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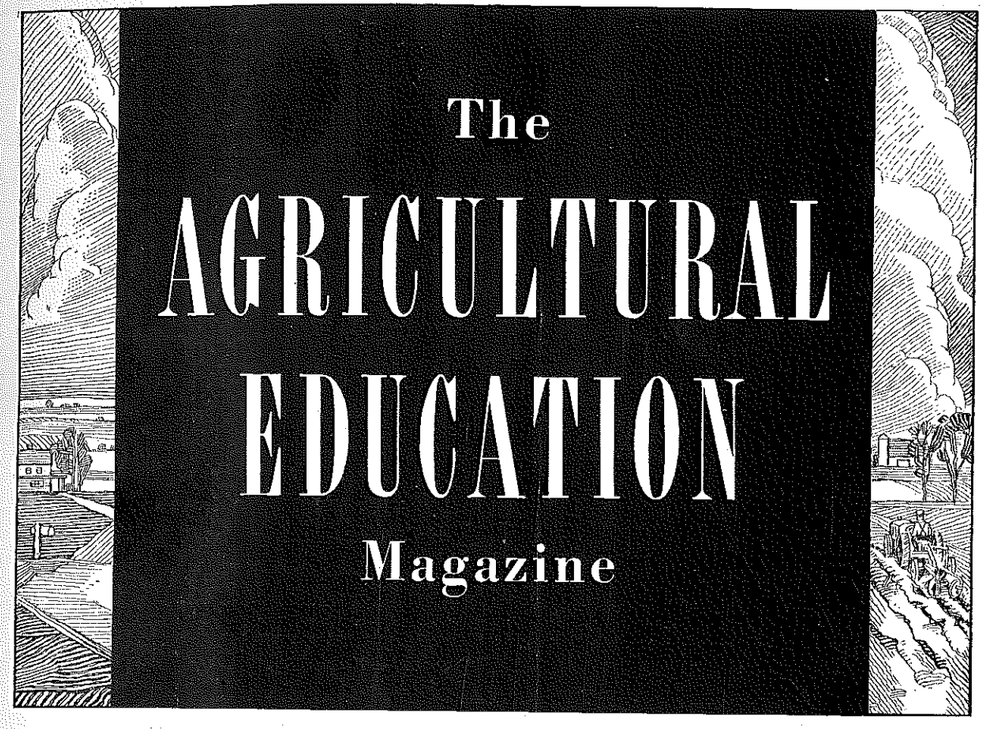

I find the greatest thing in this world is not so much where we stand, as in what direction we are moving.—Oliver Wendell Holmes.

The Agricultural Education Magazine

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CONTENTS

Editorial Comment

Efficiency

THE program of vocational education in agriculture has not yet developed to that stage where there are any efficiency engineers, recognizable as such, to point out the desirable and undesirable features of the program. Even tho "nearly of age" there has not been time enough for many fixed precedents and traditions to be developed which might contribute toward or retard efficiency.

How efficient is any given teacher of vocational agriculture? Who is qualified to attempt to determine the relationship existing between effort and result on the part of another individual? Upon what yardstick shall a man be measured?

Many times the efficiency of a teacher is passed upon by a local school board which may or may not be biased, which may or may not know enough of the objectives of vocational education to be competent judges of efficiency. Even if such a board were competent to pass on a teacher's efficiency, how would they go about arriving at measuring results accomplished?

Several items might be pointed out which are at present, justly or unjustly, used as means of determining whether or not a teacher is satisfactory.

Chronologically, the first of these is that of farming experience and college training. Many school boards demand that a teacher shall have been raised on a farm very much like those in the community in which he will teach. They also demand that the man have a diversification of college credit as between animal husbandry, agronomy, horticulture, and other divisions of agriculture.

Should a man be turned down because he was raised in a dry farming country and had a large number of dairy credits in college when he applies for a teaching job in a community of irrigated farms? One teacher, who was so situated and was given the job, stated that he had gone on the job with a realization of his lack of irrigation experience and the knowledge that his success might depend on his rapid acquisition of a working knowledge of irrigation practices. This informational deficiency has caused him to become better informed than most men who were raised on irrigated farms because he studied the whole field of irrigation practice and learned it all, whereas men raised on irrigated farms were, in general, satisfied to pass on to their classes the practices employed on the farms in the community from which they came regardless of the effectiveness of such practices. And finally, the very lack of experience in irrigation led to a greater knowledge of it in the end.

After the teacher has been employed, his employers and neighbors start to check up on him. They notice when he starts out in the morning, when he gets in at night, how often he goes fishing, and the like. Whether this is fair or not, it is true to a greater or less degree until the teacher has established himself and is measured by results instead of by the clock. There are, fortunately, many boards of education which charge the school administration with the measurement of efficiency. This is not always easy on the superintendent of schools, altho he is very likely the man best fitted to judge a teacher's worth. Again, he may not have the vision or courage to be efficient in his own decisions. He may use the clock instead of results as a yardstick, but not often. In a school system of some 3,500 pupils, the very able superintendent asked one of his grade teachers to resign in view of the fact that she was not getting results. A delegation of her friends called upon him protesting his refusal to recommend her for re-election. They elaborated upon the fact that she was at school by 7:30 a. m. and remained until 6:30 each day, returning often in the evening—stating that she was the hardest worker in the building. Upon being questioned as to the quality of her work the answer was that it was thought to be all right. The question was then asked, "Do you not think with all the time this teacher spends that her work should accomplish results more nearly commensurate with the time spent?" Being unable to reply other than in the affirmative, the superintendent told the delegation that by their own arguments they had shown why she was being eliminated, in that if her efficiency was at such a low level that it took her all the time indicated to get her work done she was too inefficient to continue on the job.

Long hours in themselves are no measure of teacher efficiency, for walking in a treadmill accomplishes nothing except an expenditure of time.

Again, it becomes known that vocational agriculture students are engaging in certain contests. Regardless of the educational value to the boys involved in such contests, many communities demand winning teams. Every state has one or more departments which, in every state contest, has a team "in the money." There has been built up in those communities a winning complex. Anything which can be done to cause more winning teams must be done. If a new teacher is not "in the money," regardless of anything else, a new teacher must be employed who can train teams to win. In the middle of the late depression one such community put up $250 to send a team to Kansas City and paid a premium of $200 per year in salary to replace the teacher who had resigned, with a new teacher who had the reputation of being a good contest man.

One might go on and mention the attitude taken on supervised farming, extra-curricular activities, enrollment, supervision of boys, F. F. A. activities, evening and part-time classes. The picture remains the same.

The greatest handicap under which most teachers work is the uncertainty of tenure on the job. What can efficiency engineers or others propose to insure the efficient teacher security and recognition? As yet no one knows the answer, unless it lies in educating administrators and school boards into a state of mind where their chief concern is results—not hours, previous training, nor contest winnings.

—CARL G. HOWARD, Teacher-Training, Idaho.

F. J. Hubbard

F. J. Hubbard

IN THE untimely death of F. J. Hubbard, State Director of Vocational Education of Mississippi, vocational education in Mississippi and the nation lost one of its most outstanding workers. Mr. Hubbard was ill for only a brief period, and his death was no doubt due in part to the strain which he had undergone during the last year in connection with expanding the program of vocational education in Mississippi.

He was identified with the program of vocational education since its beginning in Mississippi in 1917. At that time, he was named State Director which position he held until his death and in this connection rendered valiant service to vocational education. During the period, of his administration the program had grown from a start of no schools to a total number of 675 departments during the current year of 1937-38. In addition to holding the position as Director of Vocational Education, he was also Director of Vocational Rehabilitation and Crippled Children's Service in Mississippi.

Mr. Hubbard graduated from Mississippi State College with a B. S. degree in 1911. He later received his M. S. degree from the same institution. Immediately after graduation he began work with the Jones County Agricultural High School at Ellisville as Assistant Principal. The school was growing rapidly at that time and three years later Mr. Hubbard was elected Superintendent of this school. This position he held for three years at the end of which time he resigned to accept an appointment as State Director of Vocational Education in Mississippi. In addition to the outstanding service which he rendered in Mississippi, Mr. Hubbard served in various prominent capacities on matters having to do with both the Southern Region and the National program in vocational education. At the time of his death, he held a life membership in the American Vocational Association which was given to him as a token of confidence and recognition of his valuable services by the individual teacher membership of the Mississippi Vocational Association.—V. G. Martin.

A. K. GETMAN

Professional

R. W. GREGORY

New State Supervisor

MR. John G. Glavin succeeds Mr. Rufus W. Stimson as State Supervisor of Agricultural Education in Massachusetts.

J. G. Glavin

Mr. Glavin was born at Guelph, Ontario, of American parents. His elementary and high school education was completed in the public schools of Worcester, Massachusetts, followed by four years at Ontario Agricultural College at Guelph, Ontario, with the degree of B. S. A. in 1916. After a summer as herdsman at Echo Farm in Paxton, Massachusetts, he was appointed agricultural instructor at Hitchcock Free Academy in Brimfield, Massachusetts, in September 1916, remaining there three years. In September 1919 he became associate editor of the "New England Homestead" and editor of the "Farm and Home" magazine. From 1921 to 1924 he was a partner on a livestock farm in Spencer, Massachusetts. In August 1924, Mr. Glavin become agriculture instructor at Arms Academy in Shelburne Falls, which position he resigned to accept the state supervisorship.

Mr. Glavin brings to his new position a record of sound agriculture, sound pedagogy, and a sincere loyalty to vocational education in agriculture.

We greet you, Mr. Glavin.

Apprentice Training at the Louisiana State University

C. L. MONDART, Teacher-Training, University, Louisana

SELECTED departments of vocational agriculture in the high schools of the state co-operate with the Department of Agricultural Education at the Louisiana State University in making it possible for seniors to do six weeks of apprentice teaching in actual situations. The Louisiana State plan for vocational agriculture has for the past 20 years provided for apprenticeship practices in training teachers of vocational agriculture. Unfortunately, for many years only one or two weeks were actually made available for apprentice training. In 1936, the several technical departments of the College of Agriculture agreed to make the necessary adjustments in their courses for seniors enrolled in the apprenticing course, to be relieved of campus responsibilities for the duration of a six-weeks apprentice training period.

Last year, 1936–1937, twenty-eight student teachers were placed for apprentice teaching in departments of vocational agriculture located in the five parishes. This year, 1937–1938, another parish co-operated, and 41 student teachers experienced apprentice training. These men left the campus at the beginning of the second semester, January 31, and returned March 12, after having spent six full weeks in supervised apprentice training. Regular classroom responsibilities were assumed March 14, beginning the second six-weeks period of the second semester.

Apprentice training purposes to provide each trainee with ample opportunities to obtain practice in discharging under natural situations the responsibilities normally expected of agriculture teachers in Louisiana. To attain this end, it has been necessary not only to carefully select apprentice departments but to keep them grouped about convenient centers for effective supervision, and to reduce supervisory costs.

Criteria applied to the selection of the apprentice centers were those of location, soil types, farming types, and density of schools having agricultural departments. It was considered highly preferable to have student teachers experience apprentice training under farm conditions similar to those under which they were reared. Apprentice centers located in south, central, and north Louisiana offered an opportunity to assign trainees to centers and departments comparable to farm and community conditions with which they were most familiar.

The individual agricultural department within each apprentice center was selected according to the school in general and the agricultural teacher with respect to his teaching situation in particular. A school situation that makes for good teaching was naturally preferred, while a program of work in vocational agriculture that would give varied and numerous teaching experiences to trainees was considered paramount.

Several rather definite steps have been observed in administering and supervising the apprenticeship program. Candidates to the apprentice training course are required to be average or better than average students, as evidenced by the grade of C or above, earned in both technical and professional work in college. Those meeting this requirement were assigned to apprentice centers and departments where their chances for successful apprentice training appeared most favorable.

The parish superintendent of schools and high school principals, whose schools and departments of vocational agriculture had been selected for apprentice training, were contacted early in January and permission obtained to use the schools chosen. A series of conferences was then held with the agricultural instructors in charge of the departments, who acted as critic teachers. At these conferences the critic teachers were made familiar with their responsibilities, in addition to receiving instructions intended to make their own situation more favorable to successful apprentice training.

A member of the teacher-training staff was placed in charge of each apprentice center. This staff member, with the help of the critic teachers, directed the work of the apprentices on the job. In the beginning of the six-weeks period, the teacher-trainer in charge made a personal visit to each apprentice department each week. Thereafter, visitations were made as the need seemed to warrant. Conferences attended by trainees and critic teachers were held each Saturday during the apprenticing period. These conferences afford d an opportunity for pooling experiences and discussing problems common to apprentice teaching.

Eve y effort was made by the teacher-trainer in charge of each apprenticeship center to observe the trainees under his charge and handle the various teaching situations in which practice was provided. At least four full days were used by the teacher-trainers in observing and supervising the work of each pair of trainees assigned to each apprentice department. At the end of each day, individual conferences with the men observed were held, at which time ways and means were reviewed for improving the work done during the day and plans formulated for obtaining apprentice practice in additional teaching situations common to teachers of vocational agriculture. The teacher-trainers in charge of each apprenticeship center were assisted in trainee supervision by the critic teachers who, during the apprenticeship program, became temporary members of the teacher-training staff.

A summary of the apprenticeship training program conducted during the current school year, 1937-1938, might be given in terms of what the trainees did during the six-weeks apprentice period. A statement of the activities in which student teachers engaged is shown in Table I.

No attempt has been made to record all the teacher activities in which trainees participated. Sufficient evidence, however, is offered to show that apprentice training in the major responsibilities of the agriculture instructor was obtained. The emphasis placed upon observing, preparing for, and teaching all-day, part-time, and evening-school classes is of particular significance. Because of the importance of part-time and evening schools in the work of the agriculture instructor, an apprenticeship program that will give trainees repeated opportunities to observe and teach such classes is being planned for another year.

Without the wholehearted co-operation of all persons concerned in such a program it would not have been possible.

Table I—RECORD OF APPRENTICE ACTIVITIES ENGAGED IN BY 41 STUDENT TEACHERS 1937–1938

Activity	Number of Trainees Participating	Number of Each Activity Experienced	Average Number of Each Activity Experienced by Each Trainee
1. Observing all-day classes in agriculture	41	1,034	25.7*
2. Observing academic classes	41	376	9.1
3. Preparation on all-day class study guides	41	264	6.4
4. Supervising all-day class practice programs	34	439	10.7
5. Teaching all-day classes in agriculture	41	1,201	29.3
6. Visiting farm homes	41	1,164	28.4
7. Surveying farms	38	89	2.2
8. Acting as F. F. A. adviser	33	75	1.8
9. Observing part-time classes	26	72	1.7
10. Recruiting part-time students	24	84	2.0
11. Preparing part-time study guides	25	59	1.4
12. Teaching part-time classes	28	50	1.2
13. Observing evening-school classes	39	115	2.8
14. Preparing teaching plans for evening schools	33	97	2.4
15. Teaching evening-school classes	32	53	1.3
16. Preparing press articles	29	104	2.5
17. Preparing teacher's monthly report	33	43	1.0
18. Visiting other agricultural departments	36	98	2.4
19. Addressing school or civic groups	24	52	1.3
20. Attending farmers' meetings	30	103	2.5
21. Rendering community services	30	557	13.6

*Average for the group of 41 trainees.

Building a Group Conference Program

A. E. WILLIAMS, Teacher, Oak Grove, North Carolina

IN BUILDING a small group conference program, we have two problems in common: professional improvement and technical achievements. All our conferences should include both, but I consider the professional phase more important because our technical problems can perhaps best be solved in our own departments.

A. E. Williams

As we live in a changing age, we must keep abreast of the modern methods in teaching. Some of the more progressive teachers find that in order to do their best work they must develop professionally. The university president who gave his graduating class the statement, "Continue to be a student and live the intellectual life," could have adequately said the same thing to a group of vocational agriculture teachers. It is assumed that the man who enters the teaching profession does so because he gets satisfaction in the process of learning and anticipates greater satisfaction in guiding others along the road to greater knowledge. Because of the particular character of vocational agriculture education, the teacher must grow and develop in order to continue to hold the confidence of those in his community. A large group of teachers is taking every advantage of current means for self-improvement, which comes thru (1) reading good books, magazines, and bulletins; (2) joining professional organizations; (3) doing graduate work, which is very important for the teacher in the future; and (4) attending all state, district, and group conferences. It is this last method that we want to consider more in detail. State conferences are very essential to the development of a uniform system of vocational agriculture in the state. It is a conference at which problems affecting the state as a whole are discussed. The district conference serves the same purpose of the smaller section that the general conference does for the state; but the group conference comes nearer home, to our own individual problems, everyday problems that arise within our respective communities. It is well that we take a few minutes to consider this problem of building our group conference program that will serve the needs of that group of teachers for which it is primarily intended. Group conferences cannot be set up as a general conference but must be adapted to the communities in which the schools are located, as one community differs from another in general farming conditions. We find tobacco the main enterprise in one community, cotton in another community, grain in another community, and livestock is still another community; with all these arise new and different problems that need the thought and consideration of the best authorities and agricultural advisers.

At our group conferences it is not only problems that relate to our community that need our attention; we must remember our places in the professional world that tend to place us as leaders among the people we serve. We must know the newest tendencies in the field of education; and it is in these meetings that we can freely discuss them as they affect us as individuals, and not from a general standpoint. The chief aim in agricultural education is to train the student for proficiency in farming, or in other words, to do better the things he would do anyway. Therefore we cannot continue to be the same teachers we were 10 years ago; but let each year find our professional life richer and more fully in tune with the new and rising problems of the day. It should be plain to us that educating the youth of today must be a co-operative activity and that our responsibilities do not end with the effective presentation of our own respective subjects. As State Superintendent Erwin has stated, "We must become a part of the whole educational system of the state." It is possible, but I think very unlikely, that some of us might feel that since part of our salary comes from the federal government we are employees of the federal government, sent into the communities to do a specialized task only; likely to regard ourselves as specially privileged folks, not needing to place much interest on professional improvement, not always willing to be burdened with any routine duty of the school administration, and making very little effort to correlate our work with that of the school. I think such a situation is very non-professional.

The professional problems that I con-

(Continued on page 15)

Master Village Leader

H. B. ALLEN, Director of Education, Near East Foundation

HARALAMBOS ZOULAMOGLOU, an agriculturalist of the Near East Foundation in its Macedonian program, achieved the title in October 1935 of "master village leader." In January 1930 Zoulamouglou entered the service of the Near East Foundation. From the very beginning it was evident that Zoulamoglou could talk the language of the peasant farmer, that he was able to interest village boys in the drab but active life about them, that he had unusual capacity for capitalizing on the simplest situation for teaching purposes. Haralambos is 33 years of age. He resides and works in Drama of Eastern Macedonia where he settled with his parents when they came into Greece from Asia Minor, along with the million and a quarter of other Greek refugees. Upon coming to Greece he completed his education in 1923, by attending the secondary school of agriculture located just outside the Macedonian capital of Salonica. From 1924 to 1929 he was employed as an agriculturalist by the Refugee Settlement Commission in its stupendous task of settling the greater proportion of the refugees on the land. Before leaving he secured his own allotment of land and in the years since has developed a neat little farm of his own. To his land he himself expects to "retire" when his work with the Near East Foundation is done.

H. Zoulamoglou

Important features of the Macedonian program have been outlined at various times in the pages of "Agricultural Education." Briefly, the agricultural service may be said to be a combination of the Smith-Hughes and Smith-Lever programs with this combination suitably modified to meet the needs and conditions of primitive Macedonia. Each agriculturalist has six villages around which he develops an intinerant program correlating practical instruction with field supervision. All improved practices are demonstrated on the individual farms of peasants and only when the confidence of these conservative people can be so won as to make this possible, are any demonstrations conducted; in other words, the project method is applied. The project method of approach, when applied to conditions in this part of the world, has a very important place. Once started it as an efficient method and it is economical—much more economical than the demonstration plots and farms so frequently conducted in the Near East as a part of every agricultural extension program.

Since these primitive villages can hardly afford the expense of an agricultural leader, let alone other types of leadership, and since under these conditions an educated young man should be an all-around community leader and not simply a narrow specialist, we require that our village workers represent

(Continued on page 17)

A. M. FIELD

Methods

Household Mechanics for Girls

C. H. CHRISTOPHERSON,
Division of Agricultural Engineering,
University of Minnesota

THE May issue discussed the value of exchange classes between the girls in home economics and the boys in agriculture, and made suggestions for the content of the home economics instruction for boys. The factors to consider in selecting content for the household mechanics instruction for girls are quite similar to those involved in determining the home economics instruction for boys and need not be repeated here.

The time available for these exchange classes is usually rather limited and therefore the work must be carefully planned and efficiently administered if the objectives of the courses are to be attained. It should not be expected that the girls will develop a great amount of skill in performing the tasks in household mechanics, but they can be expected to acquire some valuable information about the construction, care, maintenance and repair of household equipment. They should also learn to appreciate the mechanical features involved in household appliances, and realize the contributions that these devices and appliances make to their lives. The information, attitudes, and appreciations that the girls acquire will depend to a considerable extent upon the preparation and personality of the instructor as well as his methods in presenting the subject matter.

The outlines presented here have been prepared to aid the teacher of agriculture in planning a series of instructional units in household mechanics for girls. It is not expected that all of the items listed will be taught to any one group, as a course of this kind should first meet the specific needs of the community, and then if time permits additional topics may be included. The outlines will also suggest the type of material that might be given to the girls in mimeographed form to supplement the class instruction, and guide them in applying the things learned in the classroom to actual home situations.

In general, the practical jobs in household mechanics should be stressed. However, the scientific phases must not be ignored altogether. The teacher should briefly discuss the most important scientific facts and point out the correlations between their class work, high school physics, and the problems of the home pertaining to heating, lighting, ventilating, refrigeration, water supply and distribution, and sewage disposal. A typical example of the method of presenting the scientific facts follows. At the time instruction is being given on electric repairs in the home some mention should be made of the theory of electricity, its use in heating, lighting, and generation of power. The hazards of electric shocks should be emphasized. The scientific facts pertaining to the other units can be handled in much the same way. The suggestive outline in household mechanics for girls follows:

Home Repair and Maintenance Jobs

Jobs Pertaining to Furniture

Relieve a sticking drawer.
Fasten a loose drawer bottom.
Tighten loose knobs and drawer pulls.
Tighten loose table legs.
Attach furniture glides to legs of chairs, buffets, chests of drawers, etc.
Replace a broken chair rail or rung.
Re-glue a loose joint in furniture.
Strengthen a week joint in furniture with angle irons or mending plates.
Re-cane a chair seat.
Build up a dented or splintered surface with plastic wood.
Remove old enamel, varnish, paint, or shellac finish from furniture.
Prepare an old surface for a new finish by sanding and filling.
Refinish furniture with a wax finish.
Refinish furniture with an oil finish.
Refinish furniture with an enamel finish.
Refinish furniture with a varnish finish.
Remove white spots on a varnished surface.
Restore a wax finish.
Clean wood-finishing brushes.
Re-cover an upholstered chair.
Re-tie the springs on a chair or davenport.
Re-nail or replace loose or torn webbing.

Jobs Pertaining to Doors and Windows

Replace a broken lock spring.
Tighten loose door knobs.
Apply weather stripping to a door or window.
Oil door hinges.
Tighten loose hinges.
Relieve a sticking door or sash.
Adjust a striking bolt.
Attach screen door spring, hook and catch.
Re-screen a door or window.
Repair a hole in a screen.
Adjust the tension of a window shade.
Shorten a shade and narrow the width of the shade.
Attach a window shade to the roller.
Attach a shade roller to the window.
Repair or replace a broken sash cord.
Remove old putty, glazier points, and broken glass from a sash.
Cut window glass to fit a sash.
Put in window glass with glazier points and putty.

Jobs Pertaining to Electrical Appliances

Shut off the electric supply.
Replace a "blown" fuse.
Read an electric meter.
Repair an electric appliance cord.
Splice and solder a broken electric wire.
Adjust a doorbell or buzzer.
Attach lamp socket and plug cap to an extension cord.
Oil electric motors and appliances.

Upholstery Supplies

1 box webbing nails.
1 box gimp nails.
1 box each of 3-oz. and 8-oz. tacks.
1 ball of spring twine.
Assorted upholsterer's needles.
Webbing, gimp, unbleached muslin, cambric, burlap, cotton batting, springs, and moss or tow can be purchased as needed.

Electrical Supplies

1 roll friction tape.
1 roll rubber tape.
Several extra fuses.
Extra plugs, plug caps and attachment plugs.

Plumbing Supplies

Assortment of seat washers.
Assortment of Fuller balls.
Graphited asbestos packing.
Assortment of washer screws.
Garden hose couplings and unions.
1 or 2 pipe plugs and caps.
1 can pipe cleaning compound.
1 rubber tank ball.

Household Mechanics Publications

Books

Household Mechanics, Bedell and Gardner, 1937, International Textbook Co. Scranton, Pa., $1.25.
The Practical Book of Home Repairs, Fraser, C., 1925, Thomas Y. Crowell Co. New York City, $2.50.
Mechanics of the Household, Keene, E. S., 1918, McGraw-Hill Book Co. New York City, $2.75.
Home Owners Handbook, Smith, C. B., Housing Publications Inc., 25 West 43rd St. New York City, $ .50.
Home Conveniences, Ives, F. W., 1924, Harper and Brothers, Publishers. New York City, $2.00.
Household Equipment, Peet and Sater, 1934, John Wiley and Sons, Inc. New York City, $2.00.

Bulletins

Care and Repair of the House, Phelan, Vincent B., Building and Housing Publication BH 15, Supt. of Documents, Govt. Printing Office, Washington, D. C., $ .15.
Simple Plumbing Repairs in the Home, Farmers' Bulletin No. 1460, U. S. Department of Agriculture, Washington, D. C., (free).
Floor and Floor Coverings, Farmers' Bulletin No. 1219, U. S. Department of Agriculture, Washington, D. C., (free).
Furniture, Its Selection and Use, Report of the Committee on Wood Utilization, Supt. of Documents, Government Printing Office, Washington, D. C., $ .20.
Electric Equipment in the Home, Bulletin No. 76, University of Maryland Extension Service, College Park, Md.
Refinishing Old Furniture, Extension

Bulletin No. [illegible], Office of Publications, Roberts Hall, Cornell University, Ithaca, New York.
Reconditioning Furniture, Extension Bulletin, No. 256, Office of Publications, Roberts Hall, Cornell University, Ithaca, New York.

Job Sheets

Job Sheets in Home Mechanics, Tustinson, F. E., (Looseleaf) Set L, 39 jobs, $ .64. Set II, 16 jobs, $ .36, Bruce Publishing Co., Milwaukee, Wis.
Household Mechanics, Bedell, Earl L., 32 job sheets bound, Manual Arts Press, Peoria, Ill., $1.00.

Bibliographies

A Selected List of References on Home Furnishings, Miscellaneous Extension Publication No. 26, U. S. Department of Agriculture, Division of Co-operative Extension, Washington, D. C., (free).
Figure the cost of operating various electrical household appliances.

Jobs Pertaining to Plumbing Fixtures

Shut off the water supply.
Drain the water system.
Read a water meter.
Thaw frozen water pipes.
Re-washer the stem of a compression faucet.
Re-pack the stem of a faucet.
Replace worn seat washer in a compression faucet.
Replace worn Fuller ball in a Fuller faucet.
Re-washer the supply valve in a flushing tank.
Clean a stopped drain.
Repair a leaking garden hose.
Replace rubber tank ball in a flushing tank.

Jobs Pertaining to Tool Maintenance

Sharpen a paring knife, butcher knife, and bread knife.
Sharpen a pair of scissors.
Sharpen a plane blade or chisel.
Remove rust from tools and oil them to prevent further rusting.

Miscellaneous Jobs

Patch a hole in a plastered wall.
Repair a broken sewing machine belt.
Solder a hole in a kitchen utensil.
Solder a patch on a kitchen utensil.
Solder a broken seam.
Attach to the wall such things as towel racks, small shelves, pictures, curtain rods, and coat and hat rails.
Tie some of the most useful knots.
Prevent a rope from untwisting.

Tools for Home Repair Work

Most Useful Tools

1 nail hammer, 13 oz.
1 pr. slip joint pliers, 6".
1 rule, 2 ft. folding or 6 ft. zigzag.
1 screw driver, 4".
1 handsaw, 24", 8 point.
1 plane, 9" smooth or 11½" jack.
1 putty knife.
1 glass cutter.

Additional Desirable Tools

1 pr. side cutting pliers, 6".

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Interchange of Vocational Classes

W. J. TUCKER, Teacher,
Hatfield, Pennsylvania

THE time requirements of these exchange classes are sufficient to acquaint the boys with the problems the girl or woman has in the home and vice versa. The experience develops a healthy respect on the part of both sexes for the other's tasks and responsibilities in the future home.

In actual practice, we have found that cooking and clothing information is very useful to the boys. The skills taught become useful in case of sickness or other needs in the home. The work may also contribute to many positions in which boys may fit. Hotels, restaurants, and department stores often have work for men with certain homemaking skills. The boy may also be more understanding and respectful of the mother's part if he knows some of the facts he is taught in the home economics class during a few periods of his high school career. The actual reaction of boys whom we have taught show they are anxious to learn of these duties.

The girls' vocational class was taught by the teacher of agriculture at the same time the boys were sent to the home economics class. As an experiment, we held the class one double period a week for six weeks. The time allotted may be regulated for any particular school. During the time, the girls were given six definite lessons including:

1. Making seed flats and seeding.
   a. Flowers or vegetables selected
   b. Seeding or planting
   c. Selection of soils
   d. Construction of flat
   e. Use of saw, plane, hammer, etc.
2. Pruning of rose bushes, shrubs and small trees
   a. Recognition of tools needed
   b. Feeding ornamentals
   c. Care of lawns
   d. Acquiring as many skills as possible in connection with above
3. Electric Work
   a. Use of fuses and replacement
   b. Making a special wire in household electrical device
   c. Dismantling electric plug
   d. Wiring a lamp, toaster, or iron
4. Refinishing wood furniture
   a. Taking off old paint
   b. Sanding, scraping, filling, etc.
   c. Flat coat, finish coat
   d. Care of paint, paint brushes, etc.
5. Making small wood box for jewels, handkerchiefs, etc.
   a. Identification of common woods
   b. Selection of hardware
   c. Planning and designing box
   d. Making design for decorative work
   e. Cutting out box—use of square, saw, gauge, bevel, hammer, etc.
   f. Assembling parts and nailing together as planned
   g. Finishing with stain and varnish.

The five lessons named above were selected by the girls themselves. The method used to give them a selection was simple but immediately interested them because it gave them an opportunity to choose from the skills previously listed by the teacher. About 20 different lessons were listed and circulated among the girls. They checked their first six choices and lessons taught were based upon the composite recording of their selections. (From Pennsylvania Newsletter.)

What Others Say

(Editorial appearing in the National Grange Monthly May 1938.)

Vocational Education

OUR Grange fathers 70 years ago clearly foresaw the necessity of equipping the farmer to grapple with the educational, scientific, and economic problems of the farm, in a practical and workable manner. Our Lecture Hour was doing vocational work and practical agricultural extension more than a third of a century before these great arms of government became active in rural affairs.

It is as important today as any time in Grange history to keep our educational program practical, to help the farmer help himself, and to bring the everyday truths of modern agriculture home to the tillers of the soil. We have supported farmers' institutes, agricultural extension, club work, and vocational education. Led by the Grange and similar organizations, Congress increased appropriations for vocational education under the George-Dean bill to approximately fourteen million dollars. We must demand that this fund not only be appropriated by Congress, but be used as intended.

We now have 7,100 vocational agricultural schools in the United States and approximately 250,000 boys are receiving the advantages of vocational education. More important, 122,000 farmers and farmers' sons attend night schools. There are at present 29,000 out-of-school youths—at that age when they become at times stranded and uncertain about the future—now attending either part-time, night, or day schools, or vocational education activities. It is safe to say that from one-third to half a million farm families are receiving the benefits of vocational education.

Under every recent administration the Grange has had to fight to keep the bureau of the budget, the bureaucrats, or technical educators from trying to strangle or divert this type of education. It is now time to restate, with all the emphasis at our command, that the Grange is opposed to the assimilation or submerging of this agency of far-flung service. Boys and young farmers who are in vocational schools are not on relief: they are fighting their own problems in an American way.

While we have no quarrel with those who want to make for efficiency in the handling of our educational system, we do demand that the identity of vocational education be not interfered with; that it be in charge of properly trained people; and that vocational agriculture, Future Farmer activity, and similar types of service receive the funds and the assistance that Congress and the Government have guaranteed to them. We urge the National Board of Vocational Education to use every endeavor to improve this arm of the public service

Supervised Practice

H. H. GIBSON

Writing Farm Practice Plans

J. W. Nielsen, Instructor,
Sidney, Nebraska

THE average boy needs an outline to follow in making and writing plans for his farm practice program. He will follow such a lead because he is quick to see the value of proceeding on a definite schedule which not only shows him what is to be done, but also sets time limits for the completion of each part. Such procedure results in uniform completion of all plans and in having all boys actually operating their enterprises at an earlier date. Further, nearly all problems are anticipated and late decisions are unnecessary.

To accomplish this I use the following, "Outline for the Farm Practice Plan":

Part I—The preliminary statement of your farm practice program. (Due by the end of the sixth week.)

Part II—The job list—listing in seasonal order all operative and managerial jobs necessary to complete each enterprise.

Part III—The analysis of each job listed in Part II, and stating how, when, and why you will proceed as indicated. (Parts II and III due by the end of the 12th week.)

Part IV—The agreement, in semi-legal form, with your parent covering your and his parts in the program.

Part V—The estimate of possible costs and probable returns which you may expect for each enterprise.

Part VI—Your long-time practice program—a tentative outline of all enterprises you hope to handle during the next three or four years. (Parts IV, V, and VI due the 16th week.)

It is better to write the above outline on the blackboard and have the boys copy it into their notebooks, than to hand out mimeographed copies to each one.

Field trips to visit several projects, and progress reports in class covering the management and operation of others, give each boy a picture of what can be accomplished, and he soon begins to see possibilities for a practice program for himself, or for improving the program he is carrying. Meanwhile preliminary discussion in class relative to the aims and objectives of a course in vocational agriculture leads him to want to get as much as possible out of it for himself.

By the end of the fourth week practically all boys will have decided, at least tentatively, upon one to three projects. We then write out on notebook paper Part I of the plan, "The Preliminary Statement of My Farm Practice Program for This Year." The statement consists of three or four paragraphs covering: kinds; numbers; breeds or varieties; location, including legal description of the quarter section upon which the enterprises are to be conducted; type of farming followed at home and the relation between the practice program and the farm business; and finally the aim or goal being sought.

These are turned in for correction, and when approved, form a tangible list of enterprises around which to build class discussion. Part I should be completed on schedule by the end of the sixth week.

Next the usual job lists are made containing some fifteen or twenty jobs included in a year's operation of each enterprise. Boys having similar projects work in groups and compile a list by drawing upon personal experiences, information gained from visits to successful farmers, and from supplementary reading. One member of each group then presents the list to the class for criticism. All copy the accepted list into their class notebooks.

Part III is next in order, and here each job contained in the accepted job list is analyzed bringing out how, when, and why each job is to be performed. Such discussion provides information and material for writing at least one paragraph into the notebook covering procedure for that job. The completed analyses make fine material for five to eight minute talks as a test during the twelfth week. By this time many boys will have their enterprises in actual operation.

Part IV of the plan, the agreement, is helpful in getting definite contact and co-operation from "Dad," if this has not already been secured. We use a suggested form for the agreement which involves the use of the terms "Party of the First Part" and "Party of the Second Part" and stating five or six conditions to which the two parties agree. These include rental of land, and equipment; division of expense; source of capital; payment for labor and power; responsibility for management and operation; repayment of investment and interest; keeping of records; and termination of the contract. This contract is then signed by the boy as Party of the First Part, and after being approved is taken home to the parent for his approval. It is a good practice not to require the parent's signature. However, if he will sign it, it is a good sign that he will be a good co-operator, and the three-man team, the boy, the parent, and the teacher has a fair chance for success.

The determination of estimated costs and probable returns, Part V of the plan, is made as Job No. 1 of the analysis, and these figures are placed in the record book in the proper blanks as soon as the whole class comes to an agreement regarding same.

Part VI of the plan, the long time practice program, is a tentative list of all the enterprises each boy hopes to cover during his high-school career and leads to his out-of-school farming participation after graduation. When fully completed, the approved plan is copied from the notebook into the permanent record book.

Additions or changes may be necessary from time to time. However, each boy now has a fairly comprehensive guide to follow, and the teacher has been able to meet most of his responsibility in seeing that practically all problems have been anticipated and a solution mapped out ahead of time. In this way I have attained my goal—to have every boy come to the end of the first semester with a detailed plan for his farm practice program.

The Efficiency of Feeds and Pigs

J. I. THOMPSON, Livestock Specialist,
California State Department of Education

IN THE 1936 yearbook of agriculture, W. H. Black states that four characters found in market animals produced for beef, must receive attention: (1) weight for age, (2) proportion of body parts, (3) quality of carcass, and (4) efficiency of feed utilization. He states further that it has been clearly demonstrated with smaller animals that families have been established, differing greatly in growth rate and weight for age, and in efficiency of feed utilization.

Since it is generally admitted that perfection of form has been pretty well reached in the better animals, many livestock men now agree that the next logical step is to find the animals or families that are most efficient in their feed utilization.

In California we are becoming more and more conscious of the fact that our feeds, both grain and hay or pasture, vary considerably in food nutrients. Our barley not only varies from year to year on the same ranch, but perhaps much more each year as between regions sometimes not many miles apart. Dairymen, who buy all of their hay, believe that the alfalfa from certain areas is much higher in feeding value than that from other areas.

The Danish people started out several years ago to test the efficiency of their hogs as to their ability to produce a pound of gain from a given amount of feed. They found as much as 40 percent difference in the amounts required and proceeded to eliminate the less efficient families.

The Iowa and Minnesota Experiment Stations set up similar plans whereby they test four pigs from litters sent in by various breeders. Minnesota finds as much as 20 percent difference in the amount of feed required for a pound of gain on these hogs. Since all of these are from the better herds, what must be the difference between the poorest and the best?

Some two years ago we began to consider whether or not we were utilizing the results of our livestock projects to the fullest extent. The F. F. A. boys in California will feed for market in one year from 2,000 to 3,000 hogs. These come from 75 communities from all parts of the state; so we began to plan. The result was a summary sheet which will show the beginning and final weights of the pigs, the average daily gain, and the pounds of feed required for each pound of gain. These summaries are sent to the California Polytechnic School and the data summarized. Since most of my time is spent in the field working with the teachers and boys on nothing but their livestock projects, I have sufficient time to help measure what is happening and follow it thru from year to year. We decided that it would be best to start with the fewest possible number of factors so that the procedure would not get too complicated. So we are considering just amount of feed for a pound of gain, altho we do not intend to forget cost. This amount can vary, due to three things: the ability of the boys, the efficiency of the pigs, and the efficiency of the feeds.

You will notice that the "balance" of the ration is not mentioned. Here is the reason: only those summaries where a well-balanced ration is used and the weights and figures are known to be quite accurate will be considered. Then quite a number of schools buy their feeds in large quantities, grind the barley in the school warehouse, and mix the feeds there. In this case the efficiency of the feed for that region is temporarily eliminated. That leaves the boy and the pigs. Where the animals are bred alike, pigs from the same litters, and the feed required varies, say 10 percent, most of that must be charged to the ability of the boy as a feeder. But when all of the pigs from one breeding establishment, in the hands of several different boys, require 20 percent less feed for 100 pounds gain than is used by a similar number from other herds in the hands of various other boys, this difference is largely due to the pigs.

It is this difference in the ability of the pigs that we believe can be measured, in part at least, by summarizing the results of projects totaling 2,500 or more pigs per year, continued over a number of years. After the performance of the pigs has been fairly well determined for several different areas, the relative efficiency of the feeds can then be explored, either by the exchange of pigs between areas, or by the direct purchase of grain from the regions that consistently get the better results.

If one single item had to be used as an indicator of efficiency of gains, I think most livestock people would agree that "daily gain" would be the one to use.

Using this as an indicator, I divided the summaries received on the first 120 pigs into two classes, those gaining more than 1.3 pounds per day and those gaining less than that, 60 pigs in each class. The average difference in the rate of gain of these two groups was 22 percent, and the cost of gain was one cent per pound less, at present feed prices, for the faster growers.

Another interesting factor is found. In this group of 120 hogs were 60 from one school. They were nearly all fed the same feed mixture from the same warehouse. There is 40 percent difference in the feed required by the highest and lowest group. Some of this must be "boy ability." But if we average the feed required by the top 30, compared to the lower 30, thus averaging boys' ability, we find a difference of 22 percent in feed requirements, most of which must be due to the difference in the ability of the hogs to utilize their feed. That 22 percent represents 1½ pounds less feed required for a pound of gain by the more efficient hogs compared with the less efficient ones.

Since feed costs average two cents a pound now, that's a difference of three cents a pound in cost of gains.

If the pigs of the same breeding as those just mentioned above continue to show this same efficiency for the next two years, it is a safe guess that all the pigs used in projects in that area will be secured from that same source.

If these summaries, over a period of years, are used, as they can be, to eliminate the poorer "doing" animals, they will be quite valuable. The efficiency of the hogs in 125 areas can be definitely advanced. If the areas can be determined where the feeds are definitely below average in feeding value, a whole new field is opened up, as to whether or not by using different seed, or cultural methods or fertilizers, the feeding value of the crops can be improved.

This is one of the contributions that we believe Future Farmer project records can make toward the solution of a national problem in livestock breeding.

We expect to see these youngsters selecting their breeding hogs, not so much on the color of their hair, or the high-sounding names in their pedigrees, but more on how efficiently the barrows in the family perform at the feed trough.

Parent Meeting—Results

DURING the year of 1936, Mr. Walter S. Carpenter, Instructor at Grants Pass, Oregon, initiated a new type of meeting. Since then several other instructors in the state, including the writer, have tried it, and all with good results. It sounds simple enough, for all that Mr. Carpenter did was to call a meeting of the parents of the boys taking agriculture in his department because he felt that there were many mutual problems concerning the boys which might be ironed out by such a gathering. The rest of us have found this to be true.

In calling this meeting the writer hoped for the following results: first, a better understanding on the part of the parents of the home project program and its essential features and correspondingly better co-operation; second, a better appreciation by the parents of the Future Farmer activity program and what it might do for their boys; third, a recognition of the fact that other parents were having problems with their boys and that they might be assisted by a frank discussion of them, at least as far as the agricultural program was concerned; and, fourth, the writer desired to show the parents a willingness on his part to talk over and work out solutions for situations that materially affected the welfare and progress of each Future Farmer boy.

Thirty-six parents came out to this first meeting. Altho the instructor had to do most of the talking the results hoped for have been largely achieved within that group. Getting a larger proportion of the parents out seems to be one of the greatest problems in connection with the undertaking. It is felt that another meeting or two would remove that feeling of strangeness and more helpful discussion would result. A very definite increase in co-operation and understanding have been evidenced from this first meeting however. Never before have we had so large a percentage of the boys attending our night F. F. A. meetings. This shows the parents' interest in that part of the program. Projects have also been more easily arranged.

Russell M. Adams, Critic
Teacher in Agriculture, O. S. C.

Securing Parent Co-operation in Supervised Practice Work

P. I. WASHINGTON, Teacher,
Ward, Alabama

ONE of the best ways that I have found in obtaining and using parent co-operation in supervised practice work is to know the mothers and dads of my boys so well that they will get right down and talk their problems over with me, and then have faith in what I tell them. In order to do this many and frequent visits are necessary. I try to be able to discuss with mothers and dads most any problem with which they are confronted. After they come to the conclusion that I am not a mere visitor in their home, but would be a helper, I bring my problems of supervised practice to them just as I would have them bring their problems to me.

An Example

I have one particular practice in mind that had been a problem for me to get this boy, an only child, interested in. This is his livestock year, and he seemed to have very little energy toward his supervised practice work. I had made several visits, and had made no headway. I knew that if I could get his parents really interested the greater part of my problem would be solved. I made a call not long after lunch and found his mother and father building a poultry house. I spent that afternoon helping with the house, looking over the chickens, the garden, the orchards, the vetch, and other things that they wanted to show. Eventually, the sow and seven pigs came up, and a few comments were made about them. Dad wanted to know what to do to make the pigs look better. The time had come. I suggested that the boy take them and look after them, for at least a while, as a project. Dad said, "Someone else will have better pigs." The point was brought out that if these pigs properly cared for could return a profit, better pigs would

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Farmer Classes

V. G. MARTIN — J. B. McCLELLAND

There Is No Substitute for Results

D. C. LAVERGNE, Trainee,
Baton Rouge, Louisiana

NAME me a better motto.

We agricultural men are always speaking of the farm youth but how many of us actually try to better his condition? Perhaps many, perhaps not enough of us.

Mr. M. Valois, Sunset, Louisiana, conducts a part-time class for farm boys who are out of school. His meetings for the last few weeks were on farm ownership. Does he live up to his motto? He does. Last week four boys, one married and three single, made applications to buy farms from the Federal Land Bank, taking advantage of the opportunity offered by that institution to boys who have completed four years of satisfactory supervised farm practice in vocational agriculture.

Why cannot we all do something like that for the farm youth? We can. I am not saying that it is an easy task by any means, but we can hope for a small degree of success. Let us never stop fighting for this cause. Whatever little we may do to benefit these boys will never be forgotten, and we will never regret it. For our efforts and for our work we will have received payment that can never be equaled in dollars and cents.

What to Teach?

A. T. LEWARK, Instructor,
Blacksburg, Virginia

THERE is still the question of what to teach adult farmers in an evening class. This question will always be with us from year to year. We will plan our courses to suit the present or very near future needs of the farmer; but as conditions change and new improved practices are recommended by our experiment stations, our programs of instruction will change. New problems in soils, fertilizers, crops, animals, marketing, and management are continually arising and demand attention. The activities of our government, designed to improve the economic and social conditions of our people, need to be studied and explained in order that the people may take advantage of new opportunities opened for them.

During the last four years governmental activities relating to the farmers have been so important as to command diligent attention and study from both agriculture instructors and farmers. Tho we may have signed up all the farmers in our patronage area to participate in the benefit payments made by the government, we have only scratched the surface of that great field.

We must encourage and lead farmers into study and discussion of such problems as soil conservation in all of its phases, farm tenancy and its attendant evils, co-operative buying and selling as affecting farmers directly, consumer demands in relation to farm products, price trends, production control, and many more problems. Not only must we study and discuss these problems, but we must in some way influence the farmers to take some action in these matters, do something individually and collectively to bring about desired results. In our supervision of home practice of evening-class members we may check up on the accomplishments of each, note the failures and mistakes made and thus determine how well we have succeeded as leaders in putting over what we have attempted. Out of this supervision, we get new ideas which may be worked into another course. To illustrate this point, the writer gives this report of one of his visits to an evening-class member. The conversation took place in the farmer's implement shed where he was storing some cultivators and a drill for the winter: "Now that we have checked up on all the practices you had agreed to carry out from last winter's class, what comments or suggestions do you have to make?" "Well," said the farmer, "if I had it to do over again, I'd use nitrate of soda as a dressing on my corn. Mr. Smith over here used 100 pounds per acre on his crop and his yield is better this year than mine. I think his success is due entirely to the use of nitrate of soda." "You may be right," said the instructor. "Suppose we include side dressing of fertilizer in our class this winter?" "I'd like to know more about this fertilizer business anyway," he replied.

Noticing the condition of the farmer's implements in the shed—a broken handle, dull cultivator and harrow teeth, wire used for bolts and clevises—the instructor remarked that a few classes in "care and repair of farm tools" might come in for a share in this winter's study, since we have a well-equipped shop in connection with school. The farmer said it would suit him fine, so the instructor made note of two problems to be presented to the class at their next meeting—"side dressing with nitrate of soda" and "repairing farm tools." The class accepted both as a part of their program to be studied and everyone who had tools or implements out of repair agreed to bring them into the school shop.

The school board permitted the use of the school shop for this group of men. They received instruction in forge work, fitting and sharpening tools. Here is a case of "learning on the job," supervised practice in the school shop with a practical blacksmith assisting the instructor. Plow points, harrow teeth, cultivator shovels, cold chisels were sharpened and tempered; hand saws and two-man saws were fitted; clevises, open rings, singletree clips, gate hooks, chains and other things were made or mended; buckets, tubs, strainers, cups, pans, etc. were soldered; plane bits, chisels and knives were sharpened; axe and hammer handles, plow and cultivator handles, rake and hoe handles were fitted. Many other articles, too numerous to mention, were either made or repaired in the shop.

This shop course was in operation for five weeks, two meetings per week, at the end of which time 14 men reported that all their tools and implements were in good repair and ready for use. One reported two cultivator handles to be fitted, and two said they had plow points and harrow teeth yet to be sharpened.

In the 10 years I have been conducting evening classes, I have found most interest in those problems which were suggested by some members of the group. They rather like the idea of having a hand in the program of work rather than have one handed to them. Of course there is a way of asking "leading" questions that will encourage them to make suggestions for the course we would like to give.

In the course given below, in one of our classes just completed, the units were asked for by members of the group.

1. Keeping up with soil conservation payments.
2. Proper use of lime on crops.
3. Home beautification (planting, lawn).
4. Judging corn and potatoes.
5. Planting and care of roses.
6. Outlook for 1937.
7. Farm inventory.
8. Farmer organization.
9. Soil erosion policy.

Every member of the class called for number 4. Their interest in this was occasioned by the annual judging contest held for all evening classes in the county in December. As for the other units the majority of the members indicated that they wanted more information and gave reasons in support of their desire for study.

Various methods are used in conducting the class. We try to avoid as much as possible the lecture method, tho this is much the easiest way to dispose of the subject matter. A good speaker may entertain his class but it is doubtful whether his speech will be long remembered or carry over into fruitful results. We all learn more quickly by participation in an activity, and we retain the information thus gained for a longer time and are able to apply it when the opportunity presents itself.

Farmers' experiences and discussions provide the participation in the learning activity. The instructor must be prepared to direct the discussions and keep them within certain bounds. Thru questions, he draws out the experiences of the members and starts the discussion. He makes use of the blackboard to list any statements (experiences) he thinks he will need later. When the discussion lags, he is ready to bridge the gap and continue on to a conclusion which is the goal to be reached thru discussion.

Many times a farmer or other person in the community may be pleased to lead a group in discussion occasionally. In this case the instructor, for the most part, participates as one of the group, but still is free to guide and direct the trend and limit the discussion to proper bounds. Conclusions reached thru discussions of the group should be written on the board and emphasized as much as possible, if they are found to be true and accurate. We have made it a practice to make mimeographed copies of summaries or conclusions on the units taught in each class and provide each member with a copy for the entire course.

The usual procedure we follow in organizing a course is: (1) make a community survey of farm practices by interviewing the leading farmers; (2) get the advice and suggestions from the advisory council concerning proposed courses; (3) enlist the support and co-operation of any agencies in the community, such as the Grange, Farm Bureau, farmers' co-operatives, and the county agent.

Supervising the home practice of evening-class members is much the same as that for all-day classes, differing mainly in the frequency of visits. After each unit is taught, farmers are asked to carry out certain improved practices or changes in their usual practices in connection with their farm enterprises. When the class has completed its course we have a list of all farmers and what they propose to do. This is the program the instructor follows in supervision. He visits a farmer whenever, in his judgment, a practice requires some special aid or skill to put into operation. Visits are made also to determine results, or to check up on the farmer's application of certain recommendations he had agreed to follow.

Objectives of Part-Time Classes

V. A. GREEN, Teacher,
Pinckneyville, Illinois

I THINK we have previously been too narrow in regard to "Part-Time Classes." Many teachers have stressed evening classes which are very important and essential. However, I feel that our real job is the teaching of youth. Part-time students are still youths. Another erroneous idea is that of teaching for only 10 or 15 meetings during the winter. Part-time students should be taken care of the year around.

Some of the objectives of a part-time class are as follows: (1) To develop confidence of the farm boy in himself. Boys between the ages of 14 and 25 are not going to attend farmers' meetings. After they have quit school they are not, as a rule, coming back. In part-time classes the boy has a chance to express himself and tell his experiences. If self-expression is the only thing accomplished the school has been worth while. (2) To keep the boy on the farm. Possibly 50 percent of the average group will be interested in becoming established in farming. The farm boy must be taught that conditions on the farm will be much better for him than they will be in the city. (3) To decrease farm tenancy. In 1930, 35 percent of the farms in the United States were leased; in 1935, 42 percent. If boys are helped in getting established in farming, a larger percentage of farms will be owned. (4) To establish the boy in farming. Students in high school do not know what they want to do. The agriculture teacher should not drop the student after he graduates. In fact we should teach a boy for about eight or ten years. When good farms become available for purchase or rent, it is the duty of the teacher to place a good agriculture student upon one of these farms. I believe the time will come soon when progressive landlords will go to the agriculture teacher and ask for a boy who can manage, rent, or buy a certain farm. If we do not contact these students after they graduate, we do not know whether they are capable of farming or not. (5) To help the boy earn some money at the present time. If the class instruction increases the earning power of the individual, he will return again. Start the boy in a progressive enterprise in which he is interested. Help him to make it a paying one. (6) To provide a place to go. Today this is a very important objective. Boys are going to go somewhere. Parents are going to favor clean meetings for the boys. (7) To develop in the boy an appreciation for good recreation. Anyone of the part-time age has not passed the play stage.

A Program of Recreation for the Part-Time Group

GLENN H. LE DIOYT, Teacher,
Nehawka, Nebraska

IN PREPARING a program of work for the part-time class, I devoted considerable thought toward developing an adequate recreational program for the members of the class. I did this because in my opinion the out-of-school group is badly in need of further recreational advantages as well as further classroom instruction. Some will criticize me for placing too much emphasis upon recreation but I feel justified in devoting much time to this phase of part-time work, inasmuch as it proved to be of great value to my particular group. I list here a few of the aspects of recreation and their bearing upon the part-time group.

1. All youths have an inherent desire to play. Their play if properly directed and organized gives an instructor an opportunity to get closer to the boys than he could in any other way. He can take advantage of this in promoting his classroom work and securing enrollment for his classes.

2. Most youths have had rather active lives while in school but upon leaving are at a loss to find an outlet for the energy which was dissipated in play while in school. It is an injustice to a boy to have him graduate to the "town team" class, only to find himself denied admittance to the gymnasium for the simple reason that four years ago the town team broke out a windowlight that has never been paid for. The part-time class that offers this boy an opportunity for recreation is doing him a great amount of good in helping him become a better adjusted individual.

3. Most communities have completely neglected the out-of-school group. This is especially true of their recreational activities. The community should be brought to realize that it has a definite responsibility to this out-of-school group, and a properly organized program of recreation can help to bring this about.

4. If out-of-school youths are taught to play together they will likewise work together. This makes for greater co-operation within the group. Co-operation is very essential, especially if the group is to form a Young Farmers Association as was the case at Nehawka.

I made use of the fact that boys like to play by organizing a kittenball team. This team was organized in June and consisted of farm boys not regularly enrolled in high school. Eighteen boys participated and every one of them was a likely prospect for my part-time class. At first the boys merely chose up sides and played each Sunday afternoon. After a month's practice, games were scheduled with neighboring towns. The boys felt that they needed further practice, so decided to hold a practice session each Thursday evening before darkness set in. It was after one of these practice sessions, when the boys could no longer see, that the organization meeting of the part-time class was held.

By virtue of this kittenball team I got next to many of the boys that were hard to approach. It gave me just one more angle of appeal to them. At different times during these games, I broached the subject of the part-time class to individual boys. By August 3, I had every boy in this group sold on the possibilities of further agricultural training. The practice sessions of the kittenball team were held the same night that class discussions were held, so it was easy to get a good attendance at these classes. Some will object here and say that some boys would come to class only for the recreation period and that as a whole they were detrimental to the class. I feel that the instructor who fails to interest these boys will also fail to interest some of the other boys in the class. If the part-time class has something to offer, the boys will soon find it out. If it does not, then all of the kittenball teams in the state won't hold them. Certainly no one will object to the practice of attracting them with a kittenball game and holding them with interesting class discussions.

After the kittenball season was over the group settled down to two months of evening-school work in which there was no recreation offered. During this period state fairs, county fairs and local fairs offered enough diversion (and also competition) for the part-time group. In November the group met each Saturday afternoon at the gymnasium for a basketball workout. The gymnasium was reserved for them for a two-hour practice. Since no lights were necessary and inasmuch as the school board had come to feel that the part-time group was a part of the school, nothing was charged for the use of the gymnasium. At the conclusion of the regular sessions of the class in December, the group organized a basketball team.

This basketball team was sponsored by the F. F. A. chapter of the high school. One of the requirements for participation on the team was that they must have attended at least 30 percent of the part-time classes. The F. F. A. paid for half of the suits and bought eight emblems for them. The F. F. A. had sufficient money in the treasury to do this, due to the large attendance at their outdoor Fall Festival held early in the fall. (The plan for next year is to

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Farm Mechanics

L. B. POLLOM

Motivating Interest in Repair Work on the Farm

NORVELL C. ALLEN, Instructor,
Kirksville, Missouri

IN OUR present machine age the operation of a modern farm has, as a major problem, both agricultural engineering and farm mechanics. Most of the back-breaking jobs of the early pioneer farmer can now easily and successfully be done with labor-saving machinery. Even many of the so-called hand jobs such as setting plants, milking, washing bottles, etc. are done even better with machines.

Skill in operation, care and repair of all these modern conveniences that make for the higher and better standard of living for the successful farmer are as important as their acquirement. Without such skill the machine or equipment fails and wears out, to be cast aside. Buildings go down in value without attention and repair, and are a failure as far as the owner is concerned.

Often good equipment and machinery that have been neglected can be bought by the young farmer at a very small fraction of the original cost and put in shape to give the same results as when new. At a farm sale a good two-bottom riding plow sold for about the cost of the irons on the very good type evener that went with the plow. Paint was about all that was needed to put the machine in first class condition.

During recent years repair work has replaced much of the manual training type of shop done in the early days of Smith-Hughes farm shop work. Without doubt one of the greatest factors in motivating interest in repair or construction work on the farm is a leader or instructor who can do and teach this phase of farming. I have observed several departments of vocational agriculture in different states where very little shop work is attempted even at the present time. The excuse usually offered is that the school board fails to supply suitable tools, building or materials, etc. Well, the old saying goes: "If people didn't spend half of their time wishing for things, they could work more and have them."

I do not know of any department in a high school that could be better made to support itself than a good farm repair shop. Students are often willing to make two chisels, punches, feeders, eveners or other articles if the instructor can furnish materials. These may be sold in community sales or traded for other materials and equipment if they have been well made and attractively painted. Clevises, reclaimed machinery, trailers, hitches, hay racks, wagon boxes, etc. usually are in demand.

Most shop teachers agree that the shop building comes second. Without it even good tools and equipment are shown and used to a marked disadvantage in securing proper interest. With a handy, large, roomy housing place, I am sure that a live department with an active F. F. A. chapter to lead the way will soon have necessary equipment and at the same time the Future Farmers of America will be fitting up similar repair sheds on their home farms. Fancy tools and equipment are not necessary and might have a discouraging effect on the student.

Purchase of materials offers a good field for teaching lessons in co-operation. Many boys can trade surplus materials to a good advantage. Few boys would need all the teeth from a discarded hay rake. Other students will have a surplus of lumber, sheet metal or paint.

Personally speaking, we have always found a lack of time rather than a lack of interest in farm repair work. This is one of the few classes in a curriculum where students come early, stay late, and work on holidays. With such interest, the learning processes must be excellent. We can find proof of this in the lives of boys who have been outstanding in shop classes. A number of Missouri boys who were on state shop teams in past years are now making a success in life.

In summary I would say a good experienced teacher who can do the jobs he tries to teach is the first essential in motivating interest in farm repair work. An active F. F. A. chapter, if interested, can put life into the shop course and raise money if it is not available from school funds. In teaching gas engines it is necessary to have a gas engine. For instruction on repair of mowers, it is essential to use a mower. I believe such jobs as glazing, painting, varnishing, sheet metal, woodwork, rope, forge and cold metal, electricity, mortar and concrete, pulleys and belts, gas engines and tractors should all find some time in a four-year vocational agriculture course. I believe repair work is among the most important subject matter of such a shop program. A good friendly junk dealer can help any shop course. He always has much useful shop material on hand that he has gotten for discard prices.

I feel that tool care and repair can be most effectively taught in connection with actual work jobs for best interest and results. Field laboratory exercises, modern motion pictures, demonstrations, visual educational charts and slogans all have a place in farm shop repair instruction. Many students see pictures of wonderful farm equipment. They see the wonderful exhibits at the state fairs. They want to use them and will, but without a thoro knowledge of operation, care and repair of such devices, the farmer of the future will never be able to buy and pay for these machines that raise the standards of living, lower labor costs, and remove much of the old time drudgery and long hours from farm life. A slogan which hangs in the agricultural engineering shop of the University of Minnesota says, "Plan your work and work your plan." It has been used by many people but I believe it originated in that state. I have never found a more appropriate motto for teacher or student.

Proper Dress for Shop Work

M. R. WILSON,
Professor of Shop Practice,
Manhattan, Kansas

IN THE teaching of farm mechanics to high school boys should the instructor wear his street clothes or should he wear a shop coat or unionalls, and should the students wear anything different than street clothes for shop work?

There seems to be considerable difference of opinion on this subject judging from the dress of many students and instructors in vocational farm mechanics. Some instructors wear a good suit of clothes in the shop without even removing their coat and vest. Some students do the same. Some teachers wear a shop coat or unionalls and still others remove their street clothes and don a pair of overalls and a blue shirt.

Possibly if we analyze this problem a suitable solution will present itself. Do you suppose you would receive suitable service from a garage mechanic who wore a $35 suit all of the time he was working on your car? Even a chemist wears a rubber apron and has his sleeves rolled up, and a pharmacist wears a suitable cotton coat while preparing prescriptions. Have you ever closely observed, for a period of time, a group of two or three boys working on the same shop project, one of whom had on his good street clothes and the others had on suitable shop clothing? Which ones did the work? Which ones were willing to tackle the job in a workmanlike manner? The ones who were properly dressed, of course. Will an instructor jump in and render the proper assistance to a boy in trouble if he has on a good suit of clothes and no protection? Will an instructor get the proper co-operation from a group of shop boys if he requires them to dress properly, but does not do so himself? I doubt if he will in either case.

It would be nice in every vocational farm shop if each boy could have a pair of unionalls with the name of the school lettered on the back. But to ask for this is to work an unjust hardship on many parents and it is not necessary. But every boy has an old pair of overalls and a shirt of some kind, and he should be required to wear them while in the shop. In the spring and fall when the weather is warm he should remove his street clothes and don his working clothes. He will do more work, do it more efficiently and with less effort if he is dressed properly. He should be given the necessary time to make the change to the work clothing.

The instructor should do the same, but in his case he should provide himself with a shop coat or unionalls for the winter months and unionalls for the spring and fall months. The cost of these is not very great and they will probably pay for themselves in the saving of wear and cleaning bills on the street clothes. These garments should be lettered on the back with the name

additional charge of 25 cents.

Students in the shop should be allowed to wear a cap of some kind if they wish. A regular 15 cent shop cap is rather a weird looking garment as far as style is concerned and an instructor will make a better impression if he wears a regular tailored cap costing 25 cents to $1. Many instructors prefer not to wear any head covering which is just as well.

After 14 years of teaching and observation of shop teaching procedure, I have come to the conclusion that suitable shop clothing is a necessity and the students as well as the instructor should dress for the job. (Kansas Newsletter, January, 1938)

Mechanical Trends in Farming and Their Effect on Farm Mechanics Courses

R. H. KLEIN, Instructor,
Richmond, Missouri

THE general trend in farming is to use more small power and equipment. More small tractors, small electric motors, small combines, and other small equipment were manufactured and sold for use in the United States in 1937 than in previous years. The most important causes of using more small machines are due to shortage of farm laborers, the availability of electricity, the manufacturing of smaller units of machinery to accommodate those seeking less investment in equipment, and the need for special types of power and equipment due to the soil conservation program.

Experience during 1937 has shown that we have fewer farm laborers available. Farm labor goes begging due to long hours with heaviest work usually in hot weather. On the other hand fewer hours per week attract laborers to other industries. Farmers are compelled to replace hand labor with small units of machinery. During the past years the corn sheller was turned by hand and now it may be driven by a small electrical motor on many farms. The use of small combines, where practical, certainly lessens the use of hand labor when cutting and threshing small grains.

With a change in farming systems, namely, from grain crops to pasture and hay crops, new types of machinery must be added to the farm layout. The national soil conservation program demands new systems and types of machinery. A student needs to know the economy and dependability of various types of new machinery to be able to invest wisely.

Much more electrical power is available for 150 practical uses for electricity on farms. The statistical department of the Edison Institute reports that over one millon farms in the United States were using electricity by December 31, 1936. Six states have more than 60 percent of their farms connected to central station service. Of these, four are New England States, namely, Rhode Island, New Hampshire, Massachusetts, and Connecticut, of which the first named leads the nation with 91.4 percent. The other two states over the 60 percent mark are California and Utah.

cent electrified: five between 40 and 60 percent, eleven between 20 and 40 percent, six between 10 and 20 percent, while 21 have less than 10 percent. Over one hundred thousand farms added electrical service during the first six months of 1937.

The above facts show that electrical power is reaching more farm homes. A study of economical, safe, and efficient wiring of farmsteads should be included in high school courses. Those planning to use electricity must learn how to operate electrical equipment and appliances in an efficient manner.

Farmers are demanding more small tractors in place of large heavy ones. Nearly 172,000,000 tractors were sold for use in the United States in 1936 as compared to 123,000,000 sold in 1935, or an increase of 49,000,000.

A study of terracing and dam-building equipment is needed now more than ever before. Four and one-half million acres were terraced during 1936 while only one and three-fourth million acres were terraced during 1935. Terracing properly done demands contour farming and fencing. Types of machinery adapted to farming terraced land must be studied by students. A boy needs to know the practical use of a farm level especially as used in terrace, dam, and pond constructions.

The farm mechanics course should consist of fundamental principles in electricity and modern farm power and equipment. The extent of the above courses offered will vary with the needs of the boy and his community.

To determine the content of a mechanics course, one must know the type of mechanics important to the farmer of the local community. Furthermore, one should anticipate as far as possible the future needs of a student in farm mechanics so that he may be given adequate training in mechanical skills.

Comment on Editorial By Mr. Marvin Bull

GEORGE F. COPE, Teacher,
Rockland, Pennsylvania

I READ your article in the March issue of "Agricultural Education" on "Vocational Teachers and Rural Electrification at the Cross Roads."

I agree that rural electrification has been creeping into our program by the "back door" method. We certainly have "plodded" along forgetting co-operation.

Since the coming of the R. E. A. program, there is one thing we need to do and that is talk co-operation morning, noon, and night, and then talk it some more between times until we do accomplish something in our community. The R. E. A. program can and will solve our rural electrical problem, if we in our individual patronage areas, will help boost the idea of co-operation on the part of the rural people.

We have lived in Rockland Township nearly seven years. During that time we have owned and operated a 1,500-watt, 110-volt D. C. Kohler electric plant. The initial cost was high, but operating expense and repair very low. The service we received was and still is very satisfactory; but the sad part about it is that our neighbors could not enjoy electrical power unless they owned their own plants. Rockland is 12 miles from Oil City and 12 miles from Franklin, with populations of approximately 23,000 and 12,000 respectively. Needless to say, these cities have electricity; in fact there has been electricity available within 5 miles of Rockland, at least during the past six years, yet we could not get it. During the time we have lived in this area, efforts have been made at least three times to interest one of the utilities to furnish us with electricity. Each time we were told: "We will see about it." One time a general survey was made. In fairness to the electric companies I would say that they are considerably handicapped because of franchise—an agreement between companies not to invade each other's territory and thus do "cut throat" business. This may be an advantage to the companies, but it certainly is not to the people in rural areas waiting for electricity. At the time of this last survey we were told that if we had six to eight subscribers per mile, they would furnish electricity for about $4 per month to the more thickly settled areas. After waiting nearly a year for the company to supply us at the above mentioned price and trying to get it to include a larger area, we decided to form an R. E. A. Co-operative.

A year ago various meetings were held in an effort to start a temporary organization for the purpose of establishing a R. E. A. Co-operative in this section. Some of these meetings were poorly attended and it appeared as tho our efforts would be in vain. Upon two different occasions I was asked to assume definite leadership, at least until we got started, but both times refused, insisting that there were others who should do this work. All the while I attended as many meetings as possible and always urged others to attend and join the co-operative. After we did get started it seemed as tho we would have a small local co-operative to begin with, servicing not over 100 to 150 miles of line. We were fortunate, however, in being able to hire a manager who had had considerable experience in work of this type. Today we have the Central Pennsylvania Rural Electrical Co-operative, with headquarters at Parker, Pa., servicing a part of four counties (Venango, Butler, Clarion and Armstrong counties). Two contracts have been let for a total of 450 miles of line. Construction work is under way. In not more than six months' time we should be receiving power over a part of these lines.

You ask, "How much did it cost the individual members?" It costs $5 for a membership, and no one can be a member unless he is a patron planning to use electricity. Five dollars entitles the member to one share of stock and one vote. A member may not own over five shares of stock. He is entitled to only one vote. A donation of 50 cents each was asked of those willing to help out to get the co-operative started. There are no other costs to the patron except to wire his house, barn, etc. The co-operative pays for wire, poles, transformers, etc. up to the buildings, regardless of how far from the road they are located. The co-operative hopes to have an average of four customers per mile, but

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Studies and Investigations

C. S. ANDERSON

An Educational Poultry Contest

JOE DUCK, Instructor,
Neosho, Missouri

Joe Duck

A CONTEST in culling and judging chickens was developed in Southwest Missouri in 1936. The old contest in which four birds were placed according to production or exhibition was found unsatisfactory since it lacked definiteness and allowed too much credit for guessing. A study of the accompanying contest score card will show that a student in order to make a good score must be skilled in: judging whether or not a bird is in production; judging how long the bird has been in production or out of production; the identification of breeds; discovering disqualifications; and judging past performance. This contest gives training in the real problems that come up on the farm in connection with the chicken enterprise.

Experience indicates that at least 15 birds should be used. Several breeds most common in the community should be included, a few of which should possess some of the most common disqualifications. One or two pullets should be included. Each bird should be penned separately.

The headings for the score card are arranged horizontally on the sheet with space provided for recording the data about each bird in the contest. The headings are:

Number of bird
Laying
Not laying
Time in production*
Time out production*
Past production (good, fair, poor)
Breed and variety
Disqualifications
Total points (for judge)

The score card will probably be refined to allow for differences in pigmentation changes due to size of bird and quality of bird. However, it is felt that the present form is sufficiently refined for high school students.

This contest was developed by the author with the assistance of the following Missouri teachers: R. C. Callaway, Granby; Jess Huffman, Diamond; D. M. Young, Pierce City; B. E. Stockrod, Jasper; and E. N. Wright, Anderson.

*Note—In these columns use the following key:
A—Less than 2 weeks
B—2–3 weeks inclusive
C—4–5 weeks
D—4–6 months

Vocational Agriculture Teachers Plan Books

SAM HITCHCOCK, State Supervisor,
Cheyenne, Wyoming

Sam Hitchcock

REALIZING the need for more definite plans to be used in the teaching of vocational agriculture, a considerable amount of work has been done by vocational agriculture teachers and the state department of education in Wyoming. At the annual summer conference (1936) for vocational teachers, the men attending were divided into groups and were assigned jobs in animal production and crops to be analyzed. After committees had worked these out they were taken up by the whole group and further additions made. This material was then taken to the state office where it was edited and mimeographed into book form. These two plan books were then sent to each teacher in the state. They are set up on a job analysis basis, this being recognized as the best method of approach in the teaching of vocational agriculture. The use of the plan books has made a great step forward in Wyoming towards accomplishing the aims of the work. The books are not intended to be used as a definite course to be taught, but rather as an aid to teachers in teaching courses which are based upon the long-time project programs of the boys enrolled in their classes. It has been found that having definite plans for each job taught helps a great deal in accomplishing the aims and objectives set up for that job. Two more plan books, one on soil erosion and one on farm management, were worked out during the 1937 conference. I believe that more uniform methods of teaching could be developed if plan books along this idea could be used by all vocational agriculture teachers. The job of Preparing Plowed Ground is given as an example of the way these jobs have been developed. In the book the two pages face each other.

Page 1—JOB No. 4 - PREPARING PLOWED GROUND

Operation and Decision	Standard Practice and Factors	Information Necessary
1. Harrowing	1. Use spike tooth harrow	1. How should teeth be tilted for soil types? 2. What should be physical condition of soil for harrowing? 3. Why harrow at right angles to plowing? 4. What is value of harrowing?
	2. Spring tooth harrow	1. When should spring tooth harrow be used?
	3. Disk harrowing	1. Why use disk harrow on some types of soils? 2. What is advantage of disk harrow?
2. Floating	1. Homemade level	1. Why is floating necessary? 2. What are the various types of floats?
3. Packing	1. Roller	1. Why and when should land be rolled?
	2. Cultipacker	1. What is cultipacking? 2. Is cultipacking superior to rolling? 3. How does disk harrow operate? 4. How is disk harrow adjusted?
4. Preparing good seedbed	1. Plowing, harrowing, leveling, rolling	1. What constitutes a good seedbed? 2. Do various crops require different seedbeds? 3. Why is seedbed important? 4. Make drawing of good seed bed.

Related and General Information:
Single and double disking.
Construction of levels.

Building a Group Conference Program

(Continued from page 5)

sider common to all of us would be: (1) co-operating more fully with the administrative unit of the school, (2) adapting vocational agriculture to our communities, (3) developing supervised practice programs, (4) developing problems of the Future Farmers of America adviser, and (5) making teaching materials usable.

The more technical problems cannot be so much in common as the professional, since we find different types of farming carried out in different sections of the state. I believe some technical problems that could well be reviewed in group conferences are: (1) a county or group program of agriculture adapted only to our particular section of the state, (2) Future Farmer activities as they apply to our county federations, (3) evening-school programs as they fit in with the program of agriculture adapted in the community represented by any teacher, and (4) demonstrations in post-mortem examinations, caponizing, rope work, or others that are adaptable to the group in common. We as teachers believe that the success of any conference, whether group, district, or state, is dependent upon the degree of teacher participation.

Thru properly conducted group conferences we keep alert to our duties and responsibilities. However, the success of the meeting is not solely the responsibility of the chairman, but rests equally on the shoulders of each individual teacher within the group. Someone in the group must assume responsibility for a program and see that it is properly presented at each meeting. The one in charge of the meeting should make enough copies of his discussion to pass out to each member of the group for his study after the conference has adjourned. Our group conferences should be held at least once each month and twice where practical, with the privilege of a called meeting at any time that some problem arises which could be solved more efficiently by the consideration of the group. For the seven warmer months, the group conferences should be held by visiting from one department to another. This gives an opportunity to observe what is being done by the other men in the group. For the five colder months a centrally located meeting place should be selected.

A suggested typical yearly program follows:

July—A general business meeting with the election of officers, and the adoption of a general program of work for the year.

August—Selling our program thru co-operation with the school, and adapting a program of vocational agriculture for the community.

September—Developing a well-rounded, supervised practice program with the student.

October—Applying Future Farmer activities to our county federation, or analyzing a good program of work; probably a good educational demonstration, inviting the principals and superintendent to meet with the group.

Situations to be dealt with:
1. Boys do not know how to prepare seedbed properly.
2. Boys do not know proper implements to use.
3. Boys do not know proper order of implements used.

Objectives:
1. To teach boys how to prepare seedbed properly.
2. To teach boys when and where to use different implements.
3. To teach boys how to operate machinery.

Devices:
I. *Preparation:*
- A. Collect illustrative material on various types of harrows, levels and packers.
- B. Make survey of various practices and results obtained.
- C. Talks by implement dealers.

II. *Presentation:*
- A. Visit implement dealer. Have him show the boys various types of harrows, levels and packers.
- B. Discuss use of each implement.
- C. Blackboard development of problems for discussion.

III. *Application:*
- A. Have boys make a survey of the various community practices and results obtained.
- B. With the boys draw conclusions on best practical methods.
- C. Have boys put final decisions in notebooks.
- D. Field trips to observe implements in use.

IV. *Testing:*
- A. Observe boys to see if they apply this knowledge on their supervised practice programs.
- B. Observe practices on home farm.

References:
Farm Machinery by Worth
Operation, Repair & Care of Farm Machinery—John Deere & Co.
Soil Science by Weir—Lippincott
Experiment Station practices
Corn Textbooks—Soil Textbooks—Crop Production and Management by Cox—John Wiley & Sons

November—Correlating evening schools with the program of agriculture as set up in our community.

December—Problems of the Future Farmers of America adviser; and how we might improve our local chapter thru county federations.

January—The out-of-school farm boy, his desires, and our program; and probably a good demonstration.

February—Teaching technique and making available usable teaching materials.

March—Shop programs, organizations, and records.

April—Community needs as developed from our stay in the community.

May—Supervising the projects and summer work of the teacher of agriculture.

June—Visiting outstanding departments and projects in near-by communities.

Of course it is understood that the above program is only suggestive and each group will have to adopt a program that will serve the needs of its communities.

Comment on Editorial

(Continued from page 13)

figures that as long as we have an average of three per mile we can furnish everything up to the buildings. The cost to the patron per month is not to be more than $3.50 for 45 kilowatt hours. This amount is to be reduced proportionately as the total consumption of current increases.

The vocational teacher should not stand at the crossroad with folded arms. He should be busy boosting the co-operative, even tho it does conflict with private industry. He should, however, insist that the privately owned electrical company should have the first opportunity to service the entire area, each house being considered as an eventual potential consumer. That is just what was done in our area. If the private company cannot arrange to service the area at a reasonable cost, then a co-operative should be started, and the power for the co-operative could be bought at wholesale rates from the local private electrical company. In our area the co-operative has arranged to buy from a local company all of the power at a cost of less than .015 per kilowatt hour. If this proves to be unsatisfactory a centrally located Diesel powered plant is to be installed.

The co-operative type of program has been at work in our midst for many years thru the Grange and other farmer co-operatives. It is high time that we as teachers begin to recognize the value of the co-operative program and boost it more and more. It, and not government subsidies nor acreage allotment, is the final solution to our agricultural problems.

Independent farmers are everywhere the basis of society and true friends of liberty.—Andrew Jackson.

For what avail the plough, or soil, or life, if freedom fail.—Emerson.

He who owns the soil, owns up to the sky.—Maxim.

Future Farmers of America

L. R. HUMPHERYS

Financing Projects for Future Farmers

WILLIAM H. HOLLOWAY, Instructor,
Bonanza, Oregon

IMPROVING and financing F. F. A. projects was a serious problem. Most of the boys were not in a position to buy good quality livestock, seed, or equipment to improve their projects. The boys were eager to improve their projects in size as well as quality, and getting financial credit for them was a vital problem.

Contact was made with Mr. Lee S. McMullen, Secretary of the Klamath Production Credit Association in Klamath Falls, for obtaining finances for the boys. The Bonanza Future Farmers were able to get what credit they needed. There was no red tape to go thru; signed notes and the instructor's okay were all that were needed. This served to help improve projects but I felt, and so did Mr. McMullen, that the boys were not learning enough about wise and proper use of credit. We felt they needed some more responsibility in handling the money and lending it on a strictly businesslike basis.

The idea of forming a Production Credit Association right in the chapter was worked out and presented to the boys at a meeting. At this meeting the setup was explained. They were told how a Production Credit Association could be set up and the boys went thru the same process. First the boys voted to set up their own association. Then they voted on the amount of capital stock to buy. They voted for $100 of class "B" stock allowing them to borrow up to $2,000 at any one time. This was felt to be enough. However, if it is necessary to borrow more, more capital stock can be voted. The group also voted, elected seven directors, and settled on the name of Bonanza F. F. A. Loan Association with offices in the agricultural building at the Bonanza High School. The meeting was adjourned, and then the directors met. There Mr. McMullen, of the Klamath Production Credit Association, explained to them the next step: electing their own officers consisting of a president, vice-president, and secretary-treasurer. They were elected.

Then the job of making the bylaws came up. Ideas were given us from the bylaws of the K. P. C. A., and the boys worked out bylaws suitable for their purposes. They stated the duties of each officer and director, dates of meetings, membership requirements, rates of interest, and loan requirements which are:

1. Be an F. F. A. member in good standing.
2. Fill out loan application blank (same as used by the K. P. C. A.).
3. State a definite plan of repayment.
4. Give amount of security available.
5. Have project budget worked out.
6. Have project plans written and approved by instructor.

When a loan meeting is held these are all checked over by the directors and instructor. They inquire closely into every phase of the project, the assets and liabilities of the applicants, the type of soil or facilities available for proper care of crop or livestock, the plan of repayment, the boy's interest in agriculture, his honesty, and moral risk. The loan is not always approved for the full amount. They like to have the boy put some of his money in too, if it is only a few dollars. They try to loan on the same basis as would any lending organization. I always ask them if they would be willing to loan money of their own to the applicant. They usually ask for all the security the boy has. A chattel mortgage is made out and signed. This mortgage is not recorded but is kept on file in the association files. Inspections are sometimes made before a loan is granted, and a checkup is also given during the year, if there is need for it.

After the loan has been approved the discount-offering and credit-analysis sheet, which has been made out before the meeting by the secretary, is signed by those approving the loan. The note is made out ready for the signatures of the boy and his parents. Other papers necessary for a loan from a P. C. A. are made out by the instructor.

The money is borrowed from the K. P. C. A. at five percent. The F. F. A. boys decided to make a three percent service charge, and this was approved by the members. This service charge is to obtain money to buy capital stock, and when all the necessary capital stock has been purchased they will eventually be able to build up a reserve and eventually their own association—operating like any P. C. A.

When the note has been properly signed, it is sent in to the K. P. C. A. office and the check for the money is deposited in the F. F. A. checking account. As the money is needed by the borrower, a check is written for the amount needed and made out to the one to whom the money is loaned. This safeguards the loan association as well as the boy, as it prevents the money from being spent for some purpose other than for which it is borrowed. The directors have better control of the use of the money, and the boy is taught the importance of spending the money for a productive purpose. The checks are signed by the treasurer and the teacher.

Mr. McMullen stated recently: "The Bonanza F. F. A. Loan Association, organized and managed by the boys themselves, has functioned this past year without a single borrower's failing to meet his obligations. It is unique in Oregon, if not in the West, and is receiving much attention not only from other Smith-Hughes workers, but among officials of the Production Credit Associations of the Northwest. I feel that the work of the Association is giving the boys experience in the handling and lending of money as well as proper and wise use of credit. It is emphasizing the necessity of maintaining a good credit rating and it has made better projects possible for the Bonanza boys."

A total of $1,700 has been borrowed by the boys. The loans range from $10 to $300. The money has been used to buy a team, a harness, and a cultivator, eight baby beef calves, 10 registered Duroc-Jersey sows and gilts, five purebred beef heifers, seed for various crops including 125 sacks of certified seed potatoes, and six feeder pigs, as well as feed for livestock. The projects have been improved in size. Three years ago when I came here most projects were of just one enterprise. This year they will average about four enterprises per boy with several running eight or more enterprises. A lot of this increase has come about thru the credit available and the wise investments they have made of the money borrowed.

Tree Planting Campaign

OSCAR E. REECE, Instructor,
South Haven, Kansas

THE South Haven Chapter of Future Farmers of America sponsored a tree selling and planting campaign in which all F. F. A. members and vocational agriculture pupils took part in selling trees.

O. E. Reece

Thirty-three hundred shade trees and 85 fruit trees were sold and delivered to the farmers of our community for planting. All the trees were planted in good condition and are making a splendid start.

The boys who took part in this campaign collected for the trees in advance, using a receipt form made up by our commercial department for the purpose of keeping a record of trees sold. Each boy who sold trees delivered one copy of the receipt to the F. F. A. adviser when he turned in his money for the trees which he had sold. When the campaign ended a composite order was sent for the fruit trees. The two boys selling the highest number of trees were awarded a trip to Hays after the shade trees. Henry Wolf was first with a total of 1,110 trees sold, and Stanley Hutchinson was second with 506 trees sold.

These two boys, accompanied by the adviser, Mr. Reece, left South Haven March 4th at noon and returned Sunday, March 6th. They drove to Lyons, Kansas, where they spent the night. The next morning they visited the Gulf Oil Company Supply House at Chase and went on to Hays. Several hours were spent visiting the different parts of the Fort Hays Experiment Station, including the machine shop, feeding pens, barns, silos, fields which have been terraced and listed with damming lister, and the erosion experimental test plots. On the way home Sunday, they visited the State Fish Hatchery at Pratt, Kansas. The trip covered a total of 535 miles. Expenses were paid by collecting a transportation fee when the trees were sold.

Master Village Teacher

(Continued from page 5)

the recreational supervisor in matters of recreation and the sanitation supervisor in simple problems of sanitation. Around these activities a score card has been developed. Only the major headings are given, showing the maximum scores for each division.

	Maximum Score	Haralambos Score
I—Agricultural Work		
A—Extension activities with adult farmers	400	301
B—Project boys	160	159
C—Co-operation with village school	100	63
D—Community project and campaigns	140	122
II—Recreation		
A—Success in promoting club work	40	32
B—Success in promoting athletics	30	5
C—Success in promoting and utilizing library	15	8
D—Development of local interest	15	10
III—Sanitation		
A—Extent to which objectives have been attained in building latrines	80	47
B—Activity in pointing out needs to sanitation supervisor	20	18
	1000	765

It will be of interest to summarize briefly a few of the accomplishments which were used as a basis for the score given to Zoulamoglou. During the year 1934–35 Zoulamoglou introduced among his people a total of 1606 *farmer-practice-units. Of this total, 1,083 related definitely to his long-time program. Zoulamoglou developed fairly active agricultural committees in five of his six villages. With these committees he held an average of four meetings each during the year. In addition to this he arranged a district meeting including representatives of all five of his committees. At this meeting long-time objectives for the district were formulated and discussed. Zoulamoglou showed himself quite aggressive in pressing into service the various specialists who were available in the vicinity of the Drama district. He made 166 farm management surveys last year as against some 250 originally contemplated. Zoulamoglou was also quite successful in developing home projects among boys. The standard set for the year was three good projects in each village, or a total of 18. Zoulamoglou went slightly beyond this minimum and his project standards were good.

His relations with the local schools and school masters were excellent. He conducted only 22 nature study lessons, but he developed good school gardens in most of his villages, and a large proportion of his home projects were motivated thru his relationship with the schools. In community campaigns he was also quite successful. He promoted a campaign among 690 tobacco farmers in the village of Kyrghia for the control of worms in seedbeds. He conducted a campaign for grafting wild fruit trees with the result that 114 people participated in grafting 8,400 wild trees. The interest of a local school was aroused in starting a little pine forest on a near-by hill and 6,000 seedlings were planted. A few other community enterprises were undertaken, but those mentioned were among the most outstanding.

In his recreation and sanitation activities Zoulamoglou was not so successful. Each man was expected last year to develop among his six villages at least one demonstration Future Farmer of Greece (F. F. G.) Club. Zoulamoglou succeeded in organizing his demonstration club but was not so efficient in developing proper interest among the members. Each year the sanitation supervisor promotes a special type of project depending upon the requirements of the region. At the moment the need of private and school latrines is most pressing. A peasant home seldom has a latrine and schools with enrollments from 100 to 200 children may frequently have no toilet facilities whatsoever! It is easily understood, therefore, why so much emphasis was given last year to this particular phase of sanitation work. Zoulamoglou, as it will be noted, did only moderately well in this campaign. It may be added by way of conclusion that in certain phases of the work there were men who far outstripped Zoulamoglou in their practical accomplishments. But if there were no outstanding peaks of achievement in his program, neither were there any spots of excessive weakness. And by such the race is usually won.

*NOTE: Defined in Macedonia as one improved practice adopted by one farmer. Two farmer-practice-units may, therefore, be two farmers, each one adopting one improved practice, or one farmer adopting two improved practices.

Each year, Mrs. Luther Burbank of Santa Rosa, widow of the world-famous plant scientist, helps the Santa Rosa Future Farmers of America chapter dedicate California Conservation Week.

This year, the members of the chapter presented the school with two European sycamore trees, and Mrs. Burbank was on hand to take part in the ceremonies. The event took place on the anniversary of Burbank's birth, which is also the opening day of California Conservation Week.

Following an indoor assembly, members of the chapter and student body went outside where Mrs. Burbank assisted in planting the trees.

In the picture, from left to right, are Paul Bertoli, Santa Rosa chapter treasurer; Burt Griffin, reporter; Bob King, secretary; Mrs. Burbank; President Stanley Bengston; Wayne Foster, chairman of the conservation committee of the chapter; Severa Wilford, vice-president; and J. Wesley Jamison, chapter adviser and head of the instructional staff.

W. Lyle Moulds, State Supervisor of Agriculture, Dover, Delaware, reports that: "Over the past 10 years, the vocational agriculture boys in Delaware have increased, with a net profit of $7,094.17 for 5,697 head of livestock and poultry and 111 acres of crops, to $18,332.78 net profit in 1937 for 426 projects with 28,337 head of animals and poultry and 401 acres of crops.

These records show that there has been a uniform trend of improvement made by the agriculture boys and altho the boys have suffered market losses during the depression years, they have been making a steady increase in the scope and net profits."

Household Mechanics for Girls

(Continued from page 7)

1 hack saw, 8″ to 12″, adjustable.
1 pr. tinner's snips, 2½″ blade.
1 brace, 10″.
1 soldering copper, 1½ lb.
1 mill file, 8″.
1 nail set, 1/16″.
6 auger bits, ¼″, ⅜″, ½″, ⅝″, ¾″, and 1″.
1 pipe wrench, 14″.
1 monkey wrench, 10″.
1 screwdriver, 6″.
1 automatic drill with points.
1 tack hammer.
1 steel square, 8″x12″.
1 pr. shears.
1 oilstone, 1″x2″x6″.
1 tool grinder, 4″ to 6″ wheel.
1 blow torch.

Supplies for Home Repair Work

General Supplies

1 box assorted small nails and brads.
1 box assorted screws.
1 box assorted stove bolts.
1 box double pointed tacks.
1 box glazier points.
1 coil picture cord.
1 can or tube plastic wood.
1 can or tube liquid glue.
1 small can putty.
Assortment of screw eyes and screw hooks.
1 can lubricating oil.
1 can oil, for the oilstone.
1 small can soldering paste.
1 cake sal-ammoniac.
1 bar or spool of 50-50 solder.

Woodfinishing Supplies

Assorted sandpaper.
Steel wool.
Transparent stick shellac.
Soft rags.
Burlap.
Paint and varnish brushes.
Turpentine.
Linseed oil.
Alcohol.
Paint and varnish remover.
Stain, filler, shellac, enamel, wax, varnish and lacquer (can be purchased as needed).

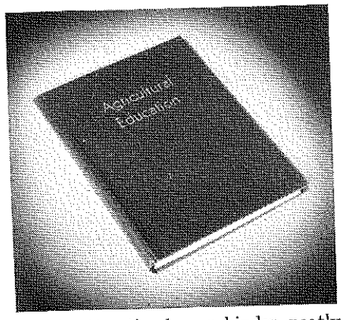
Securing Parent Co-operation

(Continued from page 9)

return a better profit. Dad asked that I suggest a feed and he would see that the boy had it. The boy made a self-feeder in his class shop work. The first of the next month everything was ready and started. On the 23rd day, the class of vocational boys looked over the litter and saw that they had made good gains, and at the same time gave them a worm treatment. Mother and dad were ready to give any assistance. When they had been fed 70 days they averaged 175 pounds each, and had gained 132 pounds each. We sold them for nine cents, which was one-half cent above the market, and realized two cents per pound profit above expenses.

Dad made the remark that his meat had been costing him more than it could have been bought for; he saw what good care had done. This particular instance has done more toward getting co-operation from these parents than anything I have done in the four years here. Fathers and mothers must understand us and our motives in our supervised practice programs.

Our Magazine Binder



This attractive brown binder, neatly lettered, with post adjustments holds at least 24 issues of the magazine. All copies of the magazine are punched to fit these binders. The cost, one dollar postage prepaid. Order directly from the Meredith Publishing Company, Des Moines, Iowa.

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Subscriptions

When sending in subscriptions please group them under the following headings: (1) New subscribers, (2) Renewals, or (3) Renewals with changes in address, giving both the old and the new addresses.

Where to Write

Correspond directly with Mr. M. A. Hunnicutt, Director of Circulations, Meredith Publishing Company, Des Moines, Iowa, in regard to questions concerning circulation difficulties and sending in subscriptions for the magazine.

Copies of Old Index Available

Copies of the Index to Volumes VI to IX, January 1934—June 1937, may be secured from Business Manager, W. F. Stewart, Department of Agricultural Education, Columbus, Ohio. They may be secured (Free) by just sending postage to cover the cost of mailing. Allow a two-cent stamp for each one you order.

Program of Recreation for the Part-Time Group

(Continued from page 11)

have the Young Farmers Association and the F. F. A. work together in promoting this activity.) The part-time group received $10.00 in donations from the merchants and the remainder was paid for in gate recipts from their games. The team played neighboring town teams and won most of their games.

The team was managed by a boy elected from the part-time group and one selected from the F. F. A. These two boys worked together and did practically all of the work in scheduling games, taking care of equipment, finances, etc. The conduct and sportsmanship of the team were excellent and they proved to be a credit to Nehawka and the F. F. A. organization wherever they appeared. There were 12 boys who played at different times on the team and quite frequently on Saturday many of the other boys in the part-time class came in for workouts.

When the basketball season was over in February the boys began meeting again, this time for the purpose of forming a Young Farmers Association. Two of the standing committees that they elected were the athletic committee and the social committee. It is the duty of each of these committees to prepare a program of activity for the year. The athletic committee is again planning to have a kittenball team this summer. The social committee is making arrangements for two parties: one a picnic with the F. F. A. in June, the other a party for their girl friends in the fall. I attribute a large amount of the success of the class to the recognizing of the fact that boys like to play.

Bibliographies of American Possessions

A bibliography of Guam, Series A, the first in a series of comprehensive bibliographies of all the American possessions—namely, Alaska, Hawaii, Puerto Rico, the Philippine Islands, Guam, American Samoa, the Panama Canal Zone, and the Virgin Islands. These bibliographies are being compiled thru funds furnished by the Works Progress Administration. A staff of 70 research workers and linguists in German, French, Spanish, Italian, Russian, and Danish languages is employed.

These bibliographies, of which Guam is the first one, are free to all public schools, public libraries, colleges and universities, governmental offices and private foundations.

To be placed on the free mailing list for all these publications, any schools and organizations may do so by writing Charles F. Reid, Editor-in-Chief, *Bibliography of the American Possessions*—The College of the City of New York, Department of Education, New York City.

The live teacher believes in himself and his job.

When you can't remove an obstacle, plough around it.—*Lincoln.*

VOCATIONAL EDUCATION DIRECTORY

Revised listing of names for the new directory will appear in the September issue.

Present head state supervisors and teacher-trainers have been provided with blank forms on which to supply the proper listings for each state. This material must be received by the editor not later than July 15, 1938.