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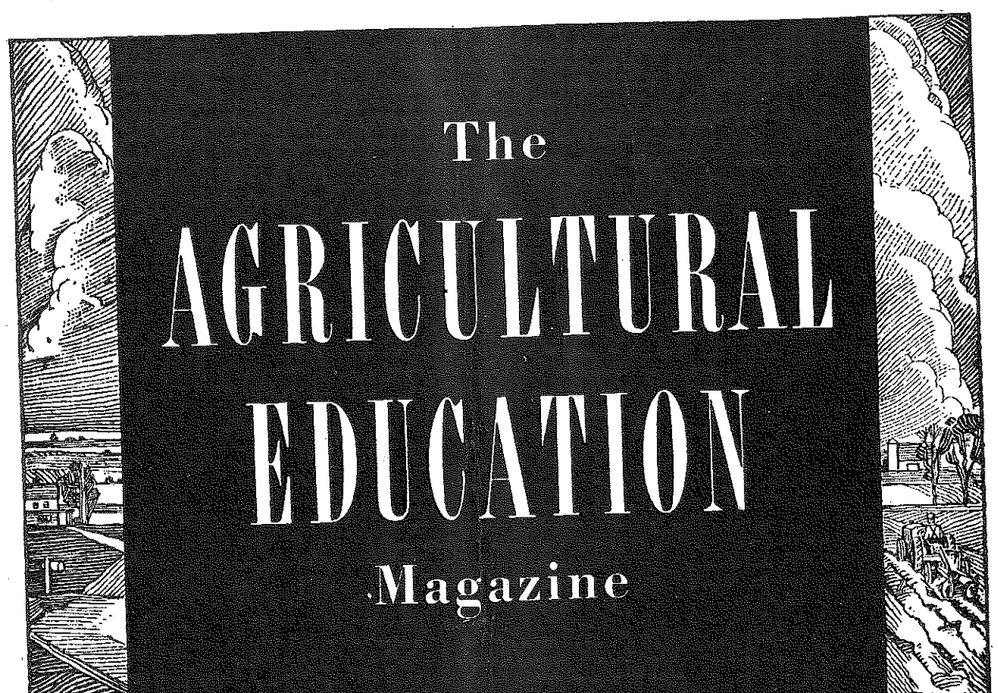

He who would be the author of the peace of the world must begin by being a farmer—inscription on cornerstone of the Sfortesca, a building erected for agricultural purposes near Milan, Italy, 1483 A. D.

The Agricultural Education Magazine

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Editorial Comment

Secretary Wickard Looks to Teachers of Agriculture for Help

Dr. J. W. Studebaker,
Commissioner of Education,
U. S. Office of Education,
Washington, D. C.

Department of Agriculture
Washington, D. C.
November 28, 1941

Dear Dr. Studebaker:

In your letter of November 21, you referred to the Food-for-Freedom Program sponsored by the Department of Agriculture.

It is my hope that the 9,000 teachers of vocational agriculture in the Nation will include this Food-for-Freedom Program in their plan of work for this year. It is not necessary for me to point out to you just how important this is in connection with our defense effort, in connection with our assistance to countries resisting aggression, and in connection with our effort to improve the diet and health of farm people, as well as others, who are in need of increased quantities of dairy products, poultry and poultry products, pork, beef, fruits, and vegetables.

I believe the vocational teachers can render a real service to the farmers and to the Nation by assisting the farm families they are serving in their school communities to improve their feeding and management methods in milk production and pork production, as well as the production of the other commodities desired. For example, many farm people need instruction in better care and management of baby chicks if we are to get the desired increase in poultry and poultry products and at the same time hold down the production cost.

I also hope that the facilities of the shops in the vocational agricultural schools in the Nation, as well as the services of the teachers, may be used in our campaign to repair farm machinery. It is very important for every farmer to make use of all the machinery he has if the Food-for-Freedom Program is to be successful, because it will be very difficult in many cases to secure new machinery as desired and, at the same time, the farmers can be saved considerable money if they have assistance in the repair of their farm implements and machinery.

As agriculture's representative on the Federal Advisory Board for Vocational Education, I shall appreciate your full co-operation in these programs.

Sincerely yours,

(Signed) Claude R. Wickard,
Secretary

Why Should I Worry About It?

There is a new stir in the educational field. Does it concern me as a teacher of vocational agriculture? There is much to lead one to suspect that the National Defense Training for out-of-school youth is cracking the field wide open for vocational training. We have long looked for some solution in obtaining increased help for giving training to out-of-school youth. Little did we suspect how suddenly we would be called upon to expand this field.

It is breath-taking to realize the rapidity with which this practical way of teaching is stimulating our educational system. New spheres of activity have been entered. Many school officials who have not seen their way clear to foster vocational training are now strong supporters. What has caused this sudden change? One contributing factor has been the extremely practical methods used in presenting this defense training. The quick results have been so obvious that one could scarcely ignore them. In fact, the methods have been so very practical that they have opened up the way for further expansion in our departments of vocational agriculture without being hampered by academic tradition.

These defense-training courses have been largely taught by expert tradesmen who have had little if any teacher experience or teacher training. Has our teaching profession been undermined? Definitely not. These experiences are bringing to light how valuable a technically trained teacher is, and how well he is qualified to supervise such programs. What are we doing to make this defense training an integral part of our system of training in vocational agriculture? Is there a possibility that this type of training might fall to other hands? It seems logical to conclude that the local teacher of vocational agriculture should be the responsible head of vocational training for rural youth. Are we prepared?—Elmer Belnap, Idaho

CCC, NYA, and The Public Schools

The Educational Policies Commission has just published a bulletin in which some far-reaching recommendations are made. After calling attention to the educational activities of the C C C and N Y A, the Federal control which has been exercised, the tendency toward making these institutions permanent, the dangers of a dual educational system, and the failure of these named agencies to co-ordinate their work properly with public schools, the commission sets up a policy for Federal relations to education. The specific recommendations made by the commission follow:

"1. That Federal funds for student aid should be continued and hereafter should be appropriated to the U. S. Office of Education, rather than to the NYA, for distribution to schools, colleges, and universities thru the appropriate educational agencies of the several states.

2. That as soon as they have completed their present emergency assignment of training workers for the national defense production program, the National Youth Administration and the Civilian Conservation Corps should be discontinued as separate youth agencies; that their functions as agencies of vocational training, general education, and guidance should be continued but should be transferred to state-and-local educational agencies; and that their functions as public works agencies should be continued but should be located with the general agency or agencies of public works.

3. That federal financial aid should be provided for state-and-local educational agencies, to equalize educational opportunities between the states, and to establish new educational services required to meet nationwide needs; and that this aid should be adequate to support a comprehensive effort to meet the educational needs of youth.

4. That the Federal government should supply leadership to the state-and-local educational agencies, thru research, conference, experimentation, demonstration, and publication; and that the government should center its educational leadership in the U. S. Office of Education."

The Boston A.V.A. Convention

If ANY incentive was needed for discussions on the part of agricultural education in national defense it was amply provided three days before the opening session by the attack on Pearl Harbor. All who attended gained a new insight into the crucial importance of bending every effort to aid in the Food-for-Freedom campaign. The keynote of the agricultural section was sounded by Dr. A. K. Getman, New York, who prophesied that the biggest test of educators will be not so much in winning the war as in "winning the peace." The task of rebuilding the civilization now being threatened will call for all the talents and the energy which we possess. Workers in agricultural education will, indeed, have an important part to play in this task.

In the closing session of the A.V.A. Mr. John J. Seidel, State Director of Vocational Education, Baltimore, Maryland, was elected president for the coming year. The 1942 convention will be held in Toledo, Ohio.

A. K. GETMAN **Professional** R. W. GREGORY

Farm Research Narratives

Soybean Research

W. L. BURLISON and H. M. HAMLIN, University of Illinois*

RESEARCH regarding soybeans is perhaps the best illustration of the modern way of introducing a new crop or a new agricultural industry. Compare with it the long process of trial and error, followed by another long process of pseudo-research, which preceded the introduction of modern methods of improving the corn crop and the corn-products industry, and the contrast is clear.

It is true that the soybean is an old crop in the United States, having been introduced in 1804.[1] It is true that the plant was written about as long as 4,800 years ago and that it has perhaps been grown as long as 25,000 years.[1] In 1925, however, there were only 4,875,000 bushels of soybeans produced in the United States, 2.7 percent of the world production at that time.[2] By 1939 the United States production had reached 87,409,000 bushels, about 18 times the 1925 production and 30.7 percent of the world production for that year.[2] The farm value of the 1939 crop in the United States was $67,488,000.[3] There were 4,226,000 acres devoted to soybeans in that year.[3] In 1941 the national production promises to exceed 100,000,000 bushels.

What had been happening that would account for this revolutionary change? It seems fair to say that the one most important new element in the situation was research regarding nearly all phases of soybean production and use.

First Soybean Research

Research on the soybean had begun long before 1925. Early research reports were made by the Illinois Agricultural Experiment Station in 1896 and 1897.[2] The search for good varieties began early, and by 1907 the United States Department of Agriculture had described 23 varieties then known in the United States, 15 of which had been introduced by the Department from 1900 to 1905.[1] A bibliography of soybean research from 1900 to 1938 includes 1,613 titles.[4]

The major lines of investigation have been:

1. The discovery of varieties
2. Improvement thru breeding and selection
3. Cultural practices
4. Fitting the crop into various systems of farming
5. Effects of the crop upon the soil
6. Feeding values
7. Uses and preparation as human food
8. Fertilizer values
9. Industrial uses
10. Industrial processing

The United States Department of Agriculture has had an important part in these studies. The regional soybean laboratory of the Department, established at Urbana, Illinois, in 1936 under the Bankhead-Jones Act, has recently made important contributions. The state agricultural experiment stations and private agencies interested in the processing and use of soybeans have also assisted in this research.

W.L.Burlison

H.M.Hamlin

Growth of Acreage Near Research Centers

One of the most striking illustrations of the practical use of this research is to be found in Illinois, where much of the research has been centered. In 1925, Illinois produced 1,431,000 bushels of soybeans; in 1939 the state production was 45,423,000 bushels, a 32-fold increase.[2] Illinois in 1939 produced about half of the soybeans grown in the United States and three times the quantity of soybeans produced in any other state.[3]

A delight to the eye. A field of Chief soybeans on the University of Illinois Experiment Station Farm

The acreage of soybeans in Illinois in 1939 exceeded the total acreage of all other legume crops in the state.[3] The following data on legume-crop acreages in Illinois are surprising revelations of the importance of the new crop in a state in which many legumes are grown and in which clover and alfalfa have long been grown extensively.[3]

Legume	*Acres Harvested (1939)*
Soybeans	2,563,000
All other legumes	2,190,000
Clover (hay and seed)	1,251,000
Alfalfa (hay)	471,000
Lespedeza (hay and seed)	232,000
Cowpeas	184,000
Sweet clover (hay and seed)	52,000

Approximately one-tenth of the acreage of harvested crops in the state in 1939 was in soybeans. In the section of the state nearest the center of soybean research (Urbana) the acreage of soybeans is now nearly as large as the acreage of corn, tho this is one of the finest corn-growing areas in the world. One reason for the rapid increase in acreage in Illinois has been an increase of the average yield from 10 bushels per acre to about twice that figure since the crop first came to the state, an increase largely attributable to research upon varieties and methods of production.

Specific Findings

Let us turn from these general considerations relative to research in its relation to the development of the soybean, to look at some of the specific findings which have resulted from various research approaches.

Up to 1938, 7,000 samples of seed, representing 2,000 distinct types of soybeans, had been introduced into the United States. These types vary in maturity from 75 to 200 days. At least 100 named varieties are widely grown or are being increased for wider distribution.[1]

Research has led to earlier planting dates and the practice of seeding in rows 24 to 40 inches apart so that the crop may be cultivated and the soil may be kept free from weeds. The necessity for inoculation has been shown; inoculation makes soybeans a soil-building crop under certain conditions when they would otherwise be a soil-depleting crop, while increasing the yield and the percentage of protein in the crop.[2]

Relation to Soil Fertility

Dr. O. H. Sears of the Department o Agronomy of the University of Illinois has summarized the extensive research on soybeans in relation to soil fertility as follows.

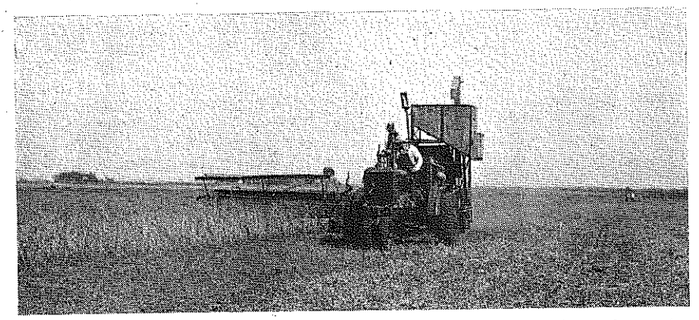
"It is true of soybeans, as of most other crops, that their effect on the soil depends largely on the way they are handled. . . . Soybeans on rolling land present serious erosion problems. If they are planted in cultivated rows up and down the slope they, like corn, contribute to

usually reduced about half. But the best control of erosion where soybeans are planted is obtained by drilling them solid on the contour, and following them with a winter cover crop of small grain also drilled on the contour. . . . The effect of soybeans on the nitrogen content of the soil depends largely on the use of the crop. Unless part of the tops of the soybean plant are returned in some form to the soil, nitrogen will be depleted. This is true even tho the well-nodulated plants may obtain about two-thirds of their nitrogen from the air. Combining the beans and leaving the straw on the land may cause a slight increase in the nitrogen content of the soil if the added nitrogen is not lost by leaching before it can be used by the following crops. Used as a green manure, soybeans supply organic matter containing from 60 to 100 pounds of nitrogen an acre, but the relatively high cost of such green manure is a drawback to using soybeans for such purposes except under special conditions. Soybeans should be considered primarily as a cash or feed crop, and other legumes, such as sweet clover, red clover, and alfalfa should be used for soil-improvement purposes."[2]

averages, he found the decline from 1922–24 to 1936–39 to be from 13.4 to 4.0 man-hours per acre. During these same years, horse labor declined in this area from 29.1 hours to 1.5 hours, while tractor use increased from 0.7 hour to 2.4 hours per acre. The cost of producing a bushel of soybeans, disregarding the cost of fertility removed, declined from $1.50 to $.56.[7]

Many industrial uses of soybeans have been studied. Some of the principal industrial products which are sometimes derived in part from soybeans are paint, varnish, enamels, oilcloth, linoleum, printers' ink, glycerine, celluloid, plastic wall coat, glue, soap, salad oils, candy, foundry core oil, and rubber substitutes.[5]

One of the most promising uses of soybean oil meal is in the production of plastics. It is authoritatively stated that "there are probably few materials which are chemically as favorably constituted for plastic development as the soybean."[8] A plastic material is "a mixture or combination of organic compounds or substances, which, under the combined and simultaneous influence of heat and pressure, becomes sufficiently fluid to permit forming to shape."[8] Some of the uses of



The combine is a very important implement in the production of soybeans. Its use has expanded very rapidly in the Cornbelt

While rather wide variations in the composition of soybeans have been found, their content of protein and of fat is high. The average of a large number of analyses of the soybean seed is 36.5 percent of protein and 17.5 percent of fat.[5] Soybean oil meal has been found to contain, on the average, 41.4 percent of protein.[5] the content of the bean, the oil, and the oil meal is unknown in great detail.

The Animal Husbandry Department of the University of Illinois reports that soybean oil meal is "the lowest-priced high-protein supplement available to Illinois cattle feeders" and that "when fed in moderate amounts to cattle receiving a full feed of grain, it may expected to give results as satisfactory as those obtained by feeding cottonseed meal." The meal has also been found very satisfactory, under certain conditions, for feeding to dairy cattle, hogs, sheep, and poultry.[6]

Increase in Efficiency of Producing Soybeans

Dr. R. H. Wilcox of the Department of Agricultural Economics of the University of Illinois has shown that in east-central Illinois there has been a marked decline, since the crop was first introduced, in the

soybean oil meal in plastics are in furniture, wall panels, builders' hardware, electric fixtures, ash trays, clocks, toilet articles, automobile parts, light switches, distributor cases, window frames, safety glass, buttons, buckles, and costume jewelry.

Importance of Soybean Oil

Soybean oil has an important place because the United States is a heavy importer of oils and fats. In 1937, there were imported 725,592,754 pounds of tung oil, perilla oil, and linseed oil.[9] This country was once a heavy importer of soybean oil, 336,000,000 pounds having been imported in 1918.[1] In 1938, 243,613,000 pounds of soybean oil were produced in the United States. The uses of this oil were as follows.[5]

Uses	*Pounds*
Shortening	143,318,000
Oleomargarine	39,885,000
Other edible products	11,260,000
Drying-oil industry	18,847,000
Soap	10,897,000
Miscellaneous	5,340,000

The United States is primarily dependent on foreign sources for the bulk of its drying oils. Domestically produced

From a group of 466 vegetable and field types of soybeans, Dr. Sybil Woodruff, then at the University of Illinois, selected 17 types which had the greatest promise for home use. Six of these showed enough merit that it was concluded that "any of them might easily be accepted for table use by the American public."[10] The varieties selected for their edible utility have thoroly tested for their agronomic possibilities.[11] Soybeans are being used more and more commonly as a vegetable side dish and, roasted, as a substitute for peanuts.

Scope of Current Activities

The current activities of the Regional Soybean Laboratory forecast some of the future developments. This laboratory, located at Urbana, Illinois, and directed by Mr. T. H. Hopper, has 25 full-time chemists, 8 agronomic workers, and 6 part-time student assistants, in addition to its clerical staff. The laboratory has grown thousands of rows of soybeans every year and has made 200 paints, varnishes, and enamels, in addition to carrying on many other activities on a smaller scale. Two developments concern it primarily now: the use of protein from the meal for plastics, adhesives, paper coatings, and synthetic, wood-like fibers; and separating out oil with increased drying properties.

Other laboratories, including those of Henry Ford, are concerned with other future uses of the crop. The search for better varieties and better cultural methods proceeds in the experiment stations. The price of soybeans rises in spite of vastly increasing acreages, due to the increasing uses found for them. The eventual destiny of this crop and its products cannot yet be guessed, but it is safe to predict that soybean research, which has proved so fruitful, will be continued and expanded, and that the soybean industry will continue its development as one of the industries most soundly based upon scientific principles.

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*W. L. Burlison is Head of the Agronomy Department; H. M. Hamlin is Professor of Agricultural Education.

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Supervised Practice

C. L. ANGERER

Evaluating Outcomes of Supervised Farming Programs

G. P. DEYOE, Teacher Education, East Lansing, Michigan

G. P. Deyoe

ACTIVITIES of supervised farm practice are accepted as essential and important parts of the total program of vocational education in agriculture. In many cases, these activities have fallen somewhat short of their potentialities in their contributions to the growth and development of the students and to other types of desired outcomes.

Why Evaluate Supervised Farm Practice

Many teachers still associate evaluation primarily with "giving a grade." In grading, much of the emphasis is still being placed on evidences from examinations and from other types of achievements in activities which take place in the classroom. While these techniques have a place in evaluation, a growing tendency is noted in vocational agriculture to include the results of supervised farm practice in appraising the total progress of a student. The evidences obtained from this comprehensive approach are considered in arriving at a grade and in appraising student progress for other purposes.

Since programs of supervised farm practice comprise some of the most concrete and tangible products of vocational agriculture, they are being evaluated in some manner by teachers of vocational agriculture and others in the field of agricultural education, as well as by parents and other "laymen." Some of this evaluation is being made whether we wish it or not. Too often, apparently, the evaluations are quite superficial, with the result that relatively insignificant aspects are given undue weight and important outcomes are overlooked. Show-ring winnings with animals frequently pampered beyond the point that is profitable for the practical farmer, unusually high prices received in exceptional instances, and rare examples of comprehensive programs or of high profits therefrom are frequently magnified beyond the point of justification in terms of balanced and sound evaluation. This being the case, it is high time that more emphasis be placed on the development of sound techniques for the evaluation of supervised farm practice.

Evaluations should provide information for laymen and others which will lead to a more balanced viewpoint of the outcomes. Also, by becoming more fully aware of strengths and weaknesses of programs of supervised practice, teachers and students should be able to bring about significant improvements. For teachers or students, self-evaluation, as well as evaluation by other persons, has an important place. Opportunities should be provided for both approaches.

Steps in Devising a Plan for Evaluation

In any thorogoing approach to the evaluation of supervised farm practice, the following steps are important:

1. Purposes or objectives of supervised farm practice should be formulated in terms of outcomes. Insofar as possible, these should be stated in terms of changed behaviors or types of growth which are expected to occur in the learners, altho other types of desired outcomes should also be included. (The teacher and students should share in the development of acceptable objectives.)
2. These outcomes should be carefully analyzed to determine the types of evidences which indicate that the objectives are being realized.
3. Methods should be developed for securing evidences which reveal the degree to which the outcomes are attained.

A suggested plan is presented here which includes these three steps for the evaluation of programs of supervised farm practice for all-day and part-time classes. (In the development of this plan, acknowledgement is given for the helpful criticisms by members of the teacher-education staff and the supervisory staff in Michigan, by the regional agent for the North Central Region, and by others.) The objectives listed are those to

A SUGGESTED PLAN FOR EVALUATING OUTCOMES OF SUPERVISED FARMING PROGRAMS IN ALL-DAY AND PART-TIME CLASSES

Objectives of Supervised Farm Practice in Terms of Outcomes	Evidences That Objectives Are Being Realized	Methods for Securing Evidences*
I. *To Develop Abilities Needed for Proficiency in Farming of the Type in Which the Boy is Likely to Engage* Achievement goals in terms of efficiency factors appropriate for each enterprise, or for the farm as a whole may serve as a basis for deciding what abilities should be developed. For example, a boy and his father might set a goal of 300 pounds of butterfat for their dairy herd, after due consideration of the present level in the herd, averages for the state and for DHIA herds, records of high herds, etc. In achieving this goal such objectives would be developed as ability to select profitable cows, ability to feed properly, etc.	1. Development of a long-time program of supervised farming in which important enterprises and activities of the farm are represented. This program becomes progressively broader to include all important aspects of farming. Continuation projects are included. 2. Approved practices and skills appropriate for the situation at hand are adopted. 3. Productive efficiency is attained on successively higher levels within the realm of expectancy for a given boy in a specific situation. 4. Managerial responsibilities are assumed by the boy. 5. A background of functional knowledge is acquired. 6. Records are complete and accurate for the purpose intended. 7. Outcomes are analyzed and interpreted in terms of goals or standards that were set.	1. Comparison of activities represented in farming program with those needed for success in the type of farming in which the boy is likely to engage. 2. Cumulative lists and performance ratings for most important approved practices and skills. 3. Inspection of production records and efficiency factors to note successive increases and to compare with goal set. 4. Conferences with boy and parents to determine situations in which the boy assisted in making decisions. 5. Informal conferences between boy and teacher during supervisory visits, etc. Pencil and paper tests. Inspection of written plans for farming program. 6. Inspection of records to note completeness and accuracy. 7. Use is made of data from cost accounts, production records, project stories, and other sources which reveal accomplishments in terms of goals or standards.

II. *To Earn Money* Achievement goals may be formulated in terms of annual profits, labor income, or increased net worth. (These are usually a part of budget estimates of costs and returns for the supervised farming program.)	1. Annual profits. 2. Increased net worth.	accounts and to net-worth statements.
III. *To Aid in Establishment in Farming* Long-time goals for establishment may be formulated by the boy with his parents under the guidance of the teacher, with yearly goals such as securing foundation stock for a swine herd, etc.	1. Enterprises important to farm and community are represented in farming programs. 2. Partnerships are developed in one or more enterprises. Other indications of improved parental relationships are in evidence, such as willingness of the parents to have the boy assume increasing responsibilities on the farm. 3. Equipment, foundation animals, and other forms of investment in farming are in evidence. 4. Earnings and investments are progressively increased.	1. Inspection of long-time programs of supervised farming to note important enterprises represented. 2. Existence of partnership agreements, oral or written, for one or more enterprises. Conferences with parents to note attitudes relative to the boy becoming a farmer, assuming increased responsibilities, etc. 3. Development of cumulative lists of equipment, livestock, etc. Quality of same evaluated. 4. Evidence from net-worth statements and investments.
IV. *To Improve the Home-Farm Business* Specific goals may be set for portions to be improved, such as culling the home flock, improving the dairy herd, introducing new varieties of grain, etc.	1. Needs of home farm are given consideration in selecting farming program. 2. Approved practices are adopted for the farm as the result of demonstrated value thru farming programs. 3. Real-estate value of the farm is increased thru various improvement projects. 4. Profits from the farm are increased. 5. Productive efficiency of enterprises is increased.	1. Check on extent to which home-farm needs are represented in farming program. 2. Cumulative lists of approved practices adopted in the manner indicated. 3. Estimates of value of real estate improvements, with assistance of boy and parents. 4. Reference to complete farm accounts or enterprise accounts to note increases in profit. 5. Reference to records which reveal productive efficiency.
V. *To Improve Farming in the Community* Goals may be set for portions to be improved, such as controlling bots in horses, adopting soil-saving practices, etc.	1. Approved practices are adopted by farmers in community, and productive efficiency of enterprises is improved.	1. Check on extent to which community needs are reflected in farming programs. Make community surveys to determine practices adopted and improvements in efficiency factors.
VI. *To Contribute to Improved Living on the Farm* Goals may be set for portions to be improved, such as improving the orchard, developing a home-farm shop, etc.	1. Supervised farming programs include improvement on house and other farm buildings. 2. New buildings erected, home-farm shop developed, etc. 3. Improved landscaping. 4. Improved gardens and orchards, and other contributions to a live-at-home program.	1. and 2. Development of lists of improvements completed. 3. Photographs, "before" and "after." 4. From boy and parents, secure estimates of amounts of products or other results of a live-at-home program.
VII. *To Develop an Increased Interest in Farming*	1. Degree of interest in classes in agriculture as shown by effort put forth, etc. 2. Interest in farming as shown by increased willingness to assume responsibilities. 3. Increased interest in farming as a lifework. 4. Definite decision to enter farming as a lifework.	1. Observation by teacher. Anecdotal records of special episodes which reveal boy's interests. 2. and 3. Observations by teacher and parents to note responsibilities assumed. 4. Study of long-time plans for supervised farming to note provisions for foundation animals, equipment, and other forms of investment for establishment in farming. Statements of boy relative to occupational choice. Statements in project stories.
VIII. *To Develop Attitudes and Abilities of Co-operation*	1. Boys are willing to co-operate, as shown by the development of group projects and group aspects of individual programs. 2. Definite savings, increased returns, or other results of group efforts are evident.	1. Note proportions of boys in classes who participated actively in such undertakings. Record anecdotal situations in which the co-operative spirit was especially in evidence. 2. With assistance of boys, make estimates of savings and returns, and note other results from co-operative effort.

* The items in each series in this column are numbered to correspond with the items in the middle column.

In this presentation, it should be noted that emphasis is placed on the use of several techniques for evaluating outcomes. These include general observation, informal interviews or conferences, and other types of oral responses, check lists and rating scales, project stories, cumulative lists of accomplishments, anecdotal records, occupational interests and choices, and community surveys.

It is also important to note that in these techniques, use is made of considerable data normally accumulated in the form of plans, records, situations, etc., which have evaluative significance if properly analyzed and interpreted.

Marengo 400 Club

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Marengo, Illinois

M. J. Nicol

THE "Marengo 400 Club" was organized at Marengo, Illinois, last year as a sort of "inner circle" group of boys carrying projects in vocational agriculture in dairy. Altho Marengo is located in the heart of a thriving dairy community supplying milk to the Chicago area, the dairy projects have been limited in number and inferior in quality for several years.

Feeling the need for greater emphasis on dairy projects, a survey was conducted to determine the cause for this situation. The survey revealed that the primary reason for poor dairy projects was the lack of financial means to establish a good dairy program. In addition, the boys stated, progress was too slow to show the results which they wanted in high school. Finally, the matter of suitable mating when project heifers reached breeding age presented a difficult problem.

Assistance From Community Leaders

In setting about to solve this problem we found a businessman in town who was willing to finance any number of calves that the instructor of vocational agriculture might choose to recommend. Furthermore, to show his purely unselfish motives he agreed to make his notes on the calves exempt from interest, providing a high standard of accomplishment was reached in the feeding, care, and management of the calf over the period of time it was covered by the note. He delegated the services of his farm-service man at any time to assist in the project.

The veterinary adviser of a local milk company, a registered veterinarian especially well grounded in all dairy problems, offered his services and suggested the idea of forming a club with some special features if a satisfactory number of students were interested in securing financial aid.

With this objective in view, a meeting was called of all boys interested in a club of this nature. As a result there were 23 boys present, along with their parents, the man offering the financial aid, the veterinary adviser, and the vocational agriculture instructor.

At this protracted meeting much was accomplished which compensated for its long duration. The objectives of the organization and some of its procedures and possibilities were pointed out and discussed. The interests of the group were discussed and some of their problems and interests considered. As a result of the interest and enthusiasm demonstrated, an adult advisory committee was appointed by the party making the loans and was authorized to start immediately to locate calves and to assist the numbers in making a suitable selection. The advisory committee consisted of the veterinary adviser, farm-service man, and the teacher of vocational agriculture, with the latter as chairman.

Committees Worked Out Details

Committees were appointed by the chairman to draw up a contract agreement, a score card for the first year, and a constitution. Five prospective members and one of the advisory council constituted each committee. At the next meeting, a month later, the respective committees presented their reports, which were in turn adopted by the group presided over by a temporary chairman. The constitution as drawn up follows:

400 Club Member With Calf at F.F.A. Sectional Show

Constitution and By-Laws of the Marengo 400 Club

Article I—Name

This organization shall be known as the Marengo 400 Club.

Article II—Purpose

The purpose of this organization shall be to establish a high-producing, dairy foundation herd for prospective farmers, while at the same time improving dairy conditions on the home farm.

Article III—Area

The club shall include any person living in the Marengo community who meets the qualifications for membership.

Article IV—Membership

Section 1—Any boy between the ages of 10–19, inclusive, who has a dairy calf of any breed which is of desirable type, purebred and registered in the name of the boy or girl making application and having a minimum dam record of 400 lbs. fat equivalent for 305 days on twice-a-day milking, and sired by a bull with a dam having a record at least equal to the minimum requirements of the dam of the calf.

Section 2—Any boy between the ages of 10–19, inclusive, who has a high-producing foundation dairy herd or to improve dairy conditions on the home farm, who has good recommendations from several reliable and responsible persons in the community, provided the calf to be financed meets the same requirements as the calf mentioned in Section 1, Article IV.

Section 3—All members on being admitted shall show general proficiency and interest in dairying and shall profess interest and show knowledge of the objectives, purposes, etc. of the organization.

Article V—Executive Body

Section 1—The officers of this organization shall be a president, vice-president, secretary, and treasurer. These officers shall be elected to perform their duties for one year.

Section 2—The president shall preside at all meetings and shall appoint all committees for the duration of his office.

Section 3—The vice-president shall preside in the absence of the president.

Section 4—The secretary shall keep a roll of members and shall record and report the minutes of all meetings.

Section 5—The treasurer shall collect, keep, and record all finances of the organization.

Article VI—Meetings

The meetings shall be called by the president at the recommendation of the advisory council. No regular meeting date will be set, but there shall not be less than four nor more than 12 meetings per year.

Article VII—Elections

Section 1—Election of officers shall be held at a specially called meeting to be held in May.

Section 2—Election shall be by written ballot.

Section 3—A nominating committee of three members shall nominate one member for each of five to be filled and in addition nomination will be received from the floor.

Article VIII—Conduct of Meetings

Section1—All meetings shall be conducted strictly according to "Roberts Rules of Order."

Section 2—Each member shall be supplied with a copy of "Roberts Rules of Order" and should attempt to familiarize himself with it.

Article IX—Advisory Council

Section 1—The advisory council shall consist o three members appointed by the note holder or note holders of the projects.

Section 2—The duties of the advisory council shall be to supervise all selections, purchase, feeding, care, management, fitting, showing, records, or any phases of the program considered essential for successful conduct.

Section 3—The advisory council shall be the final authority in all matters of probation for unsuccessful management of the project and shall mediate matters and affairs not established in the contract agreement.

Section 4—The advisory council shall be responsible for scoring score cards and making suggestions for special awards by civic groups other than F.F.A. awards.

The contract to which the boy and the note holder agree and the score card for use at the end of the year are also given:

Feeding, Care, and Management Agreement of Contract Calves

I,.....,do hereby agree that during the period of my membership in the "Marengo 400 Club," I shall adhere to and follow as closely as possible, all rules of feeding, care, and management as shall be prescribed by an advisory council appointed by the party or parties financing my project. This council shall consist of three members having equal advisory rank. I also agree that I shall be regularly enrolled in vocational agriculture and become an F.F.A. member unless class conflicts prevent doing so, or provided I have not yet reached high-school classes or have graduated from high school.

I also understand that I shall be obliged to attend all meetings unless a satisfactory reason is given in advance and that I shall be obliged to show at the F.F.A. show if eligible to do so unless able to give a legitimate reason for not doing so to the advisory council in advance in writing.

I shall be obligated to keep a neat and complete record up to date at all times, and the form of the record to be endorsed by the advisory council. At all times I shall take an active part in the activities of the organization.

I fully understand that if any form of management is unsatisfactory at any time according to the judgment of the advisory council, I shall be obliged, if still unsatisfactory at the end of a 30-day probationary period, to return the calf to the note holder or note holders. In such a case the calf will be appraised by a disinterested committee of three men appointed by the advisory council.

Futhermore, it is clearly understood that I will not be obliged to buy any particular commercial feeds, and that I am not obligated to any dealer for any feeds or supplies of any kind.

Also, in case it is necessary for me to move out of the community of Marengo, or necessary for me to sell my calf for any given reason, it is my understanding that the note holder or note holders will have an option on the purchase of the financed project. The conditions of forfeiture in case of probation will be adjudged by the advisory council.

Further, if after all obligations to the note holder or note holders are removed, I shall decide to put the animal which was financed up for sale, it is my understanding that the former note holder or note holders shall have a 30-day option on the purchase of said project animal.

Finally, it is my understanding that if a satisfactory score is made on a score card drawn up and scored by the advisory council, my annual note shall be exempt of interest for the period of the year. If a satisfactory score is not made I shall pay interest at the rate of

one year, and that I will have the privilege of renewing for two terms of one year each under the same conditions mentioned in this paragraph.

Advisory committee

.....

.....

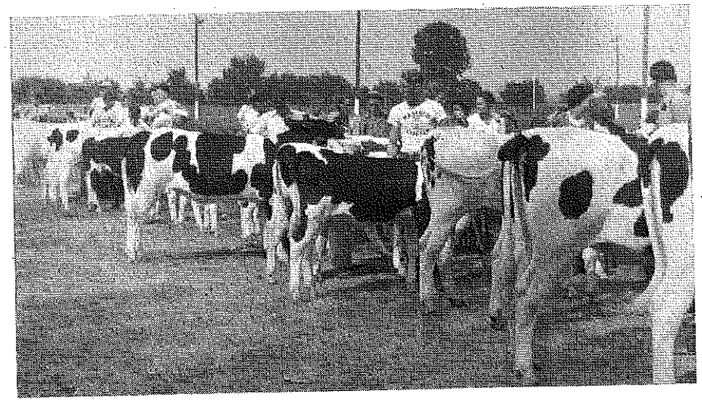
.....

Signed .....Project owner

..... Note holder

Individual Score Card for "Marengo 400 Club"	(First Year)
1. Production Record of Ancestry and General Type	20
2. Feeding	15
3. Care	5
4. Management	5
5. Sanitation	5
6. Showing and Show Record	15
7. Records (including story at end of year)	15
8. Organization, Participation, and Co-operation	10
9. Attitude	5
10. Progress and Improvement	5
Total	100

Individuals will be scored at the end of the year by an advisory committee consisting of Mr. George Lowe, Shurtleff Co.; Dr. H. E. VanderVeen, veterinary adviser, Borden-Wieland Co.; and Marvin J. Nicol, teacher vocational agriculture, Marengo Community High School. All projects making a satisfactory score will be exempt from interest on the original loan for the first year. Special awards may be given by business firms, private individuals, civic organizations, etc., on the basis of the scores made. Explanations of terms follow:



Local Achievement Show of Marengo 400 Club

1. This is a very important factor in the success of any dairy project. Within reasonable limits, the offspring is a composite of the dam and sire. To establish a high-producing herd, high-producing ancestry is essential. The production record of dam and sire alike will be the basis for scoring this point. General type will also be considered in the calf selection.

2. Because of the multiplicity of situations arising in a club such as ours, owing to the different breeds involved, wide range of age in calves, and extreme range of home conditions in available feeds etc., it is impossible to standardize a feeding program. The feeding program will, however, be closely checked from time to time for each individual project and the score compiled at a period designated by the advisory committee.

3. Included under the topic will be the general care as applied to some of the other points listed. Care will be reflected in the appearance, growth, condition, etc., of the calf when examined by members. A record habit will be established which should lead to more successful farming methods on a larger scale later on. Neatness, accuracy, keeping records up to date, and the story at the end of the year will be the basis for scoring this item.

4. By management is meant the carrying out of operative and managerial skills and operations in timely fashion. The success of any project is largely due to the timeliness with which details are attended to and skills carried out. The advisory council will check closely on this point.

5. Sanitation is important in growing a calf successfully into a mature cow. Sanitation habits developed at early stages will lead the way to a successful program later on. This phase will be observed in the periodic visits of the advisory staff as well as in the development of the calf owned by the member.

6. Showing and show record are largely stressed because they contribute to a successful calf program, not for the sake of showing itself, but rather for the phases of management and fitting involved in making a good showing. There are many values of a social nature also to be gained in showing, as well as an opportunity to learn about types, etc. this factor will be scored on placing, fitting job, showmanship, and show effort.

7. Records are extremely important inasmuch as they offer a basis of comparison on costs, feeding, management, and other factors among the various members. They also serve as a basis for study of management factors by the individual members. A record habit will be established which should lead to more successful farming methods on a larger scale later on. Neatness, accuracy, keeping records up to date, and the story at the end of the year will be the basis for scoring this item.

8. Such a club connot exist profitably without an organization which should be conducted by its own members. There are many values to be derived by active participation in the running of the organization. Co-operation is essential to success in any organization. Members will, therefore, be scored on participation and co-operation in the organization, attendance at meetings, etc.

9. Attitude may be demonstrated or exhibited in any of the above factors but more especially in the enthusiasm of the club, willingness to assume responsibilities for the club, and general boosting for its purposes, objectives, etc.

10. Success in any venture must be measured by progress and improvement. Rewards will be made for such growth.

Evaluating the Program

In evaluating the program after being active approximately a year we feel quite gratified in the accomplishments. Much enthusiasm and interest have been shown. At the present time we have 25 members in the organization and we expect a 50 percent increase next year on the basis of preliminary enrollment made recently. Eighteen of the 25 are being financed, while the other seven members have come into the organization to profit by what it has to offer. This number of purebred calves compares with four for the previous year.

The average price paid for the calves was $43.50 at an average age of five weeks. All calves were from dams having a minimum 400-pound butterfat equivalent on twice-a-day milking, 300-days' record, and by sires from dams with equivalent records. Three calves are by artificial insemination and eight calves are from dams making over 500 pounds of fat by the above standards. The calves represent four dairy breeds and were all purchased in southern Wisconsin and northern Illinois, within 100 miles of Marengo. Selections were made by the boys themselves. Altho the price for such quality calves may seem ridiculously low it must be realized that much co-operation, was received from the association members who were in sympathy with the club program as explained to them.

Seven of the calves were first-place winners in the sectional F.F.A. fair held at Elgin last August. Five of these grouped together to win the Lions Club trophy awarded to the "best five dairy animals from one school."

At the close of the first year the projects will be scored on the basis of the score card, including the project story and awards made on the basis of total scores. Awards will be furnished by the local merchants, Kiwanis Club, and other civic organizations.

To date all projects have been conducted along satisfactory lines and all terms of the contract have been fulfilled. At the end of six months five of the notes had been paid off in full and substantial reductions had been made on the face of nine other notes. The 12 applications now pending for the coming year will be financed by the funds paid back by the charter members, as well as by additional funds supplied by other agencies which have become interested in the cause. All of the five members who have paid off their loans have made credit arrangements for additional calves on the basis of their reputation established in their first loan.

Two near-by towns have become interested in the plan as it has been conducted here. In one instance the plan

(Continued on page 158)

J. B. McCLELLAND

Farmer Classes

O. C. ADERHOLD

The Comprehensive Program of Adult Education, as a Responsibility of the Teacher of Agriculture

RALPH W. GRUENWALD, Teacher,
Marengo, Iowa

ANY mention of the "400" in Marengo, Iowa, refers to the number of people who regularly participate in the community, adult-education program. The organization set up in 1938 under the guidance of Mr. R. L. Amsberry, instructor of vocational agriculture, has consistently attracted men and women from all walks of life, without regard for differences in nationality, religion, educational attainment, or economic status.

A "feeling of need" for such a program grew out of an agricultural evening school started two years earlier. The 65 farmers who attended these sessions were so enthusiastic about the possibilities of adult education that soon others were asking the question, "Why can't we organize a class?"

Other Programs Were Studied by Council Members

It was during the early part of 1938 that representative groups from the town and country made trips to Dubuque and Sac City to learn more about the organization of a comprehensive program. After gathering the necessary information, council groups were selected to represent four areas, namely: farm women, farm men, town women, and town men. The 10 people named to represent each area were selected on the basis of leadership, geographical location, willingness to serve, and representation of vocational, civic, and religious groups. Thus the leaders of the community were brought together to plan and develop the first comprehensive adult school in Marengo. Four hundred and two people attended the six classes held in the fall of 1938.

Attendance Record Significant

As evidence of the importance of the council it is worth while to examine attendance records for succeeding years. In 1939, in spite of the fact that Mr. Amsberry had moved to another school, the total enrollment in nine classes was 466. In 1940 the enrollment was 402. These figures indicate sound organization and effective work by the councils.

Since the first year the council members have been elected at the close of the year's program. The ballot is prepared by the council and is so arranged that five people who served during the year and five who did not serve will be elected to each of the four council groups. Vacancies that occur during the ensuing year are filled by the respective councils.

The chairmen of the four councils, together with the superintendent of schools and the director, which in this case has always been the teacher of vocational agriculture, make up the executive committee. One of the special duties of this committee is to arrange a forum program to supplement the class instruction.

Forums Have a Prominent Place

The forums have proved to be a popular phase of the school, and to date the policy has been to schedule them every two weeks for a 10-week period. On "forum evenings" classes which ordinarily meet for 90 minutes are shortened to 60 minutes. Forum speakers are asked to present their ideas in 40 minutes or less. An additional 20 minutes is set aside for audience participation and discussion. As an improvement feature the council is suggesting the use of 10 or 15 minutes in each of the classes, one week ahead of the forums, for the purpose of developing leading questions, presenting background material, and stimulating thinking about the problem to be discussed.

Responsibility for organizing classes, for securing membership, and for formulating general policy lies in the hands of the council members, the superintendent of schools, and the director. All matters of policy affecting the public school are subject to approval by the board of education.

Typical Courses Selected

Each council selects one or more classes which it wishes to sponsor. The courses which are thus selected and planned are presented to the entire council for their approval and suggestions.

The courses which each council has tentatively selected for the 1941 program are as follows: *Farm Women*, Handicraft and Health; *Farm Men*, Farming Plans for 1942 and Livestock Sanitation; *Town Women*, Current Thought, Home Arts, and Music; and *Town Men*, Business Psychology, Public Speaking, Wildlife Conservation, and Forum Procedure. No attempt is made to limit membership in a class to the group that planned it.

All council members, teachers, leaders, class organizers, and other local helpers with the exception of the vocational teachers who are hired by the board for evening-school work, serve without financial remuneration. This is necessary because no tax funds are allocated for adult-education purposes. Furthermore, the fund created by the small fee charged each person is inadequate to provide compensation for local people. While this policy is at present a necessary one, it likely is a desirable part of the setup. The fact that people are donating time and effort to a cause lends prestige to the organization and builds up community morale.

It has been the policy in Marengo to refrain from asking high-school teachers (vocational teachers excepted) to plan or conduct a class for three reasons: (1) Teaching load is already heavy, (2) very few have had any training in adult methods, and (3) classes that grow out of a "feeling of need" and are planned by capable, local citizens seem to be superior.

Motivating Factors

Attendance certificates are awarded each year to all members who attend eight or more of the 10 meetings. During the last two years 519 certificates have been issued.

Program booklets which include names of people enrolled in each class are published shortly after the school opens. Local advertising finances this project.

The members pay an enrollment fee of $1 which is used to pay modest honorariums and expenses of forum speakers, to pay incidental expenses of the various classes, and to finance the banquet following the completion of the program.

The program for 1941–42 opened September 15, and the group met each Monday evening for 10 weeks. The banquet was held on November 24. Marengo had another good year in adult education.

Procedures That Work in Promotion and Organization

F. M. FRANK, Teacher,
Ruffsdale, Pennsylvania

WHEN the average graduate from a college in the curriculum of agricultural education decides to start an evening school, he is faced with many new problems. In relating my own experiences as a beginning teacher I hope that they will be of value to others.

From conversations and observations I realized that the great preponderance of farms in the township where I was working were dairy farms. A small proportion of these dairy farms retailed the milk they produced. The remainder wholesaled their milk to large dairies in the Pittsburgh area. The general subject for discussion was chosen in the field of dairying.

Committee Helps With Planning

With this fact in mind I determined to select a small committee of three men which, for want of a better name, we shall call the "organizing committee." Thru inquiries around the township I learned of three comparatively young, progressive farmers who, I felt, would

dairy farmers, all of them under 35 years of age. Two of them retailed their milk and the other wholesaled. They were all three active in extension work from Pennsylvania State College. I sought each of these men out and discussed with them the possible need for an evening class and asked for suggestions on how one should be made up. Each of the men was greatly interested in the possibilities, and expressed a desire to help in any way he could.

The following week (this was the first week in January) we met as a committee. We discussed first a list of prospective members of our class. The names were all submitted by the members of the committee and totaled about 45. The list was divided into four parts. We decided that during the coming week each of us would take one of the four lists and would confer with the individuals personally. We next drew up a list of the specific subjects which would be discussed at the various meetings. This list would be presented to the whole group at the organization meeting for their discussion and approval. I might add that to work out a good agenda with a committee and to have them rather than the teacher present it will save considerable time and trouble at the organization meeting later on.

In my opinion the success or failure of an evening class lies in the committee. If the committee is a good one, the success of the class is assured. The committee members are not the only persons who help in the organization. After the class is started they are the leaders in the discussions. Theirs is a part of the responsibility in keeping the classes animated and interesting.

As a final preparation I arranged for a post card to arrive at each of the homes of the prospective members. This card was attractively typed and was so timed that it arrived on the afternoon previous to our meeting. At the same time a notice was placed in the local papers which gave further publicity to the work.

Course Planning

With these preparations, then, I felt that we couldn't help but succeed. True enough, on that first meeting night 31 members attended. We discussed our course of study, placing it on the blackboard as my committee suggested it. Following is the list of subjects as it was approved by the group:

1. Feeding dairy cattle in the winter
2. Ensilage and silos
3. Feeding dairy cattle in the pasture season
4. Pasture management
5. Raising or buying dairy herd replacements
6. Improving the dairy herd
7. Selecting and caring for a herd sire
8. Keeping dairy herd records
9. Types of dairy barns and equipment
10. To build or remodel the dairy barn, which?
11. Types of dairy cattle diseases
12. Prevention and control of diseases in a dairy herd
13. How to produce clean milk. The Babcock test
14. Milking machines, their care and operation
15. The importance of soil conservation on a dairy farm

Keeping Up Interest

At this first meeting old acquaintances were revived, new acquaintances made, and I renewed friendships made during the summer. As the evening progressed and these men began to discuss their problems among themselves using me merely as a leader, I felt that all of my efforts were not in vain.

such a class as this. There may be a tendency when we have gratifying results to sit back and relax. It is well to send out cards each week. As much variety as possible should be added to the meetings by using film strips, moving pictures, attractive charts and other materials. The special committee should be kept posted on pointed questions in order that the discussions continue to be animated and interesting.

If one were to summarize suggestions they might be stated thus:

1. Select a committee of men who are best in their field.
2. Meet with this committee; draw up a list of prospective members and specific subjects for discussion.
3. Have your committee present these subjects.
4. Adequately publicize all your meetings.
5. Keep all meetings vital and interesting.

To give of our knowledge to those men —young and old—who are out of school should be considered just as important as to offer it to all-day students. Not to do so leaves our job only half done. We must fulfill our obligations as teachers of vocational agriculture and carry our message to the whole community. First believing in the future of agriculture ourselves, we must carry our gospel to the people and help them to believe in it.

Defense Training in a Rural Shop

W. C. DUDLEY, Supervisor National-Defense Projects, Appomattox, Virginia

THE pre-employment defense training given in the Appomattox, Virginia, department of vocational agriculture during the past year has been an attempt toward conducting a well-rounded program of selection, training, placement, and follow-up of rural youth who have not had the opportunity of acquiring skills that would enable them to participate in the present national-defense production effort, or to do the more advanced jobs in metal work which are constantly required on a farm.

Boys for each group submit applications to be admitted to the course well in advance of the starting date for the class. Thru a co-operative arrangement with the Virginia Employment Service, aptitude tests are administered each applicant. The boys are then selected by the advisory committee on the basis of priority of application, previous record, and general suitability for the course.

Instruction is given by a skilled mechanic under the supervision of the teacher of agriculture. The class routine is so organized that in a class of 10 weeks each trainee receives 25 hours of instruction in lathe operation, 25 in acetylene welding, 25 in electric welding, and 75 in bench work.

Upon successful completion of the course, the boy is registered with the employment service. To date all boys who have desired to go into industry have been assigned to defense jobs. Of 26 boys trained, 19 are now at work with advanced standing in shipyards and airplane factories.

Includes Unique Feature

LESTER S. HESS, Teacher,
Moorestown, New Jersey

THE part-time course in Moorestown, N. J. High School was directly the outgrowth of a suggestion made by a patron who, years ago, had two boys in the high school course in agriculture.

There was a definite need, he felt, of guidance for those who had graduated but were "growing stale." They needed to discuss their immediate problems, to exchange ideas, and to arrive at satisfactory conclusions. It was felt necessary to supply further guidance not only for those who had graduated, but also for those who had dropped out during the second or third years. Consequently our part-time class had its inception to fill this need. Our group is made up of former students, the advanced agriculture class now in high school, and other young men in the community who are interested in farming but who are no longer in school.

Objectives of the Course

The objectives of the course might be stated as follows:

1. To provide opportunity for discussion of current agricultural problems.
2. To bring before the young men of the community the lastet developments in the field of agriculture.
3. To provide a tieup between the department of vocational agriculture of the high school and the young farmers of the community.

Our class meets Mondy afternoon during the period assigned to the advanced class in agriculture in high school. This time arrangement has some definite advantages. One advantage is that it brings the advanced students in direct contact with the actual problems of the young farmers.[1]

Former students are glad to come back to their Alma Mater feeling secure in the knowledge that their school provides a definite and specific place for them.

Organizing the Course

At our first and second meetings in the fall we try to get some idea of problems which would be timely and which the students would like to discuss. As soon as we have determined which major problems confront the students, we incorporate them in a course of study. To one not acquainted with local conditions our plans might seem haphazard; in a measure they are. And yet we have felt, on the conclusion of the course, an intense satisfaction. This interchange of ideas has cleared up many problems which, at first glance, seemed almost hopeless. After such helpful discussions these students face their tasks with renewed interest and a keener zest.

As plans materialize for the various lessons, mimeographed letters are sent to the members of the group a day or two before the meeting day. These letters endeavor to give a correct picture of the meeting so that those who are interested in the particular subject will be certain to attend. Students are thus given time to prepare carefully for the presentation

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Farm Mechanics

L. B. POLLOM

Farm-mechanics needs are different on every farm. These two farmsteads are across a county road from each other. Both are located on 80-acre, irrigated farms. The photographer stood in the same spot when taking the pictures, facing north in one instance and south in the other. If the teacher of vocational agriculture is going to do a genuine farm-mechanics job with the boys from these farms, he must have a clear picture of the mechanical needs. The long-time programs of these two boys will be quite different

Determining Needs in Farm Mechanics

MARK NICHOLS, State Supervision, Salt Lake City, Utah

DURING the last five years more attention has probably been focused on the question of what should be taught in farm mechanics than in all of the preceding years in the history of vocational agriculture. More textbooks have been written, more pamphlets have been printed, and more interest has been directed on the subject. Indeed, more need has recently been felt for help in this direction. Farming is becoming more mechanized.

Mark Nichols

A visit to high-school farm shops, however, reveals that teachers of vocational agriculture generally are not teaching in terms of the farm needs of boys in their classes. In some shops the work still centers around the old manual-arts program of building cedar chests, clothes racks, dining-room tables, flower stands, and tie racks. In other shops the teacher has an entrenched interest in auto mechanics, carpentry, electricity, or some other trade, and the instruction narrows down to intense effort in one of the trades to the exclusion of experiences in other lines. Other teachers seem only concerned in teaching skills, overlooking the importance of the application of these skills to real farm problems.

Who Should Determine Needs?

In the foregoing cases the teachers seem quite unaware of the farm needs of the individual boys and the necessity of building the instructional program around these needs. A great deal of the work in farm mechanics should of necessity be done out on the farm itself. Farm fences cannot be repaired in the high-school farm shop; farm buildings cannot be painted there; nor can the shingling of poultry houses or garages be accomplished there. Instruction in farm mechanics in the past has centered too much upon what could be done within the four walls of the school shop.

If the teacher is to instruct in terms of needs, he must first of all know the needs. To a great extent the boy himself is not a capable judge of true needs. Who, then, is to determine the needs? The boy, the father, and the teacher are all involved. All three should help evaluate them.

The father, as guardian of the boy, is the controlling factor of the farm situation upon whose co-operation much of the success of the farm-mechanics effort is based. The teacher contributes information and motivation leading to managerial decisions and the development of skills and abilities in the boy. If the boy is to experience actual problems and develop proper judgment, mechanical skills, and abilities that will fit him for proficiency in farming, there must be close co-operation between father and teacher.

FARM-MECHANICS SURVEY SUMMARY

Item	*Condition*	*Recommendations for Improvement*
1. Farm fences	Are badly in need of repair.	1. Reset posts; brace corner posts. 2. Tighten wire. 3. Build two new gates.
2. Walks and drives	Are muddy in wet weather.	1. Gravel roadway and approach to yards. 2. Construct concrete walk to home
3. Home	Needs reshingling, painting, new screens for windows, and wire doors.	1. Reshingle home. 2. Paint house. 3. Screen doors and windows.
4. Barns and sheds	Good condition. Milk house needs painting.	1. Make minor repairs on barn and sheds. 2. Paint milk house.
5. Tillage machinery	Plows, harrows, & cultivators need major repairs. Drills are new.	1. Repair plows, harrows, & cultivators in school shop. 2. Repair and oil harnesses.
6. Haying & harvesting machinery	Mowers & rakes badly in need of repairs. Binder needs minor repairs.	1. Repair mowers & rakes in school shop. 2. Repair binder on farm. 3. Oil or paint machinery for winter storage.
7. Tractor and motors	Tractor and motors in good condition.	1. Give special consideration to greasing and lubrication.
8. Other	A large number of handy devices & conveniences are needed.	1. Make handy devices in school shop. 2. Clothesline, pergolas, lattice, and other landscaping improvements to be constructed.

National Defense and [illegible] in Farm Mechanics

CARL G. HOWARD, Teacher Education, State College, New Mexico

FEW teachers of vocational agriculture will deny that the national-defense program is stimulating them to do a better job of teaching farm mechanics than they did before the present emergency. The happenings of the past year would seem to prove conclusively that those teachers who supervised OSY classes have now in their shops or at their disposal equipment and tools which they could not have had otherwise; nor could they now be bought, if they had not co-operated in the 1940–41 national-defense program. Most of the teachers who actively supervised OSY classes put on their coveralls and either developed additional skills or refreshed previous training by practicing skills which had been acquired prevocationally or on the job in some other manner.

C. G. Howard

It seems obvious that teachers of vocational agriculture are now in a position to do a better job of teaching farm mechanics than they were before their experiences with national-defense classes. In the first place, they now have the place, equipment, and tools needed to do a better job in farm mechanics. In the second place, they now have the skill needed as a background to set up job outlines and make demonstrations effectively as the first step in a sound procedure for teaching farm-mechanics jobs. The information which should be imparted to students before, during, or after the demonstration is more likely to be accessible than before Defense Circular No. 2611 and other Federal defense circulars suggested lists of reference material which defense teachers should have at their disposal. Actual teaching procedures in the shop should have been much strengthened thruout as a result of supervising the teaching of some one or more craftsmen in their efforts to impart to others something of their own skill or skills which in most cases were mastered long ago. This supposition is based on the fact that it is oneself.

More Repair Needed

Assuming that teachers of vocational agriculture now have at their disposal libraries containing adequate information; shops containing sufficient equipment and tools; skills developed previously or refreshed or learned new thru supervising defense classes; procedure reviews indicating the planning needed before instruction begins; the methods to follow in carrying out the instruction; the provision of needed practice in developing in class members the necessary skills; and the checking necessary to allow certificates of merit, there seems only one more thing needed which should be done now to make farm-mechanics teaching more effective than ever. That one thing is to get into the shop, or do on the farms more repair work and less construction.

Repair work on farm buildings and farm machinery has long been recommended to the teacher of vocational agriculture as the soundest foundation on which to build up course content in farm mechanics. The experiences of many supervisors and teacher-educators in visiting officially and unofficially many departments of vocational agriculture repeatedly seem to indicate that few teachers have even scratched the surface in getting into the shop and doing repair jobs in anything like the ratio which exists between construction and repair work on the average farm. Indeed many teachers have not even recognized repair as a part of farm mechanics, if time spent can be held as a criterion. Many of them have asked for aid in securing more finances with which to buy wood, leather, metal, and supplies for new construction, and in most cases received the aid. Too few have asked for help in developing a program which would lead to getting into the shop more and more repair jobs of a nature which can be done there easily, and of a type which needs to be done on every farm in the community.

A Long-Time Program in Farm Mechanics

A farm survey participated in by the teacher, the boy, the father, and the mother, will provide all concerned with a picture of the farm needs. This survey should involve all phases of the farming program of which farm mechanics is one part. The survey should be made shortly after the boy registers for this first course in vocational agriculture and should picture the situation, as well as recommendations for improvements. The accompanying outline for the farm-mechanics phase of the survey illustrates this item.

After the survey is made, the matter of budgeting the time for making improvements and using improved farm-mechanics practices in setting up a long-time program becomes a problem. This must be arranged in terms of immediate and remote needs, and according to the boy's skill and ability. Here again, the boy, the father, perhaps the mother, and the teacher plan the program together.

Accompanying is a four-year program planned in terms of the accompanying survey:

Perhaps the program will not be carried out entirely as planned. Improvements will be made that were not planned for; emergencies will arise to change the plans. However, the program is set up in terms of needs, and all concerned have a voice in determining the needs and setting up the plan. The needs are determined from an actual farming situation and the boy develops judgments, skill, and ability by actually doing the job.

Instruction and supervision in farm mechanics take on a different complexion when they are planned in terms of actual farm needs.

FOUR-YEAR PROGRAM BASED ON SURVEY

First Year	*Second Year*	*Third Year*	*Fourth Year*
1. Reset and brace posts. 2. Tighten wire of fence. 3. Gravel roadway. 4. Oil & paint machinery. 5. Repair & oil harnesses. 6. Other—.	1. Construct farm gates. 2. Construct concrete walks. 3. Screen doors & windows. 4. Repair & oil harnesses. 5. Repair harrow. 6. Repair cultivators. 7. Other—.	1. Reshingle house. 2. Paint house. 3. Paint milk house. 4. Repair mowers. 5. Repair rakes. 6. Repair binder. 7. Other—.	1. Make stock trailer. 2. Repair and oil harnesses. 3. Tractor repairs. 4. Repair plows. 5. Construct lattice, pergolas, clothesline.

State Policies Inadequate

There has even been evident a tendency on the part of some state programs to discount skills as a basic requirement in farm mechanics and to substitute in the place of skill the level of appreciation instead. By this is meant that instructional procedures have provided information sufficient to enable boys to select farm equipment or appliances and to tell why they have made such a selection, but that learning is not carried to the level of acquiring sufficient skill in the shop so that they can make or repair these appliances they may have selected as being best suited to their needs. In this connection it should be remembered that from the beginnings of vocational education in agriculture most shop men have held that no portion of the farm-mechanics program as it relates to vocational agriculture may be considered effective which does not carry students to the level of doing ability. This necessitates adequate information about the job, sufficient demonstration to develop full appreciation, and enough practice to fix the skill needed to do the job satisfactorily.

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Studies and Investigations

C. S. ANDERSON

Developing Chapter Advisers of the Future Farmers of America Organization

I. Responsibilities of Advisers

HAROLD L. KUGLER, Supervising Teacher in Agriculture, Manhattan, Kansas

THE purpose of this study was to determine what is being done in the teacher-participation centers in the North Central Region to develop abilities in participating students to assume responsibility as chapter advisers of the Future Farmers of America organization.

Harold Kugler

Procedure

A check list was prepared and submitted to the supervising teachers of the North Central Region for the purpose of obtaining information concerning the methods followed in securing student-teacher participation within this region in developing chapter advisers. The North Central Region was selected in preference to the other regions because Kansas is located in this region.

The check list was formulated with three purposes in mind:

1. To secure general information concerning the supervising teachers serving as advisers of Future Farmers of America chapters, their participating students, and the participation centers.

2. To secure an evaluation of the importance of the various responsibilities of chapter advisers and to ascertain a number of the responsibilities that are carried out.

3. To determine the number of student teachers and the degree of student-teacher participation in the responsibilities of chapter advisers.

A list of 44 supervising teachers was secured from Mr. James H. Pearson, Federal Agent for Agricultural Education, North Central Region. Check lists were sent to each of these supervising teachers for the purpose of securing information concerning the student-teachers' experiences in the participation center during the school year 1940–41.

Supervising teachers from 32 participation centers returned the check list. Of this number, two reported that they were not serving as supervising teachers this year; two did not fill out the check lists satisfactorily; and three were received too late to be included in the study. Returns from 25 participation centers representing 12 states were used in this study. The check lists returned from the states were: Illinois five, Indiana two, Iowa three, Kansas three, Kentucky three, Minnesota two, Missouri four, Nebraska three, North Dakota one, South Dakota one, Wisconsin three, Michigan two. In most cases the check lists were filled in completely and accurately. Where omissions were made, the data were tabulated as reported.

An evaluation of chapter activities, degree of participation on the part of student teachers in the activities of chapter advisers, percent of the 49 activities carried out in the participating centers in the North Central Region follows.

F.F.A. Chapter Adviser Responsibilities

Number of Responsibilities Reported. The adviser of an F.F.A. chapter is responsible for directing and supervising activities of the F.F.A. chapter and chapter members thruout the year. Many of the responsibilities, such as item number 35, "conducting an F.F.A. summer camp," occur in season and often only once during the year, while others such as item number 3, "counseling with chapter president in preparation for chapter meeting, and item number 37, "directing chapter co-operative marketing activities," occur frequently during the year.

Table 1 shows how the adviser's responsibilities listed were reported upon by the supervising teachers. Omissions on the part of certain supervising teachers as indicated in the first column to the left in Table 1.

Table 1. Supervising Teachers' Rating of Importance of Responsibilities of Advisers of F.F.A. Chapters

	Number reporting	Number reporting activity not carried out	Rating on importance of responsibilities — Scale I No.	II No.	III No.	IV No	V No.	Mean rating
1. Arranging with school authorities for F.F.A. meeting or other special F.F.A. activities	25	3	4	3	9	4	2	2.86
2. Arranging paraphernalia for chapter meeting	24	3	3	2	6	7	3	2.85
3. Counseling with chapter president in preparation for chapter meeting	25	2	13	6	0	3	1	1.85
4. Serving as adviser of regular F.F.A. chapter meeting	25	2	12	5	2	2	2	2.00
5. Serving as adviser of an F.F.A. officers' meeting	24	3	12	4	2	2	1	1.85
6. Counseling with chapter secretary in correcting and recording minutes of chapter meeting	25	3	8	4	7	3	0	2.22
7. Counseling with chapter treasurer in preparing treasurer's report	25	2	9	6	3	5	0	2.17
8. Counseling with chapter reporter in writing news items	25	2	8	8	3	3	1	2.12
9. Counseling with program chairman in preparing program for chapter meeting	25	2	12	3	5	2	1	2.00
10. Counseling with recreation chairman in preparing recreation for chapter meeting	25	1	4	6	9	4	1	2.66
11. Counseling with chairman of refreshment committee regarding preparation of refreshments for chapter meeting	25	5	2	4	10	2	2	2.90
12. Preparing and delivering talk as part of program of chapter meeting	25	8	3	3	4	6	1	2.94
13. Assisting committee in preparing progress reports	25	5	4	6	5	5	0	2.55
14. Assisting committee in preparing final report of its activities	24	4	6	9	3	0	2	2.15
15. Conducting chapter initiation of Green Hands	23	1	6	9	2	2	3	2.40
16. Conducting chapter initiation of Future Farmers	25	1	6	8	5	2	3	2.50
17. Conducting installation of F.F.A. officers	24	5	6	4	4	2	3	2.57
18. Organizing and maintaining F.F.A. chapter library	25	3	5	3	7	4	3	2.86
19. Maintaining filing system for F.F.A. materials	24	2	5	9	3	2	3	2.50
20. Formulating a chapter program of work for the year	24	2	15	1	0	4	2	1.95
21. Setting up a calendar of F.F.A. activities for the year	24	3	13	2	2	1	3	2.00
22. Preparing final chapter-activity report	24	2	10	6	3	2	1	2.00
23. Directing F.F.A. activities for earning funds for the chapter treasury	24	3	6	5	5	5	0	2.42
24. Assisting in building chapter budget	24	4	4	7	6	1	2	2.50
25. Directing scholarship improvement among chapter members	24	3	3	7	7	4	0	2.57
26. Counseling chapter in selection of officers	24	4	9	4	2	2	3	2.30
27. Instructing F.F.A. officers in ritualistic performance	24	2	6	9	4	2	1	2.22
28. Conducting parent-son banquet	24	10	6	2	2	2	2	
29. *Conducting father-son banquet	23	12	3	2	4	1	1	
30. *Conducting mother-son reception	23	22	1	0	0	0	0	
31. Conducting a meeting of parents of chapter members	23	9	5	3	4	0	2	2.35
32. Conducting special chapter meetings, such as entertaining visiting F.F.A. groups, pre-vocational students, Boy Scouts, etc	24	3	3	8	7	2	1	2.52
33. Preparing F.F.A. program for community meeting or civic club such as Kiwanis, Rotary, etc	24	9	3	7	3	2	0	2.26
34. *Preparing F.F.A. programs for community farm organizations such as Grange, Farmers' Union, Farm Bureau, etc	24	12	3	5	1	3	0	
35. *Conducting an F.F.A. summer camp	24	13	5	4	1	0	1	
36. *Conducting an F.F.A. overnight hike	24	12	2	0	4	1	5	
37. Directing chapter co-operative marketing activities such as marketing wool, livestock, potatoes, etc	24	6	7	6	4	0	1	2.00
38. Directing chapter co-operative purchase of seed, fertilizer, equipment, etc	25	2	7	9	3	1	3	2.30
39. Preparing F.F.A. assembly program	24	9	5	3	6	0	5	3.20
40. Conducting chapter public-speaking contest	25	6	4	9	3	3	0	2.26
41. Conducting F.F.A. project tours	25	2	10	6	3	2	2	2.13
42. Preparing an F.F.A. chapter exhibit	24	6	5	6	7	0	5	3.50
43. Assisting chapter members in preparing individual exhibits	24	9	2	5	4	4	0	2.66
44. *Planning F.F.A. chapter fair exhibits	24	10	3	5	3	3	0	
45. Counseling in chapter practice of parliamentary procedure	25	3	8	7	4	1	2	2.18
46. Stimulating boys to work toward advanced degrees in F.F.A. organization	25	1	10	7	3	1	3	2.16
47. Preparing reports of records necessary for advanced degree awards	24	2	9	8	1	4	0	2.00
48. Directing class study on the F.F.A. organization	25	5	8	4	5	3	0	2.15
49. Obtaining active membership in F.F.A. chapter	22	4	4	5	4	5	0	2.55

*Evaluation not computed for this activity since the activity was reported by only 14 supervising teachers.

One supervising teacher reported that he did not have an F.F.A. chapter. This accounts for at least one entry under column two (Table 1) for each activity. By comparing the number of responsibilities reported with the number of teachers reporting, it is shown that in no case did all of the 25 teachers omit any one responsibility. The number of supervising teachers reporting responsibilities not carried out ranges from one out of 25 reporting, to 22 out of 23 reporting. There were three adviser responsibilities which were carried out by 24 supervising-teachers, namely: counseling with recreation chairman in preparing recreation for chapter meeting; conducting chapter initiation of members; stimulating boys to work toward advanced degrees in the F.F.A. organization. There were six adviser responsibilities which were carried out by 23 teachers, namely: counseling with chapter president in preparation for chapter meeting; serving as adviser of regular F.F.A. chapter meeting; counseling with chapter treasurer in preparing treasurer's report; counseling with chapter reporter in writing news items; counseling with program chairman in preparing program for chapter meeting; directing chapter co-operative purchase of seed, fertilizer, equipment, etc.; and conducting F.F.A. project tour.

Seven of the 49 responsibilities listed in Table 1 have been marked with an asterisk (*). The footnote at the bottom of the table indicates these responsibilities were not treated statistically since they were not reported upon by more than 40 percent of the supervising teachers reporting. In the case of item 26, conducting parent-son banquet, and item 29, conducting father-son banquet, 10 and 12 supervising teachers respectively reported these activities not carried out. It would seem that this does not present a complete report of the parent banquets held; as a study of Table 1 indicates that there is an average of one banquet (father-son or parent-son) for each teacher reporting.

Adviser responsibilities in addition to the 49 listed, which were suggested by the supervising teachers were: directing subsidiary organizations such as dairy, orcharding, soils, and crops; directing radio broadcasts; conducting wild-life conservation programs; developing thrift savings accounts; assisting chapter in keeping an F.F.A. scrapbook.

Evaluation of Responsibilities of Chapter Advisers. Each supervising teacher was asked to evaluate the importance of the 49 listed chapter adviser responsibilities included in the check list on the basis of I, most important, to V, least important. Where the responsibility was reported as not being carried out by 40 percent of those reporting, the evaluation of the responsibility by the supervising teacher was omitted from the tabulated data. It was on this basis that seven adviser responsibilities were omitted from the tabulated data and, as previously indicated, are shown in Table 1 marked with an asterisk (*). This left 42 responsibilities which were evaluated. Twenty-seven of the 42 responsibilities were evaluated under all of the five degrees of im-

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Future Farmers of America

L. R. HUMPHERYS

How I Became an American Farmer

HAYWARD HUDKINS
Pullman, West Virginia

FOUR years ago I entered Pullman High School, but without the slightest idea of ever becoming an American Farmer. However, at Kansas City on October 23, 1941, I received that honor. When I entered high school, I elected vocational agriculture not because I was particularly interested in agriculture, but because I lived on a farm and I thought it would be more or less an easy subject.

Since those first few weeks in the fall of 1937, my attitude toward agriculture and farm life has undergone quite a change. Instead of regarding the farm as a place where there is always a job waiting to be done or just a place where one can eke out an existence, I look at it now as a most pleasant place to be and one where there is still plenty of adventure.

In my course, I have endeavored to apply as many new and improved farming practices as possible, and to conduct enterprises suitable to our farm. Near the beginning of my first year I selected 12 of the very best ewes from a flock of sheep. Four of these ewes belonged to me and I carried the other eight under partnership agreement with my father. On this enterprise, plus an acre of corn and supplementary jobs, I immediately began to practice the new methods that were taught me in my class in vocational agriculture. I began to feed balanced rations, to treat my sheep for internal parasites, to creep-feed, to plant hybrid corn, and to use commercial fertilizer and lime.

Expanded Program After First Year

Upon completion of my first-year records, I found I had earned a labor income of $125.62. This gave me much encouragement, so for the next year I increased my sheep enterprise to 16 and my corn to two acres, and added one brood sow. These three enterprises returned a labor income of $212.38. My third-year program was the same as my second year, except that I had 18 ewes and added one acre of alfalfa. These returned me $248.81.

I made the greatest increase in my fourth-year farming program, which is just now being completed. This program was on a 50-percent partnership basis with my dad and included a large number of the enterprises already on the home farm such as: 37 sheep, four acres of corn, one brood sow, one acre alfalfa, three fat hogs, eight beef cattle, 10 turkey hens, two acres clover and one-fourth acre potatoes. On these I have estimated my returns to be $896.

Altho I have spent much time in planning and developing my farming program, I have not confined all my activities to the economic side of farming. In F.F.A. I have served as secretary, vice-president, and president of the Pullman chapter; secretary and president of the Harrisville federation; and reporter for the state association. I have also been reporter and assistant editor of our school paper, manager of athletics, president of the sophomore, junior, and senior classes, member of the glee club, assistant clerk of the Auburn Baptist Church, superintendent of Sunday school, and junior deacon.

Credit to Dad

In F.F.A. I have been very fortunate in making one degree each year starting the first year as a Green Hand, then a Future Farmer, State Farmer, and this fall the American Farmer. The F.F.A. has meant a great deal to me, and I urge all farm boys to become members. I would also like to encourage more boys to learn to understand their fathers and to work out their farming program with them. I owe much of my success to the splendid co-operation that I have received from my parents, and feel that many other boys can likewise profit by being a partner with Dad.

My plans for the future are to stay on the farm and to continue the partnership agreement with my father. We are planning to expand several of the enterprises, and to add additional ones. It is with great pride that I enter the vocation of farming. I hope that I shall always be found worthy of having received the American Farmer Degree.

The Proof of the Program Is in the Participation

I HAD the opportunity, during the latter part of September, to read a number of applications for admission to Ohio State University. In many instances, these young men were former F.F.A. members and were enrolling in the College of Agriculture. I was pleased to note that several young men stated that their F.F.A. work had been the most profitable and enjoyable part of their high-school life. To these students, their F.F.A. experience will be an increasing source of satisfaction as they learn to appreciate the unusual privileges which the F.F.A. has afforded them.

Just yesterday I had another unusual opportunity. I visited an outstanding F.F.A. meeting where plans were being formulated for carrying out the current year's program of work. I was not called upon to "make a speech." The teacher did no lecturing. It was a boys' meeting. What opportunities for member participation in conducting meetings, public speaking, stimulation of individual farming programs, travel, school and community service, co-operative buying and selling! No mention of chapter dues was heard during the entire meeting. However, considerable time was given to a discussion of the annual budget. The budget for this chapter would have financed the entire state F.F.A. program in 1928.

What were the essential features of this local chapter program?

1. The annual program of work was written. It had been formulated by the members. The program was interesting, practical, and workable. A copy of the program was posted on the bulletin board and each member had a copy. The superintendent and principal, the board of education, and the community had become familiar with the program.
2. The chapter had regular meetings.
3. Practically all members of the chapter were eager to assume responsibility. The programs of earlier years had been so interesting and profitable that members regard F.F.A. activities as a privilege.
4. The chapter had complete equipment. This chapter would probably have had a good program without equipment. It surely has a much more impressive program with complete equipment.
5. The chapter had an adequate budget and careful records and accounts. There are no gifts included in the budget. An enormous amount of work is required to provide the funds for the budget but such work involves interesting activities and the boys are glad to participate.
6. The chapter program involved a wonderful opportunity for officer and member training thru activities which are enjoyable rather than painful.
7. There was a capable, energetic chapter adviser who loves to work with boys and who has never become intimately acquainted with a time clock.
8. The chapter participates in a reasonable number of contests but does not overemphasize the contest idea.

I can recall another F.F.A. meeting last year, where the activities of previous years had consisted of an initial organization meeting annually and the payment of dues. In which chapter would you expect to find the more interest? The F.F.A. is similar to adult organizations, at least in one respect. Members profit from their chapter activities as they plan and participate.—Ray Fife in *The Ohio Future Farmer*, October, 1941.

The American Boy

"Of course what we have a right to expect from the American boy is that he shall turn out to be a good American man. Now, the chances are strong that he won't be much of a man unless he is a good deal of a boy. He must not be a coward or a weakling, a bully, a shirk or a prig. He must work hard and play hard. He must be clean-minded and clean-lived, and able to hold his own under all circumstances and against all comers. It is only on these conditions that he will grow into the kind of a man of whom America can really be proud. In life as in a football game the principle to follow is: Hit the line hard; don't foul and don't shirk, but hit the line hard. —Theodore Roosevelt.

Reporting F.F.A. News, by C. E. Rogers, Iowa State College Press, Ames, Iowa. 248 pp., illustrated, 1941, price $2.00. This book represents a well-balanced selection of principles which operate in successful publicity of vocational agriculture and will prove invaluable to workers in the field, from the youngest F.F.A. chapter reporter to the veteran local, state, and national advisers. These principles are presented in a form that will be clear and interesting to every Future Farmer. *Reporting F.F.A. News* is written in the manner that is used in ordinary conversation; it includes examples taken from F.F.A. journalism itself, and is illustrated both for clarity and interest with representative F.F.A. pictures.

The first three chapters, "How to Find News," "How to Write News," and "The Language of Journalism" relate to the function of journalism in the life of ordinary people, and set forth the basic principles of news-writing with a clarity which is understandable to anybody who can read. Chapters four to eight, inclusive, and the appendices are elaborations and explications of the basic text as set forth in chapters one to three. The material for chapters four to eight is largely original. It was gathered at the source—from the editors of country newspapers and dailies, farm papers, and F.F.A. state papers, and from news photographers and radio newsmen. Chapter Seven, "F.F.A. News in Pictures," fills a gap in the literature of pictorial journalism with a detailed and practical discussion of how to photograph farm animals. Chapter Eight, "F.F.A. News on Radio" is a "must" for the thousands of chapter advisers and officers who are confronted with and interested in the problem of F.F.A. radio news.

Appendix A, "Future Farmer News Mart," sets forth the findings of a survey by the author to discover what publications are interested in F.F.A. news articles and what types of articles are most desired by editors. Appendix B, "The F.F.A. News Bureau," presents the functions of a news bureau and the techniques used to get thoro and accurate news coverage. Appendix C, "Newspaper Style," should be studied and mastered by local F.F.A. reporters, chapter advisers, and all persons interested in writing F.F.A. news.

Professor C. E. Rogers, the author, has had wide experience in the fields of agricultural and technical journalism. He aptly states in the preface to this interesting book, "The story that Future Farmers of America tell echoes familiar creeds and attitudes and hopes cherished in our country's traditions . . . it tells of democracy in education . . . it is practical . . . it radiates optimism, self-assurance, and progress . . . and is a story worth telling—a story that American folk like because it is their own story."

This book richly deserves a place not only in the libraries of those persons interested in the Future Farmers of America, but also in the libraries of all persons interested in agricultural news writing.—A.P.D.

Practical Methods in Teaching Farm Mechanics, by G. C. Cook & Clyde Walker, Revised and Enlarged. 517 pp., illustrated, published by The Interstate, list price $2.22. This excellent text has been revised to meet the changing conditions and advancement made in the field of teaching farm mechanics. Five new chapters have been added, one of which is on safety precautions in farm mechanics. Many new pictures have been added with the purpose of acquainting the reader with the type of instruction in farm mechanics which is being offered thruout the states. Likewise, numerous pictures and drawings of shops, shop layouts, and desirable pieces of equipment are shown in order to familiarize the reader with the expanding program in farm mechanics, and to give helpful suggestions to those who are planning a shop. Considerable information is included on problems of shop management and shop organization. This book should prove helpful to all persons interested in and responsible for farm-mechanics instruction.—A. P. D.

WHEN a discussion of home beautification, landscaping, or farmstead improvement is brought up in F.F.A. meetings, or when planning improvement projects, members throw up their hands and say they just don't have the money. It is true that it takes money for many of the things used in making a farm home more beautiful, convenient, and attractive—such as the purchasing of trees and shrubs, new gates and fences, building repairs, paint, lumber, flowers, and lawn furniture. However, there are many improvements that can be made about the farmstead that are more expensive of effort than finances. Some of the jobs that fall in this category are the following:

1. Tightening fences
2. Rehanging or rebuilding gates
3. Keeping lawn mowed
4. Digging weeds out along edges of sidewalks
5. Controlling farmstead weeds
6. Reseeding or resodding lawns with bluegrass sod from the pasture
7. Replanting wild flowers in the lawn
8. Resetting in the lawn such trees as American elm, hard maple, oak, white pine, or spruce found in the woods
9. Clearing the shelterbelt of brush, dead trees, and trash
10. Removing all dead fruit trees from orchard and pruning the other trees
11. Improving neatness and efficiency of such fruits as grapes, raspberries, blackberries, and plums by pruning and thinning
12. Pruning, thinning out, or resetting lawn shrubs
13. Storing machinery and tools after using
14. Piling junk out of sight
15. Making minor repairs on buildings
16. Setting a good post for the mailbox
17. Hauling gravel from the creek for the driveway
18. Filling up mudholes and hog wallows with stones and gravel
19. Seeding down the barn lots
20. Obtaining the co-operation of the family in getting the jobs done and keeping the farmsteads attractive—*The Iowa Future Farmer*, October, 1941.

STIMULATION of the conservation of soil, forest, game, and fish among students of vocational agriculture is the objective of the new state conservation contest for Future Farmers being sponsored this year by the West Virginia Conservation Commission. Director T. D. Gray of the Conservation Commission has announced a total of $260 in prizes to be distributed among the chapters winning first and second places in each of the ten federations, and $25 to the state winners.

The contest started September first and will run for one year. Winners will be announced at Junior Farmers' Week State Vocational Contests in 1942. The chapters having the highest percentage of their members conducting the greatest number of jobs and projects in the various phases of conservation activity that is, soil, forest, game and fish—will be declared the winners.

Advisers of F.F.A.

(Continued from page 155)

portance. Fifteen supervising teachers, in evaluating item 20 formulating a chapter program of work rated this item I, most important. Nine other responsibilities were rated I by 10 or more supervising teachers. In no case were there more than five supervising teachers who rated an adviser responsibility as low as V—least important.

Statistical Analysis

A statistical evaluation of these important factors has been made by computing the arithmetic average of the ratings submitted by the supervising teacher concerning each of the 42 responsibilities. Eight responsibilities received an average evaluation of 2.00 or above. As reported in Table 1, the eight responsiblities evaluated highest and their arithmetic averages are: counseling chapter president in preparation for chapter meeting, 1.85; serving as adviser of an F.F.A. officers' meeting, 1.85; formulating a chapter program of work for the year, 1.95; serving as adviser of regular F.F.A. chapter meeting, 2.00; counseling with program chairman in preparing program for chapter meeting, 2.00; setting up a calendar of activities for the year, 2.00; preparing final chapter activity report, 2.00; directing chapter co-operative marketing activities such as marketing wool, livestock, potatoes, etc., 2.00; and preparing reports of records necessary for advanced degree awards, 2.00. The average of 32 adviser responsibilities reported upon by the supervising teachers ranged from 2.15 to 2.94. The two responsibilities which received the lowest average evaluation were: preparing an F.F.A. assembly program, 3.20; and preparing an F.F.A. chapter exhibit, 3.50.

Considering 2.50 as a mid-point in the evaluation of the 42 responsibilities, 29, or 69.05 percent, ranked above the mid-point and 13, or 30.95 percent, ranked below the mid-point.

The second installment of this article by Mr. Kugler will appear in the March issue—*Editor.*

and Course Content

(Continued from page 153)

Even in cases where the teacher has attempted some work with machinery, much of the instruction has been given in the field of selection and operation, with emphasis on the new wrinkles in power farming, while little has been reported on farm-machinery repair.

Defense Boards Need Help

State defense boards are asking that all agricultural agencies co-operate in completing a survey of the repairs needed on farm machinery in the county and are asking that all such repairs be completed before the time the machines are needed next season. This request might be stated in another way. It might be said that we are now being asked to do as a defense measure the kind of teaching some of the good shop men have thought was most essential for a long time. Their thinking has resulted in no real education because there was brought about no change on the part of farm-mechanics teachers to induce them to do more machinery repairing.

Proctor of Illinois, in his professional paper at Colorado State College last year, presented facts which seemed to indicate that approximately half of the work on the farm which could be classed as farm mechanics was in fact repair of farm machinery. His study of his own program indicated that he had been doing less than 15 percent of the repair work he might well have been doing. If this study may be accepted as general there seems to be one more indication that too many of the shop men in the country have gone in for information, appreciation, developing of carpentry, blacksmithing, soldering, and other skills mainly in the line of "making things"—rather than in getting into the shop machinery to repair or going to the farms where there are machines which need repairing, and actually doing the job.

The Challenge to Teachers

Now, with all of the farmers asked by their state and county defense boards to repair their machinery at once, with the governmental agencies asking all to cooperate in this program, the teacher of farm mechanics is going to be hard pressed for an answer if he is asked why he is not doing more farm machinery repairing in his shop within the next few months.

It is even within the realm of possibility that if the teachers of vocational agriculture do not more or less immediately set up part-time and/or evening classes in farm machinery repair for farm young men and adult farmers who have or use farm machinery, in order that these folks as well as all-day boys can ascertain for themselves the parts needed to make the machines entirely usable, and can be provided with the instruction needed so that they can make the repairs themselves, these defense boards might set up their own defense classes in farm machinery repair to do our farm mechanics job for us. If we don't do the job, someone else will. The job must be done, and soon.

however, to say that all teachers of farm mechanics will respond to the defense needs and turn in an effective job of aiding in national defense by doing little else in their shops but the conditioning of farm machinery. When this is done the original contention is borne out, namely, that national-defense training is stimulating teachers of vocational agriculture to do a better job of teaching in farm mechanics. They can and will get the job done.

400 Club

(Continued from page 149)

will be financed by the chamber of commerce, while in the other the president of a manufacturing plant will establish the loan fund. Our advisory council will aid them in the organization of their program.

Within less than a year of the organization of the plan we feel that we have accomplished something worth while. Looking back at the results of our original survey we feel that we have definitely solved the primary problem of inferior dairy projects by providing funds for quality dairy calves. By creating a fellowship organization or "inner circle" for dairy projects, the element of slow progress, as evidenced by growth of dairy calves into herds, has been overshadowed by rapid progress in better dairy methods and confidence in the future. The breeding problem has been somewhat improved by the group contact with artificial insemination rings which have offered their services to the club at at special rates.

This article is not presented in view of having solved all the problems of promoting better dairy projects, but merely in humble hope that it might have some practical application in project promotion, whether it be dairy or some other enterprise. This co-operative enterprise has prospered by its own efforts, and because the boys have a worthy and high ambition they are getting assistance from a number of agencies which are adding to its success.

Course for Young Farmers

(Continued from page 151)

of their problems. The attendance is extremely gratifying in that classes average from 15 to 20 out-of-school youths at every meeting.

I have been conducting my class in this manner for several years. Each year helps me to see what works and what does not. Thru this trial and error method, I feel that I have evolved a course of study that fits the needs of my group quite satisfactorily.

The classes start at 2 o'clock and close at 3:30. On the other hand, most of the out-of-school group continue the discussion well into the evening, if the need arises. We usually do not disband until we have come to some satisfactory conclusion for those interested.

1. Editor's Note. This plan might also make it possible for some teachers to offer courses who could not do so any other time because of a heavy all-day and evening class schedule. However it should be noted that state plans usually do not permit teachers to report regularly enrolled, all-day pupils as members of part-time classes.

NO SMALL part of the success of a teacher of agriculture, both in and out of school, depends on public relations. As President Farrell said two summers ago at our annual conference, "I would rather have a teacher with a B.S. degree, who had a smile on his face, than one with a Ph. D., and a 'Sour Puss.' " You can always catch more flies with sugar than with vinegar.

Many teachers fail to sell themselves because they never give it a thought. Be congenial. Go out of your way to meet people and make their acquaintance. Visit often with the parents of the boys in your agriculture class, and make them feel that you are trying to help them. Take an interest in what your boys are interested in. By so doing you will get a better hold on them. Have a hobby and ride it, be it coin collecting, stamps, or what have you.

Take part in community activities. Join a good service club. Lodge work will broaden your acquaintance, and it goes without saying that church connections are valuable.

Work with your superintendent and fellow teachers at all times. Praise good work wherever you see it. It's cheaper to give bouquets to the living than to the dead. Greet your boys wherever you see them and put them at their ease.

And last but not least, don't sit back and figure that because you have done a good job you can coast along without keeping up your public relations. Too late, many teachers have found out that good public relations pay big dividends. —C. A. Brewer in the *Kansas Vocational Agriculture Association Newsletter*, Nov., 1941.

Greetings To and From an Old Friend

AT THE first meeting of the Agriculture Section in Boston, a message was read from Dr. R. W. Stimson expressing regrets that he would not be able to attend the meetings because of the illness of Mrs. Stimson. Dr. Stimson pointed out that he had travelled clear across the United States to attend A. V. A. meetings and yet could not attend the Boston meetings, altho they were held within short distance of his home. He expressed his thanks to those who have contributed to *The History of Agricultural Education.*

The Agriculture Section asked Dr. Austin of Rhode Island and Mr. D. M. Clements of the U. S. Office of Education to draft a message to Dr. Stimson. This committee expressed the gratitude of the Agriculture Section for Dr. Stimson's fine contribution to agricultural education thru his completion of *The History of Agricultural Education,* which has now gone to press. O. C. Aderhold and F. W. Lathrop were asked to take the message and gifts to Dr. and Mrs. Stimson. They had a very delightful visit with Dr. Stimson, and he asked that his thanks be extended to the Agriculture Section. Time has not lessened Dr. Stimson's enthusiasm and interest in agricultural education, and the thoughtfulness of his many friends, I am sure, will be the high spot in Dr. Stimson's Christmas season.—F. W. Lathrop.

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