, which is being used here.

The usual items of materials of instruction in vocational agriculture, if such meaning of the term is accepted, are: the farms in the community and of individual members of the classes, other items of the out-of-school environment, books for text and reference purposes, bulletins, magazines and periodicals, charts, maps, pictures, collections—insects, diseases, varieties, etc., and the miscellaneous printed or mimeographed aids which come to the attention of the teacher from a variety of sources and in considerable quantity. All of these serve in varying degrees of adequacy as the sources of information necessary to the solution of the problems studied.

Teachers of Agriculture May Have Abundant Materials

No teacher of vocational agriculture will deny that the materials of instruction in his field are abundant. At least this is true if we think of materials in their total quantity. We may find ourselves short in materials for specific needs upon occasion and we may be confronted, now and then, with the problem of availability of materials, but few teachers in other fields can call upon the abundance of instructional materials that commonly exists for us.

The first and foremost source of materials is the farm itself. Each boy coming to us for instruction has a farm, or has access to one which offers much in the way of instructional materials in the

sense in which the term is used here.

Perhaps we should review in terms of this example the distinction being given here in the meaning of the term—materials of instruction. The farm is the primary source of problems if our instruction is to enable pupils to prepare for farming occupations. The farm, too, provides the equipment or facilities for teaching. The cow, the flock of chickens, the growing crop, and the poultry house, all provide the most vital and most appropriate equipment which the teacher or vocational agriculture may use. But in addition to these forms in which the farm functions in vocational instruction in agriculture, it serves still a third purpose and the one with which we are dealing in this discussion—a source of the information necessary to the solution of problems. In other words, the poultry flock, the cow, the field of potatoes, and the dairy barn furnish information necessary in answering the pupils' problems.

Many Sources of Printed Information

It should be quite unnecessary in addressing remarks to teachers of vocational agriculture to emphasize further the importance of the environment as the first source of materials of instruction. They have always considered it so and there is no reason to anticipate any change in their point of view. Among teachers of other subjects this importance of environment may find less recognition in spite of such efforts to emphasize for them its importance as found in the Eighth Yearbook of the Department of Supervisors and Directors of Instruction of the N. E. A., which is devoted to a discussion of materials of instruction. I mention this publication here as being one of a very few which I have been able to find that devotes much attention to materials of instruction in the sense used here.

Accepting the farm and related items of environment as the primary source of materials of instruction, there is little opportunity for questioning the abundance of materials in that direction. How about the prevalence of other forms—books, bulletins, other printed or mimeographed materials, charts, pictures, and collections? Certainly in most of these classifications there is an abundance. For the past year I have been making a partial collection of the printed and mimeographed aids which arrive periodically from such agencies as the U. S. D. A., Soil Conservation Service, the Agricultural Adjustment Administration, Bureau of Agricultural Economics, the Farm Credit Administration, Civilian Conservation Corps,

Dairymen's League Co-operative Association, Consumer's Guide, Beacon Milling Company, and many others. Either you as teachers have much of these materials in your department files or your well-known "vertical files" require frequent emptying.

How Separate the "Wheat From the Chaff"?

What are the problems confronting the teacher with reference to materials of instruction? *The evaluation of kinds of materials* is a continuous problem, increasing as the abundance of materials increases. Whether to use books or bulletins, pictorial illustrations or the original material, a technical article in a magazine or the first-hand statement of some farmer, banker, or veterinarian in the community, and what combinations of such materials to use—all are questions which depend upon evaluation of materials generally and for specific cases in particular for the best answer.

A second problem and one dependent in part upon evaluation is that of *selection of materials of instruction*. What bulletin or bulletins are most appropriate for a given lesson; the selection of a desirable film strip or set of lantern slides; and which illustrations to use—either alone or in combinations with other materials—are problems arising with every lesson. There is quite likely to be much more involved in such selection than merely whether or not the title of the book, bulletin, or other material is appropriate to the need.

Adaptation of materials to needs and uses is a third problem. Many materials potentially desirable, and in some cases non-existent in any other form, are not usable because they are too technical, uninteresting, or ambiguous. If abstracted, rewritten, or otherwise changed in terms of specific needs and specific pupils, they become excellent instructional materials. Lack of time is a limiting factor to solution of this problem by the teacher in many instances. However, occasion may demand that some attention be given it and that the teacher do something about it.

Keeping Materials Up to Date

Closely related to adaptation of materials is the problem of *revision of materials*. We are all familiar with the rapidity with which materials become out of date in the field of agriculture and farming. The older teachers will appreciate this fact especially. Many of the older materials remain the best that can be had and some are just as reliable today as when they first became available. Others continue in usefulness only with revision in the light of progressive development. Perhaps the solution in this case lies outside the province of the teacher. If no one else does the job, however, the teacher is handicapped unless he can and will do something about it for himself.

Preparation of materials constitutes a

of instruction. The materials used in this connection are quite likely to be confined to such materials as collections or exhibits, film strips and slides, pictures, charts and graphs, and other visual aids. Teachers could, if they had the time, prepare many excellent materials in written or printed form. But probably we will continue to look to the subject-matter specialist and the technical authority as the source of most of our printed aids in teaching. It is pertinent to add here, however, that because this is true we are quite likely as teachers to continue to be confronted with the problem of adaptation of the language and the organization used by the technical authority to the needs and abilities of our pupils.

How We May Help Each Other

In spite of the existence of materials of instruction in generous quantity, emphasized, there still remains for most of us the problem of *availability of materials*. Many items of materials are brought to our attention frequently and regularly. For this we are indebted to the efforts of the U. S. Office of Education in having the names of teachers of vocational agriculture placed on mailing lists of the various agricultural agencies in Washington; to the state agricultural experiment stations and departments of agricultural extension for their services in keeping us informed of the materials which they prepare; to the commercial concerns which prepare and distribute exhibits, samples, and printed materials; to publishers; and to other agencies and services which have been so ready and willing to make materials or information available to us. Still we have the problem of availability as long as teachers find need for materials which they cannot get or of which they are unaware.

Teachers may assist in solving this problem by including discussions of the problem in their group meetings, making known their experiences in the use of materials thru the columns of such professional journals as the *Agricultural Education Magazine*, and otherwise assisting each other directly or thru their own teacher organizations. A large share of responsibility in solution of this problem of availability may fairly be placed upon the offices of supervision and teacher preparation.

The seventh problem in this field of materials of instruction is one which we may identify as *manipulation of materials*. By this I do not mean the use of materials in the sense of procedure in the act of teaching but rather classifying, filing, preserving, or otherwise managing materials. Very few teachers use the same scheme of caring for their books, bulletins, periodicals, illustrative materials, or exhibit materials and collections. Many teachers have developed ways and means which for them are entirely adequate and satisfactory. Others are limited in their opportunities for proper manipulation of materials by the lack of facilities for filing and of efficient management. Progress in the solution of this problem will be made to the extent that individual teachers attempt to bring order out of what oftentimes becomes a rather chaotic condition in the organization of their classrooms. The co-operation of teachers, super-

management of materials is needed.

Specific Suggestions

In a recent North-Atlantic Regional Conference, Mr. W. A. Ross, subject-matter specialist in the U. S. Office of Education, presented suggestions on what the teacher of vocational agriculture could do in his local community toward solving problems of materials of instruction. I have drawn upon these in presenting the concluding discussion.

1. Use the first and most important materials of instruction, the farm and the local community. They become such for the teacher to the extent that he becomes familiar with the farm and community resources thru surveys and analyses of survey data.

2. Build up an indexed library of appropriate and usable instructional materials to include (a) agricultural magazines and journals; (b) bulletins, leaflets, and circulars; (c) reference books; (d) case records of present and

(g) film strips, slides, and motion pictures; (h) typed, multigraphed, or mimeographed materials.

3. Supplement the opportunity to work with materials in their natural setting by accumulating collections of such materials as seeds, feeds, insects, weeds, fertilizers, soils, specimens showing disease, and the like.

4. Develop a supply of visual materials.

5. Maintain contact with local agricultural agencies and local representatives of district, state, regional, and national agencies to secure appropriate assistance where available.

6. Prepare annotated bibliographies of the references for use in each farm job or each unit of the course of study. This may be done thru personal research and by taking advantage of investigations of this kind as have been made by teachers and other workers in agricultural education.

7. Be critical in the selection of each item of material of instruction.

Promotion of Farm Forestry Thru a Forestry Field Day

R. W. Whiting, Teacher,
Johnson and Hyde Park, Vermont

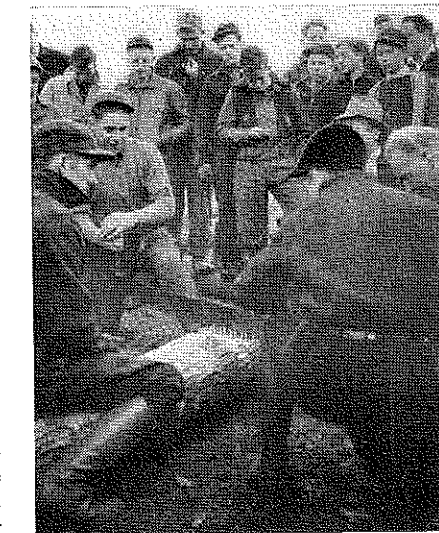
LAMOILLE County, heavily timbered and situated in the northern part of Vermont, has many farmers who receive a substantial portion of their farm income from the sale of wood, lumber, maple sirup, and other forest products. Because many of them have paid little or no attention to the better management practices, some of the timberlands have deteriorated until they are not producing as profitably as they should.

Therefore, it seemed entirely appropriate that the teachers of agriculture and the county agricultural agent should co-operate in doing something to stimulate better forestry practices.

It was with this objective in view that the first annual Lamoille County F.F.A. forestry field day was held in November, 1939. The meeting was held on one of the farms in the town of Eden where there is plenty of opportunity to stage a forestry demonstration. About 10 a.m. the boys gathered at the farm from the schools of Stowe, Morrisville, Hyde Park, Johnson, and Cambridge. At 10:30 a sawing contest was conducted by the county agent. This contest was held in a nearby clearing and each school represented had a two-man sawing team. Each team sawed thru a 12-inch maple log, and the team doing it in the shortest time was declared the winner. Next a shooting contest was held in the woods. All boys were allowed to enter this if they wished. The shooting distance was 150 feet and the rifles were .22 caliber. This contest was managed by the instructors. When this contest was completed the boys ate their dinners gathered round two large bonfires.

Instruction on Tree-Thinning

The events of the afternoon began when Mr. George Turner, extension forester from Burlington, Vermont,



Competition in sawing a twelve-inch log

gave instruction in the thinning of hardwoods. He demonstrated to the boys the speed at which trees will grow when properly thinned and the rate of growth when they are competing with other trees. He showed them the principles of thinning and discussed other desirable forestry practices. At the close of the discussion he conducted a contest to determine what they had learned from his discussion and demonstration. He marked 20 trees and each boy was given pencil and paper and asked to write down whether he thought the tree should be cut or left.

The final activity on the day's program was a chopping contest under the direction of the county agent. Each school had one representative to participate in this event. Spruce logs 10 inches in diameter were chopped in two by the contestants and the one doing it in the shortest time was declared the winner.

In spite of the cold weather which prevailed, 54 boys were present, the great majority of whom felt that the day had been a success both from the standpoint of a good time and the instruction received.

Supervised Practice

H. H. GIBSON

Teaching Boys to Budget

L. C. SCHANK, Teacher,
Churchill County High School, Fallon, Nevada



L. C. Schank

TO GET boys to see the value of, and to make good project budgets is not an easy task for the teacher of agriculture. The first step in teaching this very important unit is to create a feeling of need and a desire to make good project budgets. This I try to do by asking such questions as these:

1. What is a budget?
2. How do road contractors determine how much to bid on a job?
3. How do county commissioners know how much tax money to assess?
4. What items would you find in our high-school budget?
5. Can a farmer figure out how much his expenses and receipts will be on an enterprise before going to work?
6. How would he go about making a budget?
7. Of what value would such an enterprise budget be to him?
8. What enterprises pay best in this community? (List these on the board)
9. Do you have any proof that these are the most profitable?
10. Where can we go to find out what the costs and receipts are from a farm enterprise?

Getting the proper "mental set" is very important in budget-making. At this point it is well to pass around some summaries of successful projects completed by former students known to the boys. A few minutes may be taken to discuss the income from some of these projects. Students should look for the items of expenses and the items of receipts on a given enterprise. These items can be listed on the board under their headings as they are given. The students will note that these amounts listed will vary rather widely. Here a good discussion can take place as to the causes of this variance. It can now be pointed out that project results are different due to home conditions and methods of management. It is also well to point out that budgets are based upon averages of past experiences and reports.

I HAVE found that reports from the Farm Development Department of the State Agricultural Experiment Station on various enterprises are very valuable in getting figures for budgets, because these are taken from actual farmers' records. These, along with students' project results, are the best sources of information for making project budgets.

Along with this, some good material can be obtained by having the boys find out from their parents or someone engaged in farming the following data for each of the enterprises: average cost of

animals at start; kinds and amounts of feed needed; hours labor required; other costs; average production; average unit price for product; and average by-products expected. It is well to have ample sources of these data for reference.

When this material is brought in, a master chart may be made on the board from a class discussion, using all the data presented and collected. A sample chart produced in our department is shown.

THE student is now ready to list all items of expenses and all items of receipts he can expect in his farming program. By using the chart he has an idea of what can be expected on average estimates. Then, considering the quality of his own animals and his home conditions, he can make a project budget without "groping about in the dark." It usually takes about three ninety-minute periods to complete this unit the first time.

Shown here is a sample of Dale Johnson's project budget of 200 sexed chicks. Dale was a freshman last year, 1938-39.

Project budgets are made to mean more to the student if he will, from time to time, refer to them as the project progresses. When the project is completed the actual results set down as Dale did here give an actual comparison. Making project budgets is valuable training for vocational agriculture students for it teaches what can be expected from an enterprise, and having this training a young man can easily make out satisfactory budgets necessary before getting production credit loans or loans from the bank. Budgeting helps to minimize project failures because it helps to bring about plans for providing adequate finances.

Project Budget Chart
CHURCHILL COUNTY HIGH SCHOOL

Animals	Ave. cost unit	Grain	Mash	Hay or milk	Pas-ture	Other	Hrs. Labor	Ave. Pro-duction	Ave. Price	By-products
Laying hens	.85 1.00	45-55#	35-40#	4-6 gals	.02	grit 3#	2 hrs.	14 to 16 dozen	.23	
Turkey poults	35.00 45.00	45-50#	35-40#	5-10 gals	.10	Piek'g 15.20	3 hrs	15-16#	.20-.23	
Baby chicks	2.00 23.00	14-16#	10-12#	1-2 gals.	.01	Fuel 12.00	1/2-1 hrs.	85-90%	.85-1.00	
Dairy cow	70.00 80.00		6-7T. alfalfa	4.00	Bull 2-5.00	135	270-300# B. B.	.26-.28	S. Milk 800-1000 gallons
Weaner hogs	4.00 5.00	350-500#		200-250 gals.		Hay 150-200#	10	180-200#	.07 to .08 1/2	
Sows and litters to weaners	25.00 35.00	800-1000#		1000-1500 gals.		Hay 200-300#	50	14-16 pigs 2 litters	5.00	
Beef calf	10.00 12.00	300-500#		2-4 tons	2.50	Vacc. 50c	40	Daily 1 1/2-2#	.07-.09	

	Estimated		Actual	
	Amount	Value	Amount	Value
1. Operating & misc. expenses				
Stock purchased	200	\$42.00	200	42.00
Feed—grain	3750#	37.50	2965#	29.65
mash	2000#	40.00	1185#	23.70
alfalfa meal	1 sack	2.00	100#	2.00
pasture		4.00		4.00
Fuel for brooding	60 gal.	10.00	55 gal.	9.35
Hours labor other than self	25	6.25	70	14.00
Hours self labor	80	16.00	110	22.00
2. Overhead expenses				
Interest on investment 6%, 6 months	42.00	1.26	42.00	1.26
Rent on building and feeders		2.50		2.50
Total project expenses		161.51		150.46
3. Receipts & misc. credits				
Pullets six months old	185	166.50	180	162.00
Cockercels	10	2.50	12	3.00
Total project receipts		169.00		165.00
Total net profit		2.50		14.54
Allowed self for labor		16.00		22.00
Total project labor income		18.50		36.54
Labor income per hour		.23		.32

Planning, Teaching, and Supervising Farming Programs

R. B. JEPSON, State Supervisor,
Carson City, Nevada



R. B. Jeppson

ALL farming programs of boys enrolled in vocational agriculture require a great deal of careful planning, teaching, and supervising by every teacher of agriculture, regardless of the state or community in which he is located. These three major responsibilities are very closely inter-related. Planning is essential in order that good teaching will result and in order for boys to put into practice the things they should learn as a means of becoming successfully established in farming.

Most of us are quite familiar with and have a fairly good conception of the fundamental purposes, philosophy, and objectives of the agricultural education work. What teachers and others are more concerned with and interested in at present is how to plan, how and what to teach, and how to supervise. Getting things done is a much greater job and requires the application of all the intelligence, ingenuity, patience, and perseverance possessed by a teacher.

Here in Nevada we have been emphasizing for over 12 years the how of planning, teaching, and supervising farmer training programs—the actual

doing of these things by the teachers. The results have justified our efforts. This article will include a general discussion of the program we have been developing. It is accompanied by an article by Mr. L. C. Schank and it will be followed by other discussions prepared by Nevada teachers dealing with specific phases of this program. It is hoped that in this way experiences can be passed on to other teachers thruout the country.

Every teacher of vocational agriculture must develop a plan of work dealing with the supervised farm training programs that will meet the needs, interests, and abilities of the boys who enroll for this work. How can this be done? To begin with, the teacher should have a great deal of information about his community. With this information as a background, it is then necessary to make an analysis of all major and typical units involved in conducting supervised farming programs, similar to the analysis of a crop or livestock enterprise into its different jobs. The following jobs are suggestive of this procedure:

1. Teaching, directing, and supervising the boys in the selection of their farm training programs, or launching each boy into a supervised farming program: This is probably the most important job because, here at the beginning, it is necessary to lay a foundation upon which the boy can build during the four years he attends high school and afterwards
2. Teaching, directing, and supervising boys to prepare a project or enterprise budget: This unit is necessary in order for each boy to know whether he can financially support the major productive enterprise he has selected as a result of the preceding study. This unit is discussed in the accompanying article by L. C. Schank, who has been very successful in handling this job in the largest department in Nevada.
3. Setting up definite aims and objectives for a major project
4. Selecting contributory productive projects
5. Selecting minor productive projects
6. Selecting improvement projects
7. Selecting supplementary farm practice jobs for experience
8. Deciding upon the long-time farming program—a program of development of the above over a period of years
9. Preparing a list of jobs to be studied, planned, and executed during the current year
10. Making job plans. (This is continued thruout the year)
11. Making the project inventories
12. Keeping labor records
13. Keeping records of expenses and receipts
14. Keeping special records, such as loss, weight, production, etc.
15. Keeping records of miscellaneous overhead cost and receipts
16. Making a summary and analysis of

(Continued on page 238)

unit can be further broken down into the different activities such as—

- (a) Developing an appreciation and understanding of the fundamental principles of learning to do by doing.
- (b) Studying the home farm situation to determine possibilities for practice.
- (c) Determining the advantages and disadvantages of the different types of farming.
- (d) Determining the possibilities for the different farm enterprises in the community and on the home farm.

This is primarily a guidance unit and must be carefully planned in order that each boy can make intelligent selection of his farm training program which is to follow. This can be made very interesting by going out to study different types of farms, supervised study to secure new data and information, class discussions, and special reports. It takes about three to four weeks for this work at the beginning of the school year for first-year boys. At the end of this time, it usually is possible for every boy to make a tentative selection of at least a major productive enterprise project. Further selections will be made later but this makes a good place to tackle unit number two.

The other teaching units follow, and in each case it implies the "teaching, directing, and supervising boys to do these things."

The other teaching units follow, and in each case it implies the "teaching, directing, and supervising boys to do these things."

3. Setting up definite aims and objectives for a major project
4. Selecting contributory productive projects
5. Selecting minor productive projects
6. Selecting improvement projects
7. Selecting supplementary farm practice jobs for experience
8. Deciding upon the long-time farming program—a program of development of the above over a period of years
9. Preparing a list of jobs to be studied, planned, and executed during the current year
10. Making job plans. (This is continued thruout the year)

The statement has been made that "the navigation instruments of any business being operated for profit are its books of accounting." Certainly this is true for the business of farming. Here again the work is analyzed into teaching units and careful plans prepared for teaching them. They include:

11. Making the project inventories
12. Keeping labor records
13. Keeping records of expenses and receipts
14. Keeping special records, such as loss, weight, production, etc.
15. Keeping records of miscellaneous overhead cost and receipts
16. Making a summary and analysis of

Vocational Agriculture— A Continuous Educa- tional Process

G. S. Dowell, Teacher,
Quail, Texas

EDUCATION begins at birth and ends at the grave. Any public school administrator will tell you so, but public schooling does not always apply this truth. In general it provides organized instruction and guidance for only a few years, six or eight in the elementary school, four or six in the secondary school, and four or more in college or university. It provides, therefore, about 16 years of instruction for its students and leaves them without either organized instruction or guidance for the other 50 to 70 years of their lives. In general, schools have been held down by tradition. It seems that many educators have confined their efforts to lengthening the periods of time spent within the classroom and have not provided for an adequate follow-up system or additional organized ways of influencing or directing the thinking of people.

Vocational agriculture represents a new vision of education different from the traditional set-up. Once a boy is enrolled in vocational agriculture his education may continue the rest of his life. It is true that a boy usually does not enroll in the course before the seventh grade and more often not until the freshman year in high school. Thus the first 12 or 14 years of his life are not provided for in the field of vocational agriculture. Once enrolled, however, he may study vocational agriculture each year of his high-school career and if he enters college after he graduates from high school his regular day-school instruction continues. But if he drops out of school at any time and never completes his college course, the high school, even the elementary school—or if he does graduate from college—the continuance of his education is provided for thru the part-time school for a number of years, until he is well established in farming, and then in the adult evening-school classes the rest of his life.

At Quail, Texas, we have people enrolled of almost all ages from 14 to 75. One of the most regular attendants at one of our evening schools and one who is regularly adopting improved practices as a result of the adult evening-school work is a man past 70.

The high-school course is planned so that the classroom instruction and the program in supervised practice will lead to farming. When a boy enrolls in vocational agriculture he, with the help of his father and his vocational teacher, plans his supervised practice program on a four- or five-year basis so that at the end of his high-school course he will be established in farming. Usually he begins with rather small livestock and crop projects. By increasing his projects and adding more projects each year he

comes out at the end of the four years of high-school work set up for farming or largely so. Following is an example of one supervised practice program of a boy who graduated from our school last spring:

First Year

1. One gilt for pig production
2. Five acres of maize for grain

Second Year

1. One sow and one gilt for pig production
2. One bred dairy heifer
3. Five acres of cotton
4. Five acres of maize

Third Year

1. Two brood sows
2. One cow and calf
3. Five acres of maize
4. Five acres of cotton
5. Three hundred baby chicks

Fourth Year

1. Two brood sows
2. Two cows and calves
3. Ten acres of feed
4. Ten acres of cotton
5. One hundred hens

In addition to having cows, hogs, and chickens, he had \$265 in cash which he made out of his projects during four years of his high-school work. But the teacher of vocational agriculture did not turn him loose without help and guidance. The boy was enrolled in the part-time group. One hundred acres of land available for renting were located; the landowner was contacted and told of the boy's progress in his vocational work and his desirable qualities as a tenant; and a contract satisfactory to both parties was drawn up and signed. A loan of \$175 was negotiated with the Production Credit Association which, together with the cash on hand, enabled him to buy 20 ewes and a ram, four mules, and the necessary second-hand, one-row equipment with which to cultivate the land. He sold his feed thru his livestock on which he won several premiums, paid off his note, rented another 80 acres of land, and bought more stock and a two-row outfit of tools. He is out of debt and is completely set up in farming. He joined the one-variety cotton community organization, the local co-operative association, and will later be changed from the part-time class to the evening-school class where he will receive guidance that will help solve the farm problems that arise thru the years. He will likely be one of the progressive, successful farmers who provide the whole farm demonstration for the community and the teacher of vocational agriculture who continues to lead the school boys, the out-of-school youth, and the adult farmers. At no time has his education stopped nor will it stop until he dies.

Vocational agriculture can truly become a continuous educational experience from about 14 to approximately 70 years of age.

Kaufman, Texas, Farmers and Their Wives Ride to School in Busses

BOB THURMAN, Teacher,
Kaufman, Texas

ONE night each month the seven school busses of the Kaufman, Texas, schools make their regular routes and pick up the parents of the all-day student passengers. This new system affords transportation, co-operation between local communities, better acquaintance of the parents with the work in vocational agriculture and home economics, and helps to associate the parents with the faculty and work being carried on by their children.

It is no trick to get over 100 parents out to the meetings under this system and, since the program is rapidly growing in popularity, it would not be illogical to set 200 as the ultimate goal. The parents are very enthusiastic about the program and asked at the first meeting for a similar one for the next night.

At the beginning of the program a survey showed that only about 85 percent of the parents of the rural students attending Kaufman High School had ever been in the school building and that only about 90 percent of the same group had ever ridden on a school bus. The opportunity to ride the busses was not only a challenge to the parents but also proved to be a pleasure since they could better appreciate the experience their children were getting.

The departments of vocational home economics and vocational agriculture are carrying out several co-operative projects during this year. It is very easy for the promoters of this work to get the approval of the parents for various activities being carried on. The adults, as a group, discuss such activities at the meetings, while riding the busses, and during community meetings. An example of such activities is the combining of the vocational agriculture classes and the home economics classes for instruction periods in table service, color schemes, poultry, and landscaping.

The programs for each meeting last about one and one-half hours, which is about 30 minutes each for the business transactions and announcements, the educational program, and the refreshments or entertainment program.

This program is still in the experimental stage and Miss Pauline LaRoe, the teacher of home economics, is doing her part in making it a success. To date, more interest in carrying out improved practices at home has developed than ever before, and it can be attributed mainly to the new program of evening-school work with the parents.

Out-of-School Farm Youth

SAM HITCHCOCK, State Supervisor,
Cheyenne, Wyoming

THE agricultural content of part-time classes in Wyoming is organized around local farming enterprises and other interests of students. Many times special classes in English, mathematics, civic improvement, and other subjects are organized which furnish an immediate contribution toward making the student-farmer a more intelligent citizen.

Part-time work is conducted in a way which will appeal to boys who are primarily interested in putting the instruction to immediate use on the farm. A plan based upon a general outline of the content of the course of study is made up for the purpose of budgeting time. Each teacher works out his program,

it might include follows:

INDIVIDUAL farming programs are planned and followed by each member enrolled. This program is based upon each individual's situation in his home community. Some may start as farm laborers, some may be working at home, some may be continuing with their supervised farming, and some may be renters; but each one will progress toward satisfactory establishment in farming as a goal.

Permanent records of the occupational status of all former part-time students are kept by the teacher. The placement of part-time students in farming occupations is considered a definite responsibility of the teacher of vocational agriculture. These students are encouraged to continue their education in agriculture thru evening classes after becoming established in farming.

Suggested Units and Jobs for Part-Time
School in Poultry

Major Unit: Agriculture—Poultry Production:

1. Determining the advisability of engaging in the poultry business;
2. Getting started in the poultry business;
3. Selecting the type and breeds of poultry suited to the community;
4. Housing the farm flock;
5. Equipping the poultry house;
6. Managing the farm flock;
7. Feeding for egg production;
8. Judging and culling the flock;
9. Controlling poultry diseases and enemies;
10. Incubating;
11. Caponizing;
12. Fattening, killing, and dressing poultry;

(Continued on page 238)

Certificate and Membership Card for Young-Farmer Classes

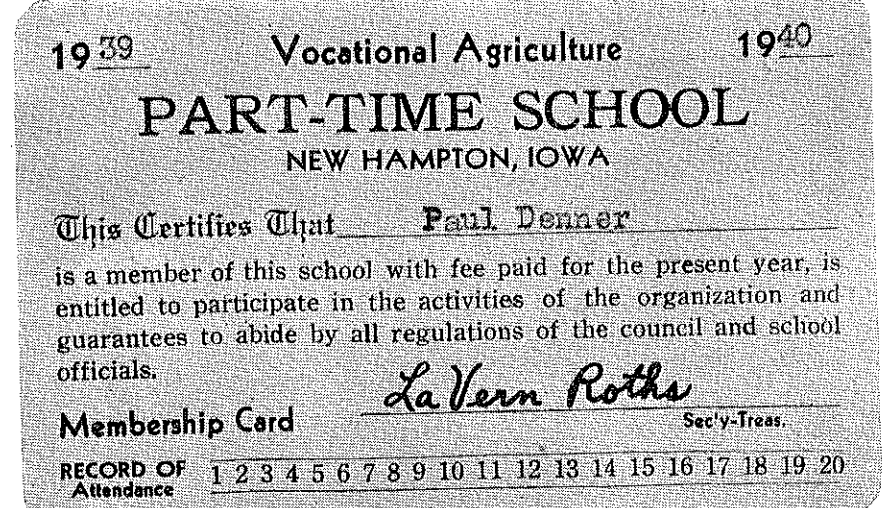
R. W. Gregory, U. S. Office of Education

THE accompanying certificate has been developed by the agricultural education staff of Pennsylvania to serve as one of the features in the development of the program of instruction in agriculture for out-of-school young men.

This certificate emphasizes three important elements which should be found in every well-organized program of systematic instruction in vocational agriculture for out-of-school young men who want to go into farming. In the first place, it is to be awarded to those young men who have participated in year-round programs and, in the second place, to those young men who have satisfactorily completed units of instruction—implying, of course, that in a year-round program it is certain that there will be many types of educational activity. In the third place, "during the years indicated below" implies that the program of instruction organized for these out-of-school young men is predicated upon the need for making of it a continuing educational service.

We have only to look about us to see the avidity with which teachers of vocational agriculture and state workers wear pins and insignia and to see how frequently high-school and college graduates frame and hang diplomas to realize the psychological appeal such certificates as this one have. It becomes even more important when we stop to consider that to most of the recipients of these certificates, many other certifications of awards of merit such as were mentioned above are denied.

The membership card shown here is illustrative of the many little things of tremendous significance that are being developed by teachers of vocational agriculture as they make progress in providing systematic instruction for out-of-school young men. Not the least in importance on this card is the provision for record of attendance across the bottom. It is our observation that the whole idea is psychologically sound, doubly so because we know it came from the young men themselves.



Mechanics for Farmers in a Machine Age

A. H. HOLLENBERG, Agricultural Mechanics,
California State Polytechnic, San Luis Obispo, Calif.

THE purpose in teaching farm mechanics in our high schools is to develop better citizens and more successful farmers. A boy may become a fine mechanic and still be far from the kind of a farmer who can run a farm at a profit. When the course in farm mechanics is so arranged that we are teaching the principles and skills that have to do with the agricultural enterprises found in the communities where the subject is being taught, we will at least be nearing the goal for which we are striving. We must keep in mind that the majority of the boys whom we are instructing are going back to the farm. Too often we teach unrelated industrial skills, as if we were educating a man who is to set up a shop in town for farm repair work.

Instruction Based on Farm Enterprises

In teaching farm mechanics on an enterprise basis we are thinking of agriculture, rather than the industrial skills which may or may not aid him in his farm work. If an enterprise is analyzed, we find that much agriculture may be taught thru the mechanical phases. For instance, in the poultry enterprise a boy should master the following: poultry buildings—their proper design, construction, size, ventilation, cost estimates, and location; watering devices—proper type, sanitation, correct capacities of different types; feeding devices; fencing and gates; brooders; and incubators.

A boy who is to become a successful poultryman may need to raise some crop such as grains and green feed. If so, he should be taught work on the different types of farm machinery that a poultryman in that particular community would use. When one looks at farm mechanics from the standpoint of the enterprise instead of that of purely industrial skills, he is seeing agriculture which is being taught thru the mechanical phases of farming. Skills are still taught, for while we are teaching the principles of poultry housing, such items as farm carpentry, farm plumbing, and farm concrete work can be taught, after the foundation has been built.

The principles that underlie almost every skill in the enterprises being taught can be given at the same time as the manual skills, or before. For instance, in a hog self-feeder there are a great many things to keep in mind if we expect to have a workable, long-lasting device. First, it should be built strong enough to stand up under use. Second, the feed storage space should be in proper relationship to the amount of feeder space. Third, the device should be rain-proof. Fourth, it should feed positively. Fifth, the cost of building must be relative to its value. Sixth, the

device should be portable. Seventh, the device should be easily cleaned. Eighth, some method such as divider bars should be employed to prevent the wastage of feed. Ninth, there should be some arrangement for adjusting the feed throat for different kinds of grain. If these principles are taught a boy can either make any one of a dozen different designs or can purchase one, so long as these requirements are met. This is the real "farm mechanics" attack. The "industrial arts" attack might be to teach a boy to read a blueprint of a particular hog house, then saw boards straight, drill holes straight, and hammer nails straight.

If each of the farm enterprises are broken into their different phases of agriculture, we get a better picture of what should be taught to boys in our classes. When we arrive at the place where the work given in the agricultural science side is followed by the same type of work in the mechanical side of agriculture, we will be much nearer the goal toward which we are working.

Changing Interests

A boy may be interested in a different phase of farming each year that he is in school. If such is the case, he should follow the work thoroly in each case. For example, if a boy may want something in dairying the first year, he should study the mechanical side of dairying in farm mechanics during that time. The next year he may want poultry, and similarly he should get poultry mechanics with it.

If the subject of brooding is studied, the brooder should be studied in the farm mechanics laboratory. As far as the manual skills are concerned, the boy might build a brooder, repair and operate one, or purchase one and learn its features before he puts chicks under it. When a boy wishes a more general course, he might get it by studying various enterprises.

The field of farm mechanics is so large that it is impossible to teach all of it in four years of high-school work. However, the managerial side should not be overlooked, because it is one of the most important phases of the subject. Answering such a question as "How much machinery should I have for a farm of a given size and given crops?" may cause a farmer to make money or lose it. "Can I afford to have a tractor or should I hire my plowing done?" is another example. How many of us know how much it costs to raise a ton of alfalfa, to operate our tractors, machinery, and pumping plants? The only way we will be able to know is by keeping accurate, simple records. Again, when we find as many as a half-dozen types of power

being applied to irrigating pumps in one community, which of these are the most economical and why are others using the type of power being employed? Many times, we think our power costs are high for the water being delivered, but it may be because of the efficiency of the pump being too low.

If we keep our farm mechanics programs agricultural; teach our farm boys to keep simple, accurate records; consider the managerial side of agriculture; and teach the underlying principles and skills that are normally found in the mechanical work to be done on the farms of our community, we will develop more successful farmers and more prosperous citizens.

Keeping Shop Equipment Up to Date

Mack M. Jones, Dept. of Agr. Engineering,
University of Missouri

OCCASIONALLY the shop teacher has the problem of buying equipment for a new shop, and more frequently the problem of adding to or improving the equipment already in use. He may be confronted with the problem of whether to buy more hand tools or to buy a power saw or a lathe, or possibly some other power equipment which has become popular in the last few years. Or should he replace some of the older planes, or that vise, or this post drill, or possibly some other piece of much-used equipment which has not proved quite "boy proof" and has become pretty badly worn?

The teacher can usually solve such problems satisfactorily if he will keep in mind the ultimate objective of shop work: that is, to train the boy so that he will do creditable shop work on his own farm. (If a large proportion of the students do not do appreciably better shop work than their dads, something is wrong with the program.) Questions regarding equipment for the school shop can be largely answered by keeping in mind the kind of equipment the boys will have to work with at home or should have when they grow up and become farmers themselves. Shop tools and equipment on most farms are of the hand variety and it appears that this kind will predominate for many years, altho each year sees more and more farms equipped with electricity and some farmers buying power tools.

It would appear, therefore, that the main part of the tools for the school shop should be good substantial hand tools, but with a few useful power tools such as a power grinder, a power drill press and possibly a power saw. It should be kept definitely in mind, however, that the unwise use of power tools may defeat the main purpose of shop instruction. If a boy has not learned to use a hand saw effectively and with ease and confidence, but has been allowed to run the power saw, he probably will not do

(Continued on page 238)

Rural Electrification and Its Possible Effects on Courses in Farm Mechanics

JAS. F. MERSON, California Polytechnic School,
San Luis Obispo, Calif.

RURAL America is becoming more and more electrically minded. Not only is the farmer beginning to realize the possibilities of electricity as a labor-saving factor, as a more convenient and less expensive source of power, and as a better method of lighting, but he is actually connecting up with the power line and installing lights and various other electrical equipment on his farm. In some states as high as five percent of the farms were connected for electric service during the first six months of 1937.

At the present time some of the New England and far western states have as high as 90 percent of the farms connected to electric service. On the other hand, many of the states in the South and Middlewest, where the distance between farms is rather great, have as low as five percent or less receiving electric service. Perhaps the chief reason why so few of these farms are connected to power lines is the prohibitive expense of constructing lines across the distances which separate the farms in that part of the country rather than the farmer's lack of appreciation of the advantages of electricity.

Some Farmers Make Their Own

If one drives across the Dakotas where only a small number of the farms are connected for electric service he will notice an almost complete absence of

power lines except in the near vicinity of the larger towns. On the other hand, almost every farm has a windmill tower with a propeller-driven, low-voltage generator which charges a battery of sufficient capacity to furnish electric lights—and very often light power—for the washing machine or pump. This would indicate that these farmers are keenly aware of the advantages of electricity.

These wind-driven electric plants run in cost from \$35 up to several hundred dollars, or in a great many cases they are made by the farmer himself from an old automobile generator with one or two automobile batteries for storage. Using six-volt globes, such an outfit will furnish lights for the house and operate the radio—which does a lot to improve living conditions on the average farm where kerosene lamps are used.

Circular 58, a bulletin showing in detail the construction and operation of such a plant, is published by the Agricultural Experiment Station, North Dakota Agricultural College, Fargo, N. D. Another bulletin, "Power for the Farm From Small Streams," Farmers' Bulletin #1430, is published by the U. S. D. A. and describes ways of generating electricity where power from running water is available.

In view of the fact that in recent years the Federal Government, thru the Rural Electrification Administration, has been making it possible to extend

Planning Instruction in Rural Electrification

H. L. Price, Teacher,
Palmyra, Missouri

THE coming of the R. E. A. offers a direct challenge to teachers of vocational agriculture. We know that most of our farm youth are practically in ignorance of the principles of electricity. We might argue that a licensed electrician should do all the farmer's wiring. Yet we know that sooner or later the farmer will run a new wire or change an old one without calling the electrician. Thus the need for training along these lines is probably more urgent than ever in our farm mechanics course.

Electrical power offers an entirely new field of opportunities in the farm mechanics course. Many teachers have avoided the use of power tools in farm shop work because it was impractical,

Time Allotment

10%

40%

40%

10%

Jobs

- A. 1. The R.E.A.
2. Uses of electricity
3. Generation and distribution of electricity
- B. 1. Selecting and buying wire and wiring material
2. Wiring the farmstead
- C. Selecting, buying, and caring for equipment and motors
- D. Efficiency in the use of electricity

the network of power lines farther and farther into the rural communities, and the various public utility companies have followed suit in an effort to increase their field of service, it certainly seems logical that electricity as it applies to the farm should find a very definite place in our agricultural mechanics courses. Just what we should teach and how much time we should spend on it will depend on the local set-up of the particular community. In California, where 80 to 90 percent of the farms are already electrified, our course content would differ considerably from a course set up to fit conditions in the Middle-west. In any case it should deal briefly with the fundamentals of how electricity is produced, how it functions in a circuit, and the meaning of the various measures of electricity such as the volt, ampere, ohm, kilowatt-hour, and horsepower. The function of the fuse and various precautions and "electrical safeties" should also be thoroly considered.

In communities where most of the farms have electric service, the students should be taught how to read the meter and compute the cost of operating various electrical devices. They should compare costs of pumping, grinding feed, and performing other farm jobs with an electric motor against doing these same jobs with a gas engine or tractor. In other words, from a managerial standpoint students should be able to decide whether they can farm more economically by using electric power or gasoline.

Teaching Farmers to Use Electricity

For laboratory practice the student could be taught to make simple repairs to electrical equipment, to care for and operate a motor, and perhaps to replace worn brushes and bearings. Under strict supervision of the instructor the student might make lighting power installations in some of the farm buildings, being careful to comply with all underwriters' specifications. The farm boy could very profitably make a survey of his home farm using a sketch to show where additional electrical equipment could make his place more profitable or his home more livable.

In a community where power lines do not exist the student could compare the merits and costs of various home generating devices and perhaps could construct one in the shop.

If students install such a system in the home, it should be done only after a thoro class discussion on wiring methods and practices and safety rules and regulations.

The Future of Electricity on the Farm

The farmer is finding out that he can induce his hens to lay more eggs in a year with electric lights and can irrigate his orchard cheaper with an electric pump than by the methods he formerly used. His wife and family are finding the farm home much more livable with electric lights, running water, a radio, electric washing machine, and refrigerator. In addition there are new electrical devices being developed every day, some of which will help the farmer to farm more efficiently. Why not set up a very definite place in our teaching program to teach our Future Farmers how to use electricity, the greatest and most efficient slave mankind has ever known.

Putting on a Large Farmers' Banquet

CLARK PIERCE, Teacher,
Romeo, Michigan

THE Romeo, Michigan, chapter of F.F.A. and the Romeo Home Economics Club, working co-operatively with many local organizations, have developed a farmers' banquet of unusual success.

The Fifth Annual Farmers' Banquet, held in the Romeo High School Friday evening, March 3, was attended by about 700 farmers, their families, and many town friends. At least 200 more attended the program and dance which followed. The banquet is regarded as the largest of its kind in Michigan.

In preparing for this banquet the first step is to ask the leaders of the local organizations, including Granges, farmers' clubs, soil conservation groups, the Farm Bureau, Farmers Union, 4-H Clubs, local milk organizations and the Rotary Club, if their organizations favor sponsoring and participating in a large farmers' banquet. Groups that are interested send two delegates to a preliminary meeting held a few weeks prior to the time of the banquet.

At the meeting of these delegates, the complete banquet arrangements and plans are made, discussed, and approved. These plans include the time of the banquet, the menu and method of serving, the nature of the program, financing, and the necessary kinds of committees.

The plans, as developed by this committee, have become quite constant from year to year. Each person brings his own dishes and silverware, either buttered rolls or sandwiches, and any dish or dishes from the menu.

Each organization furnishes three men and three women to help serve.

These plans are taken back to the organizations by the delegates, and the names of the committee members appointed are sent in for use in publicity articles. Sometimes the members of an organization balance the menu within their group. Treasury money is often used to purchase meat, the item most apt to be lacking.

Financing is accomplished thru voluntary contributions, the amount necessary being only a few cents per family.

A well-accepted feature has been the junior program. During the address on the main program, children in the eighth grade or below are excused to go to a program of their own in another room. Formerly this program consisted of games and movies, with the group split. This year, with more success, there was a program consisting of two short plays put on by a rural school. Two boys from town entertained with their puppet show. About 125 youngsters were entertained so successfully this way that the junior program will doubtless be put on by rural schools in the future.

After the programs were over, the ladies cleared the tables, and the men cleared the floor of tables and chairs, and those who wished remained for old-time and modern dancing. With good music and a good caller, the dance has aided in mixing people of different ages and occupations.

The F.F.A. members secured the tables and arranged the chairs. Com-

mittees were appointed to decorate the auditorium, make the orchestra platform, prepare the rooms for garments, serve on the reception committee, and help clean up Saturday following the banquet.

Home Economics girls secured additional dishes, and set the tables. Committees were appointed to label the baskets and dishes, to decorate the tables, and to take charge of a nursery for little tots.

The 4-H Club members registered people as they arrived, giving each a little name slip. The names and addresses so secured have proved useful in publicity work.

The publicity work included posters, slides at the theaters, large numbers of publicity sheets distributed to individuals, and a series of articles sent to newspapers of neighboring towns. This work was largely an F.F.A. activity.

Our county agricultural agent supports the program. He co-operates in securing speakers, making the plans, and sending out publicity sheets. He has served as toastmaster.

The program booklet, placed at every other place at the tables, contains the program, the names of all committee members (150 this year), a list of the organization leaders, the songs, and the junior program.

Thus our farmers' banquet has become a vast co-operative enterprise, with no objective other than to have a good time, and our F.F.A. is proud to work with about 18 other organizations in making the banquet a huge success.

Wyoming Teachers

(Continued from page 233)

13. Marketing eggs and poultry;

Related Units:

I. Farm Business Methods

1. Making use of reference material;
2. Communicating with people by letter, telephone, and telegraph;
3. Becoming familiar with simple farm business customs, rules, and laws;
4. Handling money—banking procedure;
5. Transferring money;
6. Borrowing money, using credit instruments;
7. Saving money;
8. Investing money: buying land, livestock, or securities;
9. Ordering supplies;
10. Buying, advertising, selling, and shipping farm produce;
11. Transferring property, using legal instruments;
12. Making agreements—contracts and leases;
13. Organizing the farm business, budgeting, and keeping records.

II. Farm Arithmetic

1. Figuring poultry rations;
2. Figuring capacity of feed bins;
3. Figuring gain for feed used;
4. Calculating cost of feeds;
5. Estimating percent of egg production;
6. Figuring space needed for hens, size of houses and yards for given number of poultry;
7. Figuring cost of fencing poultry yard;
8. Figuring board feet and lumber

9. Figuring cost of poultry house;
 10. Figuring profit from poultry business;
 11. Figuring interest on investment.
- III. Farm Mechanics
1. Making plan for a poultry house;
 2. Woodwork: building a poultry feeder, a trap nest, poultry roosts, or a poultry house;
 3. Soldering and sheet metal: making or repairing a tin pail, a watering pan, a feeding trough, or metal poultry appliances;
 4. Concrete construction: foundations and floors;
 5. Farm electricity: running an electric light line to poultry house, placing sockets and switches, or repairing electric poultry appliances.

Shop Equipment

(Continued from page 234)

very much shop work at home on his own farm.

Many school shops are short on hand metal-working tools such as hacksaws, files, metal-working vises and drilling equipment. Many times a single piece of equipment was bought when the shop was organized and this single tool has had to serve all the boys in large classes. In many such cases, these single tools cannot be used for effective instruction but are kept for an occasional job that may arise. If more such tools will facilitate or improve instruction, the teacher should have no hesitancy in buying them, for the school shop is primarily a place of instruction. With the increase in the use of metal and the decrease in the use of wood in implements and farm equipment, it is becoming more and more important to include instruction in metal work in the farm shop course.

Farming Programs

(Continued from page 231)

projects at the close of the year

17. Making a report of work conducted

The course of instruction is built around the supervised farming programs the boys are conducting. Individual and group instruction make it possible for each boy to work out his own individual problems. The idea is for the boys to develop their ability to think for themselves by finding a solution for the jobs and problems on which they are working.

Carefully prepared teaching plans are being followed by the teachers covering the above listed 17 typical jobs that occur in every program and must be dealt with by every teacher of vocational agriculture in one way or another, regardless of his school location. Thru this means it has been possible for most boys to develop long-time programs over a period of years, to expand these programs, to assume greater responsibility, and to grow into the farming business.

*In the selection of 4 and 5 above, the boys are given more experience in budgeting and determining aims and objectives. Another factor involved in each of these units is making satisfactory arrangements with parents, guardians, or others for conducting the proposed work.

VOCATIONAL AGRICULTURE EDUCATION DIRECTORY*

OFFICE OF EDUCATION, WASHINGTON, D. C.

John W. Studebaker—U. S. Commissioner of Education

J. C. Wright—Ass't Commissioner for Vocational Education — J. A. Linke—Chief, Agricultural Education

Regional Agents	C. H. Lane—North Atlantic D. M. Clements—Southern	J. H. Pearson—North Central W. T. Spanton—Pacific
Specialists	F. W. Lathrop—Research H. B. Swanson—Teacher-Training R. W. Gregory—Part-Time and Evening	W. A. Ross—Subject Matter W. N. Elam—Special Groups W. P. Beard

STATE SUPERVISORS—TEACHER-TRAINERS*

s—supervisor t—teacher-trainer cs—colored supervisor ct—colored teacher-trainer

ALABAMA

s—R. E. Cammack, Montgomery
t—S. L. Chestnut, Auburn
ct—E. A. Grant, Tuskegee

ARIZONA

s—A. G. Snyder, Phoenix
t—R. W. Cline, Tucson

ARKANSAS

s—H. L. Cochran, Little Rock
t—Keith L. Holloway, Fayetteville
ct—C. S. Woodward, Pine Bluff

CALIFORNIA

s—J. A. McPhee, San Luis Obispo
t—S. S. Sutherland, Davis
t—B. J. McMahon, San Luis Obispo

COLORADO

s—L. R. Davies, Denver
t—G. A. Schmidt, Fort Collins

CONNECTICUT

s—R. L. Hahn, Hartford
t—C. B. Gentry, Storrs

DELAWARE

s—W. L. Mowlds, Dover
t—R. W. Heim, Newark

FLORIDA

s—J. F. Williams, Jr., Tallahassee
t—E. W. Garris, Gainesville
ct—L. A. Marshall, Tallahassee

GEORGIA

s—L. M. Sheffer, Athens
t—J. T. Wheeler, Athens
ct—F. M. Staley, Industrial College

HAWAII

s—W. W. Beers, Honolulu
t—F. E. Armstrong, Honolulu

IDAHO

s—Wm. Kerr, Boise
t—H. E. Lattig, Moscow

ILLINOIS

s—J. E. Hill, Springfield
t—A. W. Nolan, Urbana

INDIANA

s—Z. M. Smith, Lafayette
t—B. C. Lawson, Lafayette

IOWA

s—H. T. Hall, Des Moines
t—J. B. McClelland, Ames

KANSAS

s—L. B. Pollom, Topeka
t—C. V. Williams, Manhattan

KENTUCKY

s—R. H. Woods, Frankfort
t—Cassie Hammonds, Lexington
ct—E. N. Morris, Frankfort

LOUISIANA

s—S. M. Jackson, Baton Rouge
t—Roy L. Davenport, University
ct—Cornelius King, Scotlandville

MAINE

s—H. S. Hill, Orono

MARYLAND

s—H. F. Cotterman, College Park
ct—J. A. Oliver, Princess Anne

MASSACHUSETTS

s—John G. Glavin, Boston
t—F. E. Heald, Amherst

MICHIGAN

s—Harry Nesman, Lansing
t—H. M. Byram, East Lansing

MINNESOTA

s—Leo Knuti, St. Paul
t—A. M. Field, St. Paul

MISSISSIPPI

s—A. P. Fetherree, Jackson
t—V. G. Martin, State College
ct—W. A. Flowers, Alcorn

MISSOURI

s—J. L. Perrin, Jefferson City
t—Sherman Dickinson, Columbia

MONTANA

s—A. W. Johnson, Bozeman
t—R. H. Palmer, Bozeman

NEBRASKA

s—L. D. Clements, Lincoln
t—H. E. Bradford, Lincoln

NEVADA

s—R. B. Jeppson, Carson City
t—W. C. Higgins, Reno

NEW HAMPSHIRE

s—E. H. Little, Concord

NEW JERSEY

s—H. O. Sampson, New Brunswick

NEW MEXICO

s—Frank Wimberly, State College
t—H. M. Gardner, State College

NEW YORK

s—A. K. Getman, Albany
t—R. M. Stewart, Ithaca

NORTH CAROLINA

s—Roy H. Thomas, Raleigh
t—L. E. Cook, Raleigh
ct—S. B. Simmons, Greensboro

NORTH DAKOTA

s—E. L. De Alton, Fargo

OHIO

s—R. A. Howard, Columbus
t—W. F. Stewart, Columbus

OKLAHOMA

s—J. B. Perky, Stillwater
t—D. C. McIntosh, Stillwater
cs—t—D. C. Jones, Langston

OREGON

s—E. R. Cooley, Salem
t—H. H. Gibson, Corvallis

PENNSYLVANIA

s—H. C. Fetterolf, Harrisburg
t—H. S. Brunner, State College

PUERTO RICO

s—Nicholas Mendez, San Juan
t—Lorenzo Garcia Hernandez, San Juan

RHODE ISLAND

s—G. H. Baldwin, Providence
t—E. L. Austin, Kingston

SOUTH CAROLINA

s—Verd Peterson, Columbia
t—W. G. Crandall, Clemson College
ct—J. P. Burgess, Orangeburg (c)

SOUTH DAKOTA

s—H. E. Urton, Pierre
t—R. R. Bentley, Brookings

TENNESSEE

s—G. E. Freeman, Nashville
t—N. E. Fitzgerald, Knoxville

TEXAS

s—Robert A. Manire, Austin
t—E. R. Alexander, College Station
t—S. C. Wilson, Kingsville
t—S. V. Burks, Kingsville
t—Ray Chappelle, Lubbock

UTAH

s—Mark Nichols, Salt Lake City
t—L. R. Humphreys, Logan

VERMONT

s—t—Kenneth Sheldon, Burlington

VIRGINIA

s—W. S. Newman, Richmond
t—E. C. Magill, Blacksburg
ct—G. W. Owens, Petersburg

WASHINGTON

s—J. A. Guiteau, Olympia
t—Everett Webb, Pullman

WEST VIRGINIA

s—John M. Lowe, Charleston
t—D. W. Parsons, Morgantown

WISCONSIN

s—L. M. Sasman, Madison
t—J. A. James, Madison
t—F. T. Ullrich, Platteville
t—J. M. May, River Falls

WYOMING

s—Sam Hitchcock, Cheyenne
t—L. S. Crawford, Laramie

*See complete directory of state directors; state and assistant state supervisors; regional or district supervisors; colored supervisors; teacher-trainers; itinerant teacher-trainers; research workers in teacher-training; supervising teachers; and colored teacher-trainers, in the December issue (separate insert).