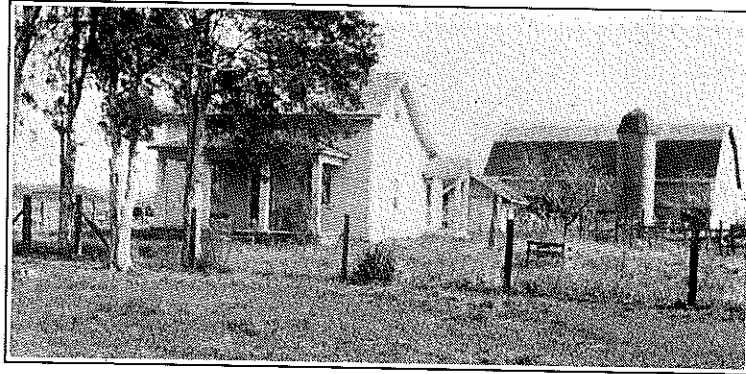


Agricultural Education



Farm Home of an Illustrious Farmer

In this house, near Wilmington, Ohio, lived J. S. Leaming when he developed the variety of corn which bears his name.

[See editorial page]

*"After worthwhile abilities are developed,
they must be kept alive." — R. H. Woods*

EDITORIAL COMMENT

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

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Subscription price, \$1 per year, payable at the office of the Meredith Publishing Company, Des Moines, Iowa. Foreign subscriptions, \$1.25. Subscriptions terminate January 1 or July 1. Single copies, 10 cents. Contributions should be sent to the Special Editors or to the Editor. No advertising is accepted.

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

FARM HOME OF J. S. LEAMING

THE farm home shown on our cover is not as pretentious as some of the homes on previous covers, but who is there who can estimate the influence of the man who lived therein? For thirty years he carried on the corn-growing operations which made his name revered among farmers. What if we teachers could but catch a vision of the patience, the persistence, and the painstaking attention to an ideal and goal which brought Leaming his well-merited success!

This house is seventy-five years old and in excellent condition. It has been remodeled within the past two years with new siding and a coat of paint, and is used as a tenant house at present. A grandson of J. S. Leaming now owns the farm, and lives in a large, new house "on the front."

OUR NEW BOOKLET

OUR booklet is off the press. We have brought together the 10 articles on leading American educators, the first of which appeared in the magazine September 1932, into a booklet *Contributions of Ten Leading Americans to Education*. This booklet should be read by 10,000 people in general education, and by every teacher of agriculture, teacher trainer, and supervisor. We predict that this publication will mean much to the cause of agricultural education. See that your superintendent, principal, and fellow teachers have a chance to read it. It is an attractive 45-page portfolio, containing the picture of each of the ten educators and of each of the ten authors who prepared the statements. The booklet is being sold at cost of printing and handling, to encourage its wide distribution.

Prices are given below. Please send the pay along, as we cannot afford to send bills when the booklet is being offered at such a low price.

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THE BROOK STREAM DRIED UP

LAST summer I went out to the old home farm and found the tenant in dire distress. The well had failed, and the brook spring had dried up. His cattle were thirsty, and he had to carry water for home and farm use. I said to the tenant, "Come with me, and I will show you a spring of abundant water." We went to a deep ravine in the woods pasture, where my father and I had always watered the stock. There the erosions of the hills and the freshets of the springtime had cluttered the old spring with mud, sand, and debris, and the brook spring had dried up. I

told the tenant that if he would clear away the debris, and sink a big tile over the spring, he would have plenty of water, for there was an ever-flowing fountain hidden beneath the mud and sands. The debris was cleared away, the tile was sunk, a watering trough was provided, and man and beast had plenty of water.

Let me draw an analogy between the teacher of agriculture and the brook spring. A worthy teacher may even at times be like the brook spring,—dried up. His soul of optimism and god-like life, which should be present, may be cluttered up with the debris of materialism, and the worries of the depression. His salary may have been cut. His job may be uncertain. The community may be unresponsive, and the farmers have "sleeping sickness." The heavy sands of debt may have weighted his spirits. The school, the farm boys, the community, and his own private affairs may all tend to clutter the springs of his best self,—but I give to such teachers the admonition I gave to my tenant, "If you will clear away the debris and plumb the depths of your soul, you will find an ever-flowing fountain of living water." This is my faith in a real teacher. There is a "LITTLE GOD WITHIN," called ENTHUSIASM. It is full of life. Liberate it, and it will give life to all you touch, and flow out among your students and patrons, like the brook spring,—to quench the thirst of distressed and discouraged lives.—Aretas W. Nolan.

TEACHERS RENDER SERVICE SAYS SECRETARY WALLACE

ON September 20 there appeared on the outside page of "Wheat Production Adjustment," issued by the Department of Agriculture, a message from Secretary Wallace to the extension workers for their part in the Agricultural Adjustment.

Dr. Lane wrote to Secretary Wallace, calling his attention to his message as it appeared in "Wheat Production Adjustment," and raised the question with him as to whether he would not like to prepare a similar message in reference to the cooperation of the agriculture teachers of the country. The message of Secretary Wallace follows:

Dr. C. H. Lane,
Federal Board for Vocational Education,
Washington, D. C.
Dear Doctor Lane:

In reply to your letter of October 11, I assure you that the service rendered by teachers of vocational agriculture in the conduct of the production control campaigns by this Department, and particularly the cotton acreage rental campaign, is greatly appreciated. The cotton acreage rental campaign, as you know, was an emergency one which necessarily had to be completed within a very short period and the assistance rendered by vocational teachers in presenting the plan to farmers was of very material help in the successful completion of the campaign within a period of a few weeks. A considerable number of vocational teachers rendered especially difficult service in checking disputed cases and bringing about adjustments of production figures in certain communities where there was a tendency on the part of contract signers to overstate their actual production. The cotton campaign was brought to a successful completion through the united efforts of the extension forces and the vocational teachers and many thousands of interested farmers and business men. Without the wholehearted cooperation of all these groups it would have been impossible to obtain the desired results.

While vocational teachers have not taken as prominent a part in the wheat production control campaign as they did in the cotton campaign, they have in many counties rendered excellent service. I assure you that the delay in acknowledging the value of this service is not due to lack of appreciation but rather to the many pressing questions which come to me for daily consideration.

Sincerely,
H. A. Wallace
Secretary

(sgd.)
Agricultural Education December, 1933



Professional

LAND HUNGER

A. R. MANN, Provost, Cornell University

IT MAY seem out of place to write on land hunger at a time when one of the most pressing problems before this country is to take land out of use for agricultural purposes in order to reduce production and to remove families or populations from land not suitable to yield a decent living. In the next two decades we are likely to witness in America a widespread movement to devote to other purposes large areas of land now in farms. This must be done not only for the benefit of agriculture but in the wider national interest. Just at the moment, under the stress of economic privation, thousands of city families have felt the call of the land as a last resource for food and shelter, and the trek away from the farms is more than counter-balanced by a countryward movement of city families to such farms as they can get hold of. The land will always beckon when one can find no other means of getting the physical necessities to sustain life.

It is just such conditions, arising out of great density of population and lack of large industrial developments of other sorts, which support a permanent land hunger in many of the older countries of the world. It is the stress of economic necessity, the pressure for the requirements of physical existence, which maintain a relentless hunger for land in great areas of this world, and which are frequent causes of internal and external strife among nations. If our means and economics of distribution effectively distributed among the populations of the world the food supplies which the farms of the world are today competent to produce, this situation would be greatly relieved in all lands. But as such is not the present case, great areas are inadequately supplied, and the hunger for land remains acute in such areas.

In the highly congested regions of Asia, particularly in Japan, China, and India, one finds perhaps the most acute pressure on farm land. But even in Europe, where agriculture reaches a high level of proficiency, one finds land hunger a powerful force, engaging the most serious consideration of governments, and exercising large influence on the manner of life.

In North and Central America the density of population is only 14.1 persons per square kilometer (about .4 of a square mile). In Europe the density of population for a similar area varies from 72 in Poland, or five times as great as in the United States, upward through the several countries until it reaches 252 in Belgium, or eighteen times as great as our own. The average sized farm in New York is 113 acres. Ninety per cent of the farmers in Norway, Holland, Belgium, and France operate farms under

25 acres in extent, the majority far under 25 acres. The farms of Switzerland average 20 acres.

For many generations the land problem in Europe has been acute because of the density of population. Following the Great War, one of the most vexatious problems which swept over Europe was the demand for land reform, the better distribution of available lands, and the bringing into cultivation of new areas formerly considered impossible for agriculture. In many of the countries of continental Europe, as in Austria, Switzerland, and Eastern Poland, for example, where law or tradition had long required the division of the land among the children on the death of the father, and the long continued policy of repeated sub-division has resulted in the excessively small fields which now characterize the strip farming found in many

the nobility, the church, farm syndicates, and the like. The enforced breaking up of these estates into small family farms, seldom exceeding 25 acres in extent, has been a conspicuous recent national policy in many European countries, as in Finland, Estonia, Czechoslovakia, Spain, and elsewhere.

Equally active have been the efforts to bring more land into cultivation. By way of example, Norway has fostered the clearing of forest land, the building of roads and houses with government aid, and the development of extensive tracts for colonization as small family farms. The government of Holland voted in 1919 to create a new province of 550,000 acres by driving back the waters of the Zuider Zee from such an area. The work was begun in 1924, and is expected to be completed in 15 years. In Italy, a lake 3,900 feet high in the Appennine Mountains, covering a surface of 35,000 acres, was drained by means of a four-mile tunnel through the mountains and 480 miles of drainage ditches. Before it was drained, 8,000 people dwelt about its borders. Now there are 80,000 people living on and near the land. The writer saw here 19,000 so-called farms of one-half acre each. He also visited a farm on the eastern coast of Italy where 340 persons were gaining all their living by farming 720 acres.

The owner of the farm took one-half of the production, the result was that the living for each worker was gained from 1 acre, approximately.

I have not cited the most difficult conditions which can be found, but enough perhaps to indicate that even in these days, when we in America are troubled because we have brought our lands into cultivation too rapidly, there are great areas in the older countries in which the available lands are far too scant for the needs of the people. Where land is at such a premium, toil, thrift, and avoidance of waste are characteristic of the farming. So also are high skill and infinite care. In America land is the cheap item, and labor ordinarily the expensive one. In much of Europe and Asia land is the expensive and limited item, and labor the cheap one. Europe wants to get the most out of the acre, so that one finds a heavy application of labor to a given area of production. We want to get the most out of the labor of the man, so that the man spreads his labor over as many acres as he can work profitably without the employment of other men. We find the use of labor saving machinery profitable in order to extend the area one man can work. On the small farms of Europe and Asia, in the congested areas, it is cheaper to use more human labor; and in the small-farm areas machine meth-



A. R. Mann

countries, the problem of reassembling or regrouping these strips into contiguous farm units has baffled many a modern government, and has been the object of much legislation in recent years. To cite a single example, an American investigator found that in Switzerland, where the average sized farm is 20 acres, the average number of separated, isolated strips for the entire country is 14 for each farmer. In nine geographical regions in Switzerland the number of separate, scattered strips for each farm operator varies from 41 to 129. In Eastern Poland the condition is worse.

On the other hand, in every country there are large areas in the hands of single owners. These may be private persons of wealth, but are frequently

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ods are often not practicable as well as not economical. In those parts of Europe where large farms obtain, as one finds in some sections of every state in continental Europe, machine methods and practices much like our own are employed.

We could profitably give up much of our marginal and submarginal land and devote it to forests, recreation purposes, or other uses, thus reducing the area under cultivation. But while we suffer sharply at present from a superabundance of land in farms, land hunger remains a stark reality for populations many times greater than the population of America. It behooves America to be far-seeing and wise in husbanding our land resources against a future day when our own needs may be multiplied.

Science Must Now Develop the Social Point of View

THROUGH a relatively small investment, the expenditures for research by the Federal and State Governments have undoubtedly made it possible for the farmers of the United States to produce the present volume of corn, wheat, and cotton with a billion hours less man-labor annually. This is a tremendous increase in efficiency.

"Science has magnificently enabled mankind to conquer its first great problem—that of producing enough to go around; but science, having created abundance, has now to help men learn to live with abundance. Having conquered seemingly unconquerable physical obstacles, science has now to help mankind conquer social and economic obstacles. Unless mankind can conquer these new obstacles, the former successes of science will seem worse than futile. The future of civilization, as well as of science, is involved."

"I have no patience with those who claim that the present surplus of farm products means that we should stop our efforts to improve agricultural efficiency.

"What we need is not less science in farming, but more science in economics. We need economic machinery corresponding in its precision, its power, and its delicacy of adjustment to our scientific machinery. Science has no doubt made the surplus possible, but science is not responsible for our failure to distribute the fruits of labor equitably. We must charge that failure squarely up to organized society, and to government."

"In defending the scientific work of the Department of Agriculture I am not making a plea for the farmers. Much of our research expenditures are of direct interest only to industry. All of them benefit city standards of living far more than they do rural incomes. Indeed, I believe the standard of living of the next generation will be definitely lower, especially in the cities, if the scientific work of the Department of Agriculture is destroyed at this time, merely to save ten or fifteen million dollars a year. I want this standard of living, in city and country alike, constantly improved. But we shall never achieve that desideratum, unless we learn how to distribute what we have produced as well as we have learned how to produce it. Science has done the first job, and done it magnifi-

cently; now let it turn to the second, and infinitely more difficult, one."—Secretary Wallace, *The Official Record*.

Codes and Codes

Our support of the N. R. A. is based chiefly on two premises:

1. Any reasonable experiment designed to improve unfavorable conditions deserves a fair trial. Even skeptics should not block the way to success.

2. Every person in public employ (national, state or town) is bound to act not only within the letter of the law but also fully within the spirit of the administration of the law.

It has been stated that none of the "codes" formulated are binding upon state and municipal service, but it is obvious that the spirit of the whole plan must be exemplified by such service. There are "codes" which are much more effective than any which are written or which are formally agreed to. The gangster's code regarding sealed lips is doubtless unwritten. The school boy's code is known to most of us, and we seldom ask him to break it even when he is wrong.

A "creed" is not a code. A creed is a statement of belief and is often static. A code is a determined course of action, an accepted contract, which is fundamentally dynamic. It works or it ceases to be a code. It may be frequently unethical, but is accepted by the group.

Farmers have a variety of codes, but most of them are on a rather high ethical level. It is our desire to help young farmers establish and accept the improved codes which will make them most valuable to the commonwealth. How should such a code be formulated?

As teachers, our code should be a working statement of our creed. Self-interest must be subordinated. Our commodity is boys' lives, the future welfare of the community. These permit no opportunism, no compromise, no crossed fingers. Try your hand at formulating a code for vocational teachers. Send in your choice.—F. E. Heald, Massachusetts Staff Letter.

Codes of Conduct

RUFUS W. STIMSON, State Supervisor of Vocational Agriculture, Massachusetts

VARIOUS schools and departments in Massachusetts have developed codes of conduct which have proved of advantage to all concerned.

A good example is that formulated and enforced by Mr. Thomas P. Dooley and his associates in charge of the six-teacher vocational agricultural department at Jamaica Plain High School, in the Arnold Arboretum, park, and estate section of Boston,—a department which this year has a selected enrollment of 182. It is briefer than some, and reads thus:

"MAKING A REPUTATION"

1. Learn to make good on every job.
2. Earn a reputation as a dependable worker.
3. Adapt yourself to the working conditions of your particular job.
4. Learn to do many different kinds of work well. This is experience: get all you can.
5. Make good so that next year you may return at an increase in pay or so another student may secure work.

6. Have an understanding with your employer about time off.
7. You are on the job during the summer—a short time—hence try to make the responsibility of the employer as light as possible.
8. When visitors come to the farm go about your work as usual.
9. Toward the end of the season—the last month, be sure to do good work. Finish strong.
10. Continue on the job as late in the season as your employer needs assistance.

11. Be a gentleman at all times.
 12. Don't grumble. Be courteous.
- "YOU ARE MAKING A REPUTATION FOR YOURSELF AND FOR THE SCHOOL. IT'S UP TO YOU."**

District Conference in Iowa

G. F. EKSTROM, Supervisor of Agricultural Education in Iowa

THE plan of conducting fall district conferences for vocational agriculture teachers, in addition to the annual state meeting held during the summer, seems to meet with the favor of the Iowa instructors and to be helpful to them in organizing their programs for the year. This year five conferences were held on Saturdays, beginning September 16 and ending October 14. Ninety-five per cent of the teachers have attended such meetings during the past seven years with an increasing number of the superintendents participating in the programs.

The district conferences provide the agriculture instructors an opportunity to make contacts with the work of the different departments who serve as hosts to the groups each year. They enable teacher trainers and representatives of the resident and extension staffs, as well as the state supervisors, to present selected topics to the groups on a "training school" basis. For example, the conferences just completed were featured by a discussion of the agricultural adjustment act and by the setting up of certain criteria relating to the supervisory practice work of the all-day, part-time and evening students. (A series of summer program-planning meetings will be conducted with smaller groups of teachers next spring.) The conferences also enable the teachers to make plans for group activities on a sectional basis, such as the promotion of radio broadcasts and the arrangement for educational tours to livestock markets and industrial centers.

Leadership Meetings

The leadership meetings for vocational agriculture students and F. F. A. members, conducted for the third year in connection with the district conferences, were well attended and enthusiastically received by the boys who participated in them. The program for these meetings consisted of discussions pertaining to the influence and moral aspects of sound leadership, reports on F. F. A. activities, and the organization of cooperatively planned supervised practice programs. Community singing, recreational activities, and various types of entertainment helped to enliven these meetings which were conducted by the executive committee of the Iowa Association of F. F. A.

The program for the joint noon-hour luncheon of instructors and students was drawn for the most part from the leadership conference. The boys gave a fine account of themselves and demonstrated that the development of substantial rural leaders is a major obligation charged to agricultural education and that the F. F. A. movement is a splendid medium for providing such training.

Agricultural Education in Macedonia, Greece

W. W. ADAMS, Supervisor Macedonian Village Extension, Salonica, Greece

IN Macedonia, Greece a program of rural education organized in 1929 under the direction of Mr. H. B. Allen and in cooperation with the Greek Government is making rapid progress in meeting the needs of the native and refugee farmers. The following story is a brief outline of the work being developed under the agricultural division by one teacher of agriculture.

In the Porroia section of Northern Macedonia, bordering the mountains which separate Greece from Bulgaria, Mr. Demosthenes Economou has become known as a master teacher of agriculture among the Macedonian and refugee farmers. For four years Economou has labored in his area of six villages, conducting agricultural evening lessons, holding day classes, visiting home project boys, and developing experiments with cooperating farmers in each village. During the first year, there were many discouragements. The extreme poverty of the farmers in addition to a naturally skeptical attitude caused the work to progress slowly. But Mr. Economou was not discouraged, and gradually organized his program of work on a sound basis. A survey was made of the farmers in each village. Based upon needs determined by the survey, a long-time agricultural improvement program was formulated. From this program carefully planned evening lessons were conducted, based upon problems in which the farmers were interested. From these lessons have grown improved practices which today are influencing more than 50 per cent of the farmers in the entire area.

Beginning with potato production, Mr. Economou saw the need for improved yields and reduced losses in storing, so in 1929 he started with six home projects. Just what were the reasons for low yields? Mr. Economou encouraged his boys to prepare the land more carefully, to plow a little deeper, and to use fertilizer for improving the yield. But the project results were not a success, the yields were not higher, the cost of production was greater, and the farmers remained skeptical. But Mr. Economou was not discouraged. One year's experiments were not enough; more trials were needed; more home project boys who would follow his suggestions. The yield must be increased. So the second year additional projects were developed, but again the results were no better. Then last year Mr. Economou decided to experiment with an improved variety of potatoes from Hungary. Accordingly, with one cooperating farmer in each of four villages, po-

tato experiments were conducted, using both the local and the imported varieties. The results were very encouraging, and in every case the Hungarian improved variety matured earlier and out-yielded the local variety. Careful records were kept on these experiments, and in the evening schools conducted in each village Mr. Economou discussed the results with farmers. This year for the first time, progressive farmers in each village are interested in improving their potatoes. Five thousand okes of the improved variety have been ordered by Mr. Economou through the Government Agricultural Bank and are now being planted by 65 farmers in six villages.

A similar story might be told of poultry improvement. The small home flocks from improved stock which can now be seen in dozens of homes in each village are the result of a beginning made from 20 eggs. Mr. Economou saw the need of introducing improved breeds and in 1929 sold to one cooperating farmer 20 eggs from improved strains of White Leghorn and Rhode Island Reds produced at the American Farm School at Salonica. In 1930, largely as a result of evening school work, 500 eggs were purchased and sold to cooperating farmers in each of four villages. In 1931 and 1932 the same farmers began to produce their own improved stock and to sell eggs of young stock to other farmers in the village. This year the number of improved birds will be much greater in all villages, and several new poultry houses have been planned. Up to the present Mr. Economou has 11 colony shed-type poultry houses completed by project boys as a part of their home projects.

In the improvement of other livestock Mr. Economou has again depended upon his home project boys. To date 10 pigs of the Large Black breed have been purchased from the Government Experiment Station and will be fed and cared for by six boys as home projects.

Through the improvement of livestock Mr. Economou has seen the need for improved feed and crop rotation. Thus in 1931 vetch was introduced as a soil builder to be grown as a winter crop and either cut for hay or turned under for green manuring and then followed by potatoes, tobacco, or late corn. In 1932 this rotation was tried by two home project boys in each of six villages, and proved to be successful. This year more than 500 okes of vetch have been purchased by the fathers of the boys who were successful in growing vetch and who have shown that two crops could be produced profitably on the same piece of land in one year.

As a fourth major undertaking Mr. Economou has promoted the planting of both fruit and ornamental trees, through his evening lessons and by means of young nurseries started in three villages. Each nursery was planted and cared for by school children under the direction of Mr. Economou, and from these small nurseries more than 1,100 one and two-year-old mulberry, gledischia, pine, and cypress trees produced from seed have been sold to farmers, and the money used for the local schools. In addition to this work, four

grafting campaigns were organized last year and conducted by groups of home project boys in each village. As a result of these campaigns more than 1,000 apple and pear trees which grow wild throughout this section were grafted with improved varieties of fruit.

Gradually, Mr. Economou is beginning to see the fruit of his labors. Slowly and almost unwillingly some of the most skeptical farmers are accepting new ideas and adopting changed practices. Through home project boys the seemingly impossible has been made possible.

Four Louisiana Teachers Do Their Bit

EARLY this year, co-operating with S. C. Shaw, superintendent of Grant parish schools, four Louisiana teachers of vocational agriculture planned a program of year-round home gardening, as an aid particularly to the needy. Their plan was submitted to the unemployed relief committee, who agreed to donate the seed, and the plan got under way.

Word went out over the parish for needy, unemployed men to assemble at schoolhouses on certain nights, and when the nights came 'round, the rooms were crowded.

Plant Tables Used

Plant tables were worked out by the teachers—telling just what to plant, when to plant, and how to plant in the various seasons—and were passed out with the seeds.

Then started a flurry of planting, the agriculture teachers offering advice and instruction. Some of the men had never worked gardens before, some had. But all started to work with eagerness.

Groups of Future Farmers aided the agriculture teachers in their work of instruction, making weekly visits to the garden plots.

About 3,000 Aided

About 3,000 persons in Grant parish have been aided through the garden plan and instruction given in connection with it. So popular has the plan proved that it has been duplicated in other parishes, and R. D. Maltby, federal agent for vocational agriculture in the southern region, is calling attention of other states to the work, suggesting the plan as a means of meeting the relief problem in many localities.

Following the planting of the gardens, the holding of classes is continued, those with gardens asking questions about their particular plots and bringing up for general discussion the problems they have met in their individual year-round garden plan. The class hours are held when most convenient for the workers, and the place may be a front porch easily available, the living room of a home, or even, when the winds have tempered themselves to spring mildness, the shade of a tree.

Give your friends a copy of *Contributions of Ten Leading Americans to Education*, as a Christmas time token. See editorial page.

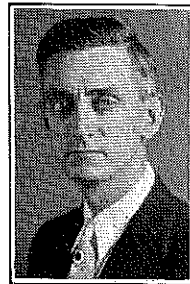


Evening Schools



Do We Fail to Teach?

V. G. MARTIN, State College, Mississippi
Editor's Note: Although the philosophy here presented is applied to evening school work, it applies equally well to other types of teaching. The editor feels that there are too many teachers who have failed to accept this point of view.



V. G. Martin

IN our evening school work, are we teaching farmers or merely endeavoring to get farm practices improved? Can we justify classing as teaching any means or method that gets the desired change in practice on the farmer's part? Observation of evening school activities

reveals various types of methods and procedure being used in this work. "Telling," "advising," "promoting," "high pressure salesmanship," directing farmers in getting, interpreting, and applying information, all are types of procedure in use. Has a farmer who feeds his dairy cows more succulent feed because his agricultural teacher "told" or "advised" him been taught?

As a teacher, any kind of a teacher, my job is to instruct—teach. For me to teach, some one must learn. Organized instruction, if above the trial and error level, must motivate the learner, set situations to be analyzed, aid the learner in finding, interpreting, and applying appropriate information to such situations, to the end that the learner understands, decides, and adjusts his conduct in the light of such information.

As teachers of vocational agriculture under the provisions of the federal acts, we are charged with the responsibility of vocational education through organized instruction. Before the enactment of the Smith-Hughes Act other agencies were engaged in work for the betterment of agriculture. With the means and methods appropriate to their functions it is to be assumed their work was being well done. Two things should be remembered about their work, namely, they were not agencies of public education and were not using organized instruction, but they were looking towards improving farm practices. Publicly supported vocational education represents a recognition of a need for educating the farmer to do for himself both his thinking and his manual operations. It is significantly our responsibility that we teach farmers to intelligently do for themselves.

While emphasizing the importance of putting our work on a real organized instruction basis—not merely change of farm practices—it would probably be amiss not to refer to the converse practice of a great many teachers, namely, holding evening school classes but never getting many, if any, farm practices changed. We can scarcely claim effec-

tiveness in our instruction unless the farmer reflects his learning in improved practices. It is bad for the teacher of vocational agriculture to endeavor to promote a program of improved practices without giving his farmers intelligent, organized instruction, but it is probably even worse to endeavor to conduct evening school classes without definite improved farm practices resulting therefrom.

Practice without instruction, instruction without practice—neither can be called vocational education. In our evening school work farmers should be taught to intelligently make their own decisions, and then they should be supervised adequately to see that these decisions are executed in practice.

Proposed Outline of Material to be Published in the Evening School Section

RESPONSES to inquiries to supervisors and teacher trainers indicate that evening class material on special phases of this program is preferred to material relating in a more general way to the whole program of work. The editor of this section of *Agricultural Education* interprets this expression to mean that the readers of the magazine will derive more profit from more complete reports on definite and specific phases of this work than from general reports dealing with the whole program.

In line with this preference, definite phases of evening school work on which material to be considered for publication is desired is submitted below:

1. Selecting problems to teach
2. Developing interest in problems used for teaching
3. Information—locating, gathering, and organizing
4. Methods and procedure in teaching classes
5. Supervised practice
 - (1) Determining and organizing the supervised practice program.
 - (2) Following up instruction or supervising the practice program
6. Evaluating evening class instruction or measuring results
7. Special courses:
 - (1) Farm organization
 - (2) Cooperative activities—marketing, etc.

All teachers throughout the country who have had especially satisfactory achievement along any of these lines are urgently requested to write up such achievement and send this to the evening school editor to be used for publication in *Agricultural Education*. The first six items above represent distinct activities in doing complete evening school work. It is hoped that from reports of achievements along all these lines it will be possible to publish during the course of this year material on every phase of evening school work, representing the most successful experience of agriculture teachers of the entire nation.

Such material, when published, will be a source of useful information to all engaging in this type of work.—V. G. M.

Enrolling Farmers for Improved Practices

J. B. KIRKLAND, Teacher of Vocational Agriculture, Tennessee

THE real worth of an evening school course for farmers can be largely measured by the number of farmers enrolling and actually adopting practices that are an improvement over those formerly followed. It seems that the average agriculture teacher values too much the importance of getting a large number of farmers to attend the meetings, efficiently leading a group discussion, or presenting the latest experimental data pertaining to the enterprises under discussion, but does not realize that the big objective of the evening school course is to get farmers to draw the correct conclusions and to improve the practices improvable.

The Federal Board for Vocational Education states that "one of the most important factors of success in vocational education in agriculture is intelligent provision for directed or supervised practice." The vocational Act requires evening school members to do at least six months of supervised practice during which time it is expected that they will have adopted the improved farm practices agreed upon at the evening school or soon afterwards. The adoption of improved practices by the members of the evening school is the basic purpose of the course.

The interest in evening school work in any community will be short lived if the teacher depends on the classroom instruction to prove its worth but fails to secure a supervised practice program as the outcome. Foard states that "a well-conducted evening class should result in all members undertaking certain improved practices which they had not been doing before. A farmer must do supervised practice because he has been sold to the idea rather than because it is required. There is evidence that many teachers who have conducted evening schools have either ignored the supervised practice altogether or have done it in a very half-hearted manner."

Many teachers feel a hesitancy in enrolling farmers for improved practices and often pass up splendid opportunities to get farmers to make their decisions and express their intended changes; as a result, some farmers do not adopt improved practices because of lack of encouragement. If the teacher has established himself with the members of the group; if he is thoroughly familiar with the needs of each individual member; and if he realizes that each member is enrolled primarily to increase his efficiency in the jobs he is already doing or to secure instruction in some new phase of farming, he will not hesitate to approach the members

regarding the adoption of improved practices.

There are several methods of enrolling farmers for improved practices. One that has been very successful in Tennessee involves the "signing up" of farmers for improved practices during the discussion or at the end of the study of each job. After sufficient experimental data have been presented to enable the farmer to arrive at the proper conclusion, the teacher should determine what decision each member is going to make. It is advantageous to talk with two or more "key" men before the meeting who are expecting to adopt one or more of the improved practices resulting from the study. As the "key" men are asked to express their intended improved practices, it is well to have the class secretary record these in his roll book. Either the teacher or the secretary should then ask other farmers what improved practices they expect to adopt. Farmers absent may be enrolled for improved practices through personal visitation by the teacher as soon as possible after each meeting. Some teachers devote a few minutes to a review of the previous discussion at the beginning of each meeting. At the close of the review, additional farmers may express their intentions to adopt improved practices resulting from the study at the previous meeting.

An Evening School in Potato Production

C. B. ODELL, Student Teacher, Morgantown, West Virginia

IT has been my privilege to attend regularly an evening school in potato production at Masontown, West Virginia. The school was directed by Mr. R. W. Cline, the vocational agriculture teacher. Meetings were held weekly from February 20 to May 29, and more meetings during the summer as need for them arose. Eighteen farmers regularly attended this evening school.

In planning for the school, Mr. Cline set up the specific objective to have a minimum of 12 leading potato growers use at least 5 new practices.

The various practices in the form of problems to be solved were, as far as possible, taken up at the time the farmers were actually facing them. The method of dealing with these problems was the conference procedure in which the farmers would state and evaluate their experiences. However, occasions arose in dealing with almost every problem in which the experiences of the group needed to be supplemented. To take care of this, the instructor had prepared charts and other illustrative material to advance.

The conclusions arrived at by the group, as well as any other usable ma-

terial, were mimeographed and handed out the following meeting.

One of the significant features of the instruction as carried on in this evening class was the development and use of practice summary sheets. These sheets were so constructed that the practices carried on by each individual farmer, both before and after attending class, could be recorded separately.

Two forms of these sheets were developed. The first one was designed so that the names of all the farmers, as well as their respective major practices of potato growing both before and after attending the class, could be entered on it. The second form was designed to summarize each participant's practices in more detail, showing the practices as carried out last year, the ones planned for this year, and the practices actually carried out after attending class.

The facts concerning the old practices were secured for filling in Form 1 at the time of considering any particular practice. In securing such information at this time, two very important purposes were served. First, the discussion of the class could be built up around these old practices; and second, a record of the old practices was secured for each individual farmer to compare with the new practices to be performed.

The centering of the discussion around these practices turned out to be a very effective way to get the farmers to participate actively and thereby reach definite conclusions. For example, when considering the steps in cultivating potatoes it was found that certain farmers had been using the following procedure:

- | Farmer | Steps in Order of Doing |
|--------|--|
| 1 | (Weeder—3 times
(Cultivator—4 times |
| 2 | (Spike tooth harrow—3 times
(Cultivator—5 times |
| 3 | (Springtooth harrow—2 times
(Spike tooth harrow—3 times |
| Etc. | (Double shovel—3 times
(Cultivator—4 times |

After considering and evaluating these methods, the group worked out a system to follow for the coming year which they considered best suited to their conditions. Steps in order of doing were:

Form 2 was filled out by the farmers themselves at the last meeting in May, in order to give the teacher a permanent detailed record of the practices planned for this year as well as of those already carried out. This form as well as Form 1 will not be filled out in full until the potato enterprises have been completed.

As a result of the work of this evening school, some worthwhile improved practices have been carried out by the farmers attending. The F. F. A. chapter in cooperation with the evening class purchased 290 bushels of certified Michigan seed and 240 bushels of Maryland seed potatoes. These groups and other growers in the community treated 1,015 bushels of seed potatoes (for 32 growers). Practically all of this work was done in the agriculture building. The F. F. A. chapter and evening class members purchased 3,150 pounds of copper sulphate, 5,850 pounds spray lime, 500 pounds calcium arsenate, 9 pounds of yellow oxide of mercury, and 8 pounds of copper carbonate. A spray ring of 25 acres of potatoes was organized.

FORM 1

EVENING SCHOOL SUMMARY

Farmer	Meetings Attended	Teacher Visits	Practices Followed Last Year and After Attending Class								
			Number of Acres		Kind of Seed Treatment		Amount of Fertilizer		Analysis of Fertilizer		Preparation of Seed Bed
			Before	After	Before	After	Before	After	Before	After	

FORM 2

Grower.....	Acres.....	Year.....
-------------	------------	-----------

PRACTICE	Used Last Year	This Year		REMARKS
		Planned	Used	
1. Grade of seed.				
2. Amount of seed per acre				
3. Kind of seed treatment. Etc.				

TOOL	When to Cultivate	Depth	Number of Times
Weeder	After first rain	2½ inches	About 3 times (After each rain.)
5-tooth cultivator	When row can be seen	4 inches	1
Weeder		2½ inches	2 or 3
5-tooth cultivator		*2½ to 3 inches	1
Weeder			1
5-tooth cultivator		*2½ to 3 inches	1

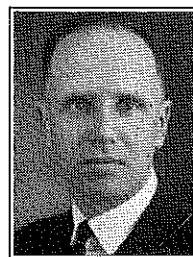
* Center of row.



The Needs for Part-Time Education in Rural Communities in Iowa

H. M. HAMLIN, Iowa State College, Ames

IOWA is seriously undertaking a part-time school program. As a first step, a study has been made of the clientele available for such schools in six rural communities in the state. Mr. E. E. Mayhew, teacher of vocational agriculture at Story City, directed the study. He was assisted by the local teachers of vocational agriculture. The data were gathered in the Fall of 1932.



H. M. Hamlin

The communities studied were quite diverse, and they were widely scattered over the state. The Story City and Gilbert communities are located only a few miles from the Iowa State College. The Hudson community is close to Waterloo, almost semi-urban in character. The Guttenberg community is a German settlement along the Mississippi river. The Corning community covers a large area in southwestern Iowa. Stanhope is a central Iowa community, resembling somewhat the Gilbert and Story City communities, but farther removed from the College.

The general procedure was to secure from the rural mail carriers the names of the persons over 14 and under 26 years of age on their routes. These names were then taken to persons in various parts of the community who were widely acquainted, who supplied the data. This made it necessary to consult only a relatively small number of people. The task of securing the information was not hard.

A large number of prospective part-time students was found. In the six communities, comprising 693 square miles, there were 652 rural boys and young men of the ages included, nearly 1 per section. The community with the smallest number had 40, an ample group from which to recruit a part-time class. One community had 233.

There was wide variation in the number of out-of-school boys and young men in the various communities, which was independent of the size of the community. Some communities were holding in school a higher percentage of their boys of this age. Computed on the basis of the number of boys, 15 to 25 per township, the following figures are secured: Guttenberg 79, Story City 41, Gilbert 41, Stanhope 40, Hudson 32, Corning 25.

The boys in the different communities varied widely in their educational at-

tainments. In one community, 87 per cent had not gone beyond the eighth grade; in another all but 12 per cent were eighth grade graduates. In one community, 20 per cent had attended college; in another no one had attended college. In all of the communities studied, 43 per cent of the out-of-school group had not gone farther than the eighth grade. Thirty-four per cent had graduated from the high school and 7 per cent had attended college.

It will be of interest to those who are considering the development of part-time classes for girls to parallel those for boys, to know that there were only about half as many out-of-school girls of these ages as there were of out-of-school boys, about one girl in every other section. It is significant too that 22 per cent of the girls of these ages were married, while only 10 per cent of the boys were married.

About 60 per cent of the persons discovered, both male and female, were under 21 years of age. The others were in the age group 21 to 25, inclusive. This would indicate that in some of the larger communities, at least, there might well be two part-time classes conducted, one for the younger group and one for the older group.

Failure of agencies other than the school to care for this group adequately was indicated by the fact that only 46 per cent were reported to be interested in church work and only 1.4 per cent were 4-H Club members.

Studies were made in two communities of the ratio of the number of boys of the ages studied in and out of school. It was found that there were more than four boys out of school for each boy in school.

Three of the communities have consolidated schools. It has been held by some that in such districts there are not enough boys out of school to warrant holding part-time classes. This may be true if enrolments in such classes are confined to persons of high school age. The numbers of boys 15 to 18 years of age in the three consolidated school districts were, respectively, 6, 13, and 19, an average of only 13 per district. But when the group 19 to 25 is added, the number of out-of-school farm boys is raised to 74, 83, and 40, respectively, for the same three communities, an average of 66.

In the larger, non-consolidated districts there was an abundance of farm boys 15 to 18 years of age out of school. The numbers by communities were 38, 42, and 88, an average of 56 boys.

The study did not deal at all with persons of the same ages who live in the

towns and villages. These people are quite as much in need of part-time education as are the farm youth. The ordinary rural community apparently has a tremendous part-time problem, if seen in its totality.

The study is available in a thesis form from the library of Iowa State College. Its complete title is "An Analysis of the Needs for Part-Time Education in the Rural Communities of Iowa."

Summary of Part-Time Class at Cook, Minnesota

DURING the Christmas vacation much of my time was spent making personal interviews with boys whom I thought might be interested in the part-time work to be offered at the Cook School during January. From my previous work in part-time classes I found that with just meeting once a week, the boys lost their interest in the work, and the attendance was not satisfactory. This year being in a new department, I thought I would experiment on a method new to me of handling the work. I informed the boys that the class would meet every day from 1:00 to 3:30 in the afternoon. About twenty boys made definite statements that they would be in on Monday afternoon after the Christmas vacation. When the time came for them to be at the agriculture room for their first day's work, only eight students were present. We went ahead with our work as though the room was filled, and made assignments in the various classes for the next day.

The eight boys appearing the first day seemed to be quite interested in the work and all were back every day that week. On Wednesday afternoon three new students came in.

The boys attending were a little older than the regular part-time group, the ages ranging from 19 to 27. This, therefore, included boys who were really having to sacrifice some time from their farm work in order to attend. The boys wanted to know if it would be possible to have at least part of the meetings in the evening each week, to which I readily agreed. On the following Monday the classes met in the evening, and the attendance rose to 19. It was then decided to hold the class in the evening on Monday, Tuesday, and Thursday, and in the afternoon on Wednesday and Friday. The principal reason for holding in the afternoon was to give better opportunity for field trips.

By the end of the second week the enrolment had risen to 32, and I informed the boys that we did not care for any larger enrolment, as that filled my room to capacity. The enrolment then stayed nearly stationary, and the attendance remained to capacity.

The course was as follows:

Agriculture	45 minutes
Farm arithmetic	30 minutes
Farm law	30 minutes
English	25 minutes

Farm mechanics 25 minutes
Physical education 30 minutes
On Friday, January 29, we had graduating exercises for the part-time boys, and diplomas were given to 18. These 18 boys attended 80 per cent or more of the meetings after they enrolled. The graduation exercise was conducted by the county superintendent, the supervisor of agriculture for the county school system, and other members of the county board of education.

The boys all seemed very much interested in the work, as indicated by their desire to continue the meetings for once a week until the spring work started.

Winter Courses at Hannibal, New York

S. R. LOCKWOOD, Instructor in Agriculture
THE winter short courses at Hannibal High School, Hannibal, New York, have touched and interested three groups: (a) The adult, both men and women, (b) The high school graduate, (c) The boys who have left school either in the grades or high school.

The first group is looking for some definite instruction along a particular line of farming, such as poultry raising. The second group has not gone on to college but wishes to get in touch with some of the newer ideas being developed in the state college at Cornell University, such as farm management, agricultural cycles and prices. The third group is just realizing that the school offers an opportunity for some special training along farm enterprises of interest to them.

The subject matter presented after the first year has been taken from the Cornell Farm Study Courses.

The winter short courses at Hannibal began in 1926 and have continued every year since. Organization takes place the Wednesday prior to Thanksgiving, and classes meet once a week, usually on Wednesday, for 10 weeks. Sometimes we have met for 12 times. We close with a joint banquet with the Hannibal Future Farmers. Our chief, Mr. A. K. Getman of the State Department, is usually with us at these events.

A grouping of the registrants shows 28 owners or part owners of farms, 2 farm laborers, 3 wives of farmers, 1 retired farmer. Two have been registered for four consecutive years, 7 for three years, 4 for two years, and 22 for one year.

Virginia Part-Time Students Buy Feed Cooperatively

W. R. EMMONS, Instructor in Agriculture, Boykins

PART-TIME students of the Boykins and the Newsoms F. F. A. Chapters, having organized into two clubs in their respective communities, decided last November to purchase poultry feed materials and mix feeds for their laying hens and for the birds of a few other small poultry raisers in the community. Since December 1, 1932, the clubs have mixed and distributed 450 bags (100 pounds) of feed. This includes laying, starting, and growing mash, with an estimated saving of \$225. Excellent results have been secured both from the laying hens and the young chickens.

The place of holding part-time schools varies with the community. They may be held in the evening at the central school or outlying districts, one or more times a week and for twenty or more meetings. Such a plan may, in some cases, necessitate carrying over into a second year. Afternoon meetings may be held, one or more per week, for twenty or more days. The time allotted in the foregoing plans may be 2 hours, or it may include the whole afternoon. All day courses may be offered for one or more months, during which time the pupils are put on the regular high school schedule of four or more class periods. The writer has used all of these methods and finds this last plan the most satis-

L. H. THURWACHTER, Instructor in Agriculture, Appleton, Minnesota

Mr. Thurwachter is one of the pioneers in part-time and evening work. I do not know how many schools of this type he has held, but my opinion is that he has done more work of this kind probably than any other person in the United States. He has been teaching evening schools in Minnesota since 1920 and has done more evening school work than any other teacher in Minnesota and probably also more part-time work.—Louis M. Sasman.

factory. Then there is the plan of conducting such schools in outlying districts, where there are seven or more pupils. "If they can't come to you, then carry the message of practical agriculture to them" should be our slogan.

The program of work, of course, will vary with the length of term, the number of periods, and the community needs. In a typical part-time school it might be the following:

- First year
1. Dairy production and readjustment problems
 2. English
 3. Farm shop
 4. Farm arithmetic and accounting
 5. Junior business training
 6. Basketball

- Second year
1. Swine production and readjustment problems
 2. Shop
 3. Related science
 4. English
 5. Basketball
 6. Soils and fertility problems

- Third year
1. Poultry production and readjustment problems
 2. Marketing farm crops, and readjustment problems
 3. General science
 4. English
 5. Basketball

In a one-night-a-week school the following program might be used:

1. Dairy production and readjustment problems
2. Farm arithmetic
3. Spelling words pertaining to agriculture.

A part-time school should be at least two years of two or three months each, and if there are enough teachers, it should be three years in length. Where the home economics department conducts a part-time school, a special teacher can be employed. The shop man will teach the shop courses in addition to his regular load, the special teacher for home economics can take the related subjects for agriculture and home economics, while the teacher of agriculture will arrange his schedule so that he can take the agriculture. This plan worked out very satisfactorily with us last year.

After the part-time term is over, what then? As with the all-day groups, our contacts with the pupils must continue. If the proper approach to farm practice work is made and the purpose for which the school is held is maintained, farm practice work will carry over. However, something definite must be expected, such as herd improvement, growing certified grains and seeds, conducting commercial fertilizer tests, etc.

Greater emphasis should be placed on part-time schools, for most schools do not have a well-balanced three-point program. The all-day and evening schools are progressing steadily, but figures show that part-time schools are still far below the goal set.



Summary of Measurement Studies in Agricultural Education

H. M. HAMLIN, Iowa State College

(Continued from November)

Influence of vocational agriculture on choice of farming as an occupation. Myers compared returns from 271 rural high schools in New York covering 2,350 graduates who had not received instruction in vocational agriculture with reports on 910 ex-students who had studied vocational agriculture in 32 other New York high schools.³⁷ He found that only 3.6 per cent of the graduates of schools without vocational agriculture were engaged in farming, while 45.2 per cent of the vocational graduates were on farms. He found in ten Pennsylvania communities where vocational agriculture was taught that only 3 academic graduates of the local high schools were engaged in farming, while 225 ex-students in vocational agriculture were on farms.³⁸

Kay compared the occupations followed by 957 vocational and 333 non-vocational students in Virginia rural high schools, confining his study to those who had left school between 1917 and 1925.³⁹ The non-vocational group was selected from schools not offering vocational agriculture. The two groups were distributed as follows:

1. Ex-agricultural students
 - 43.8 per cent farming
 - 13.9 per cent in allied occupations
 - 42.3 per cent in non-agricultural occupations
2. Non-vocational students
 - 24.6 per cent farming
 - 3.9 per cent in allied occupations
 - 71.5 per cent in non-agricultural occupations

One hundred eighteen of the 133 former students in agriculture who were classified in "allied occupations" were attending colleges of agriculture. Only 7.3 per cent of all vocationally trained persons were in attendance in non-agricultural colleges, compared with 31.2 per cent of the persons without vocational training.

Kay found also that the percentage of vocational students engaged in agricultural occupations increased slightly with increase in the number of years of instruction in vocational agriculture which they had received. Of the 350 with one year of instruction, 52.6 per cent were in agricultural occupations. Fifty-seven per cent of the 233 with two years of instruction, 64.7 per cent of the 139 with three years of instruction, and 61.7 per cent of the 235 with four years of instruction were in agricultural occupations.

Lathrop reports, on the basis of a nation-wide study, that the percentage of persons with two or more years of instruction in vocational agriculture re-

maining in farming is higher than the percentage of persons receiving less than two years of instruction.⁴⁰ The differences are slight as the following statement shows:

	Number of students	Percentage farming
1-year students	2,378	54.7
2-year students	2,693	38.7
3-year students	1,251	60.7
4-year students	1,478	59.9

Smothers found that 74.7 per cent of the graduates of the Newton, Iowa, high school, 1920 to 1929, who were engaged in 1930 in agricultural occupations, had taken vocational agriculture while in school.⁴¹

Bowen, in a study of the high school graduates of Winnebago County, Iowa, found the lowest percentage of farm boys entering farming in the one school in the county having instruction in vocational agriculture.⁴²

Bates decided, after studying the seniors in 65 Iowa schools having vocational agriculture and in 48 schools not having vocational agriculture, that:

1. Vocational agriculture apparently does not influence the percentage of pupils who attend and complete high school.
2. Vocational agriculture does not influence the occupational attitudes of pupils who take less than two semesters of work in it.
3. Vocational agriculture does not affect the number of pupils choosing farming as a life work.⁴³

These studies do not establish the influence of agriculture in bringing about the differences observed. In fact, there is no technique available for making such a determination. The procedure in deciding the effects of vocational agriculture instruction on the choice of farming careers is particularly complicated by the fact that only persons intending to farm are admitted to classes in vocational agriculture. Whether the relatively high percentages of vocational graduates engaged in farming trace to the instruction they have received or to their initial interests before receiving instruction is by no means clear.

Entrance into farming occupations of village and city boys receiving instruction in vocational agriculture.—One point has been rather effectively settled through research for the period from 1917 up to the beginning of the depression, that is, that few boys who are not farm residents at the time of taking instruction in vocational agriculture enter or continue in farming. Whether the same situation in this respect will continue during a period when there

is general migration from city to country remains to be discovered.

The first study of this type to be reported was that of Gabriel, who secured his information in four New York communities.⁴⁴ He found that over one-third of those who had studied agriculture in high school were village boys, yet of this number only one in twenty had anything to do with agriculture in 1920, and not one of the entire group was following the work for which he had been directly prepared. In contrast, 49 per cent of the farm boys were farming, and 59 per cent were in some agricultural occupation. Boys who had received instruction during the period from 1912 to 1920 were included in the study.

Another good example of this type of study is that completed in 1929 by the Department of Education of the Kansas State Agricultural College.⁴⁵ The investigators studied 2,308 country boys and 631 town boys, who had received instruction in vocational agriculture. Sixty-three per cent of the farm boys and 9.6 per cent of the town boys were engaged in farming. Nine per cent of the town boys and 4 per cent of the farm boys were in occupations related to farming.

A survey in 1932 of South Dakota boys who had studied vocational agriculture sometime during the period from 1920 to 1930 showed that of 1,164 farm boys, 1,001 or 86.25 per cent were farming, while 3 per cent more were in related work. Only 2 village boys were farming, while 60 others were engaged in related work, only 14.8 per

37. Charles Everett Myers. Effectiveness of vocational education in agriculture. P. 32-33. Bulletin 82, Agricultural Series No. 13, Federal Board for Vocational Education, 1923. See also article by Myers in Vocational Educational Magazine, 2:1104-04, December, 1924.

38. Ibid, p. 34.

39. Ashby W. Kay. Occupational selections of students of vocational agriculture. Master's thesis, Virginia Polytechnic Institute, 1926. 28 pp.

40. F. W. Lathrop. Effectiveness of Vocational Education in Agriculture, p. 12-13. Bulletin 82, Agricultural Series No. 13, Federal Board for Vocational Education, 1933.

41. Homer I. Smothers and H. M. Hamlin. Occupational careers of high school graduates. School Review, 40:368. April, 1932.

42. Earl T. Bowen. A survey of the vocational distribution of graduates from Winnebago County, Iowa, high schools. Master's thesis, Iowa State College, 1929.

43. Carl E. Bates. The influence of vocational agriculture on the occupational attitudes of pupils. Master's thesis, University of Chicago, 1927. vi + 71 pp.

44. Harry S. Gabriel. A study of the extent to which the knowledge and skill acquired in secondary vocational agriculture function. Master's thesis, Cornell University, 1920. 109 pp.

45. Few town students farm. Agricultural Education, 1: No. 4:14. April, 1929.

cent of the 418 village boys being engaged in work related to agriculture.⁴⁶

2. Farming Careers

The most complete set of records regarding the farming careers of vocational agriculture graduates is probably that of the Massachusetts State Department of Education. For more than 20 years, data have been kept regarding the project programs and the post-school achievements of all Massachusetts boys enrolled in vocational agriculture. The possibilities for the use of such data in research are exemplified in an article by R. W. Stimson in *Agricultural Education* for December, 1929.⁴⁷ Mr. Stimson concludes that it is possible, through instruction in vocational agriculture, to place young men as far along in the mastery of standard farm practices and in managerial ability at the age of 28 as the farmer without such educational aid at the age of 45.

Newman has contributed a technique for comparing the farming efficiency of vocationally-trained persons with that of persons without such training.⁴⁸ Using the procedure with a limited number of cases (101 vocationally trained farmers and 52 farmers without vocational training), he has reached the following conclusions:

1. Vocationally trained farmers realized averaged labor incomes greater by 163 per cent than the labor incomes for the untrained group.
2. In six out of nine farming enterprises the vocationally trained group secured larger yields. The advantages of the untrained group in the other three enterprises were not significant.
3. Vocationally trained graduates showed a better balance in their farming business, as indicated by a better distribution of income from various sources and better adjustment of the expenses of farm operation.
4. The vocationally trained group participated to a greater extent in co-operative buying and selling, made greater use of approved sources of agricultural information, and were more active in farmers' organizations.

The findings of W. A. Smith in Indiana have been similar, based on rather complete data regarding the farming operations of 30 former students in vocational agriculture, 65 former students who had not received instruction in vocational agriculture, and 25 "average farmers."⁴⁹

The findings in this point are more meager than would be desirable, but they point, in general, to considerable superiority in farming on the part of persons vocationally trained.

3. College Careers

Extent of college attendance and types of colleges attended.—The studies of occupational distribution, already reviewed, contain much evidence regarding the extent to which persons with vocational agriculture training attend college and the nature of the colleges attended. These data should not be compared directly, in most cases, with college attendance data for high school graduates generally, since many of the ex-agriculture students included

in these studies had not completed high school courses.

It was seen that the range in the percentages of graduates attending agricultural colleges was from 4.1 per cent to 9 per cent in the six studies reporting on this point. The range in percentages of attendance at colleges other than agricultural colleges was from 6.7 per cent to 16.4 per cent. The highest percentage of college attendance was reported by Buckhardt for Illinois, where almost one-fourth of the boys with one or more years of vocational instruction had gone to college.

Magill has studied particularly the effect of high school vocational agriculture on agricultural enrollment in Virginia.⁵⁰ College enrollments in agriculture and in curricula other than agriculture were determined for each session from 1912 to 1927 and the number of male graduates each year from the high schools of the state was also determined. Analysis of these data yielded the following conclusions:

1. The different classes of high schools in Virginia contributed graduates to the freshman class at Virginia Polytechnic Institute (all curricula) as follows:
 - City high schools—1 out of every 5 male graduates.
 - Town high schools—1 out of every 7 male graduates.
 - Rural high schools—1 out of every 9 male graduates.
 - Agricultural high schools—1 out of every 5 male graduates.
2. The different classes of high schools contributed to the agricultural enrollment at Virginia Polytechnic Institute as follows:
 - City high schools—1 out of every 240 male graduates.
 - Town high schools—1 out of every 297 male graduates.
 - Rural high schools—1 out of every 122 male graduates.
 - Agricultural high schools—1 out of every 19 male graduates.
3. In the 1925-26 freshman class in the school of agriculture, 72 per cent came from agricultural high schools, practically all of whom had taken vocational agriculture. Were it not for the agricultural high schools, the agricultural enrollment at Virginia Polytechnic Institute would be so small that the school of agriculture could not continue with its present program of specialized curricula.
4. The more high school agriculture a student had taken, the more likely he was to select some curriculum in the school of agriculture.

College achievements.—Several important studies have been made of the records in college of vocational graduates in comparison with those of other types of students.

Bradford has compared 250 male students entering the University of Nebraska with credits in vocational agriculture with 250 other male students who did not take vocational agriculture in the high school.⁵¹ The groups were paired as to high school grades and intelligence quotients. Twenty-nine per cent of the vocational agriculture group and 25 per cent of the other group were graduated. The average grade in all subjects pursued by members of the vo-

cal group was 78.1; the average grade for the check group was 76.8. Vocational agriculture graduates excelled by about one per cent the average grade in agricultural subjects of non-vocational graduates. They did work of approximately the same average quality in English, mathematics, economics, and natural science. Vocational graduates took a larger part than the others in college activities.

Maddox and Dickinson have made a similar study at the University of Missouri.⁵² One hundred fifteen boys with training in vocational agriculture were checked with 115 without such training, selected at random. It was found that the average high school grade for the vocational agriculture boys had been 2.51, compared with 2.25 for the check group. The vocational group had earned high school grades as high as or higher than the check group in each of the subject-matter fields, such as English, language, natural science, social science, mathematics, etc. The average college grade was 2.0 for the vocational group, compared with 1.8 for the check group. The vocational group excelled in each of the three groups of college subjects studied. In technical agriculture the average grades of the two groups were, respectively, 2.34 and 2.2; in the sciences, 1.88 and 1.7; in the academic subjects, 1.7 and 1.63. The two groups were tied in number of points earned through organization and leadership activities.

Singleton has reported another study from the College of Agriculture of the University of Missouri.⁵³ All students enrolling in agriculture at the University during the five-year period, 1925 to 1930, were included, a total of 426 students. It was found that 40.1 per cent of them had presented credits in vocational agriculture. The vocational group earned an average grade of 2.25 in courses in agriculture, compared with 2.11 for the non-vocational group. A higher percentage of vocational than of non-vocational students remained in college and received degrees. Ninety-six per cent of the vocational students reporting thought that high school training in agriculture made college

Singleton has reported another study from the College of Agriculture of the University of Missouri.⁵³ All students enrolling in agriculture at the University during the five-year period, 1925 to 1930, were included, a total of 426 students. It was found that 40.1 per cent of them had presented credits in vocational agriculture. The vocational group earned an average grade of 2.25 in courses in agriculture, compared with 2.11 for the non-vocational group. A higher percentage of vocational than of non-vocational students remained in college and received degrees. Ninety-six per cent of the vocational students reporting thought that high school training in agriculture made college

46. Data from South Dakota State Supervisor.

47. R. W. Stimson. Economic significance in Massachusetts of vocational agricultural education. *Agricultural Education*, 1: No. 12:11-12. December, 1929.

48. Walter S. Newman. Effectiveness of vocational training in agriculture (Virginia). Mimeographed. State Board of Education, Richmond, 1932. 5 pp.

49. William Arthur Smith. Discovery of a method of determining results of vocational training in agriculture. Master's thesis, Cornell University, 1927. 121 + 23 pp.

50. Edmund O. Magill. The effect of vocational agriculture in high schools on enrollment in agricultural colleges. Department mimeograph No. 4, Department of Agricultural Education, Virginia Polytechnic Institute, 1926. 16 pp. reported also in *Agricultural Education*, 1: No. 4:8. April, 1929.

51. Harry E. Bradford. An analysis of achievements of certain University of Nebraska students who offered vocational agriculture as credit or entrance; compared with achievements of a similar group who offered the traditional entrance subjects. Doctor's thesis, Cornell University, 1932.

52. Lester B. Maddox and Sherman Dickinson. Vocational agriculture graduates excel. *Agricultural Education*, 1: No. 2:14-16. February, 1929.

53. Rollo E. Singleton. Effect of vocational agriculture training upon work in college. *Agricultural Education*, 3:183, 196. June, 1931.

work in agriculture easier. Forty-five per cent believed that their high school agriculture has made their college science easier. Twenty-three per cent indicated that even the academic courses were made easier as a result of their high school work in agriculture. Every person replying indicated that vocational agriculture had been a help, rather than a hindrance, in college career.

McCalley studied the college records of 246 vocational agriculture graduates at the Iowa State College and 35 vocational agriculture graduates at the University of Iowa.⁵⁴ These persons had entered college during the period from 1920 to 1928 with two or more units in vocational agriculture. It was found at Iowa State College that:

1. Fifty-eight per cent of the 85 persons choosing agricultural curricula graduated from them, while only 17 per cent of the 29 men entering engineering curricula were graduated.

2. Thirty-nine per cent completed four years of college work, which was slightly above the average for the entire student body during the period studied.

3. The intelligence ratings of the vocational graduates were slightly lower than the ratings of students in general.

4. The vocational group earned grades in all subjects approximately at the average for all college students. Their grades in the first year of college were slightly higher than the average of other first-year students.

5. Their average grades in three introductory courses in animal husbandry were higher by .85 per cent than the average grade of their fellow students in these courses.

6. They made slightly higher grades in mathematics than the average of their fellow students.

7. The percentage demoted to sub-collegiate English courses on entrance to college was about 10 per cent higher than the percentage of college students generally. (25 vs. 35 per cent.)

Only 30 per cent of the 35 persons entering the University of Iowa had been graduated. The average grade at the University of all vocational graduates studied was 1.73, compared with a University average of 1.95.

Of the graduates who expressed opinions regarding the effect of high school work in vocational agriculture on their success in college 50 thought it had helped in college, 79 thought it had not hindered them, 30 believed that the time might better have been used on some other high school subject than upon vocational agriculture.

The performance of Virginia graduates in college has been studied by Farmer.⁵⁵ Grades in college subjects were secured for 7,765 freshmen, 1925 to 1928, students in three Virginia colleges; Virginia Polytechnic Institute, University of Virginia, and the College of William and Mary. No evidence was found that college freshmen had been handicapped in college by taking vocational agriculture in the high school, regardless of the amounts of vocational agriculture taken. Other findings were as follows:

1. Ex-vocational students performed somewhat better than other students

at the Virginia Polytechnic Institute.

2. The amount of agriculture taken in high school had little relation to scholastic performance in college. There was a slight increase in scholarship for those students who had had the largest amounts of high school agriculture.

3. Ex-vocational students of agriculture made higher grades in college than students from the other rural high schools or from town high schools.

4. No significant difference was noted between the performance of ex-vocational students and other students in scholastic standing in college in history, mathematics, art, and language. The ex-vocational students performed better than others in agriculture and science. They did better in English than students from the rural and small town high schools generally, but were excelled in this respect by students from city and preparatory high schools.

5. The final ranking on scholarship in all college freshman work in all institutions was as follows:

1. Students from city high schools 73.9
2. Students from preparatory high schools 73.4
3. Students who took vocational agriculture 72.9
4. Students from town high schools 70.7
5. Students from rural, non-agricultural high schools 68.7

Peeler has completed a similar study at the North Carolina State College.⁵⁶ He found that:

1. The vocational students were superior in animal husbandry and chemistry.
2. They were slightly superior in botany, English, social sciences, education, zoology.
3. They were about equal to the other students in horticulture, poultry, and farm crops.

Another study of this type, the data from which are not available, has been conducted by Earl M. Knepp at the Kansas State College.

All of the evidence regarding college attendance is thus seen to be in substantial agreement, indicating that:

1. Vocational agriculture increases attendance at colleges of agriculture.
2. Vocational agriculture helps students in their college courses in agriculture and, at least, does not hinder them in other courses.

4. Attitudes

One study has been made which deals primarily with the attitudes of persons who have received instruction in vocational agriculture.⁵⁷ Working at Iowa State College, John has developed a test of attitude toward farming and toward participation in cooperative organizations. Fifty raters were employed in making the test. It was given to 200 college students, 106 first-year and 116 fourth-year high school students, and 168 high school graduates not in college. Using this test along with other means of collecting data, he found that:

1. Six per cent more of the persons without training in vocational agriculture had migrated from their home communities.
2. Four per cent more of the sons of farmers who had taken vocational agri-

culture were engaged in farming.

3. The high school seniors in the agricultural group rated 76 points stronger than high school freshmen in their attitude toward farming (total points 1,081). The non-agricultural seniors ranked 60 points below the freshmen in their attitude toward farming.

4. Vocational agriculture graduates rated only 22 points stronger in their attitude toward farming than non-vocational graduates engaged in farming.

5. The vocational agriculture graduates engaged in farming were less active in community organizations than the non-vocational graduates, though the difference was slight.

6. Vocational agriculture seniors ranked 131.5 points higher than freshmen in their attitude toward cooperation, while the non-vocational seniors ranked 117.6 points higher than the freshmen.

This is a fruitful field for inquiry. With the development of adequate measures of attitudes, wide-spread changes in teaching practices can be expected.

III.

MEASUREMENT OF OUTCOMES OF WORK WITH ORGANIZED CLASS GROUPS

1. Achievement Tests for High School Classes

The national agricultural tests, developed largely at the Pennsylvania State College, Dickinson's test in the field of dairying, and Lathrop's test of information regarding the oats enterprise are the leading examples of achievement testing in the field of vocational agriculture. An achievement test for general agriculture has been developed by Deibert.⁵⁸

2. Results from Supervised Practice

Baker studied the annual reports of 59 Virginia teachers for three years: 1923, 1924, and 1925.⁵⁹ The data regarding project yields and labor incomes were compared with data regarding the farmers in the counties in which the departments were located. The com-

54. Carl R. McCalley. A study of the college records of persons who have studied vocational agriculture in high school. Master's thesis, Iowa State College. 1930. 55 pp.

55. Alfred B. Farmer. The performance of Virginia secondary school graduates in college. Master's thesis, Virginia Polytechnic Institute, 1929. 69 pp. The College Performance of High School Graduates of Vocational Agriculture as Compared with Others, by Edmund C. Magill, September, 1933, a study based largely on this thesis, is published as a bulletin, by the Virginia Polytechnic Institute. It contains a bibliography of 40 articles or studies having a bearing on the subject.

56. Ralph James Peeler. A comparison of the scholarship records and intelligence scores of vocational and non-vocational students entering North Carolina State College of Agriculture and Engineering as agricultural students in 1922-25.

57. Macklin E. John. The relation of vocational agricultural training to the choice of occupations and to activity in rural organizations. Master's thesis, Iowa State College. 1932. 67 pp.

58. James L. Deibert. The validation of an objective achievement test in agriculture. Master's thesis, University of Iowa. 1927. 55 pp.

59. George F. Baker. Some of the results of instruction in vocational agriculture in Virginia and of the activities of departments in their communities. Master's thesis, Virginia Polytechnic Institute, 1926. 39 pp.

parative yields of vocational boys and farmers were as follows:

	Vocational Farm- Students	Farm- ers
Tobacco, pounds	696.4	581.6
Cotton, pounds	301.	252.
Peanuts, bushels	181.	52.
Potatoes, bushels	112.	104.
Corn, bushels	36.3	24.
Wheat, bushels	23.8	13.6
Soy bean hay, tons	2.	1.4
Sweet potatoes, bushels	114.4	106.
Soy bean seed, bushels	11.5	16.5
Tomatoes, bushels	120.	130.

Colvin in 1920 developed a score card for home projects in agriculture, 128 teachers suggesting items to be included.⁶⁰

Johnson undertook in 1930 to measure the efficiency of project work in ten Colorado schools.⁶¹ Fifteen factors were considered, and each department was scored regarding each factor.

Results from teaching thrift.—Angerer determined the bank accounts of 3,364 Missouri boys taking vocational agriculture.⁶² He found that:

1. Thirty-five per cent of the boys had checking or savings accounts, money on time deposit, or investments in stocks or bonds.

2. The greatest percentage of their money was invested outside of checking accounts.

3. A much larger percentage of the advanced students than of first-year students had bank accounts.

4. The advanced students had an average investment of \$258.54; the first-year students, \$210.67.

3. Results from Evening School Instruction

Bunyard set up a plan for measuring the outcomes of evening class instruction in dairying and applied it to five Iowa schools.⁶³ His findings are summarized as follows:

1. Dairying practices and problems on the farms of these evening school members were quite fully discovered by this procedure. Significant among them were:

- a. Only 28 per cent were feeding silage.
- b. Only 42 per cent had legume pastures.
- c. Only 42 per cent of the bulls used were dairy bulls.
- d. Eight per cent of the herds were infested with contagious abortion.
- e. Only 27 per cent of the farms had separate milk houses.
- f. Only 18 per cent of the farmers were keeping any sort of dairy records. Only 12 per cent were in cow testing associations.
- g. Only half of the farmers sold their products through cooperative organizations.

2. General needs of these evening school members were indicated by the following data regarding them:

- a. Their average number of years of schooling was 7.6.
- b. Twenty-three per cent belonged to no general farmers' organization.
- c. Seventy per cent had never attended the State Fair (though all were within 50 miles of it).
- d. Seventy-five per cent had never

attended an Iowa State College short course (nearly all were within 50 miles of the College).

e. Fourteen per cent read no farm papers.

f. The percentage of farmers attending the evening schools who did not participate in any way in the discussions ranged as high as 44 per cent in one community.

3. Changes during the first year traceable to the evening schools were discovered as follows:

a. Seventy per cent of the farmers adopted new farm practices; 53 per cent adopted two or more new practices.

4. As a result of the year's experience criteria for measuring the results of dairy evening schools were set up as follows:

- a. Participation
 - Percentage of dairy farmers reached.
 - Percentage attendance of those enrolled.
 - Percentage participating in class discussions.
 - Percentage adopting improved practices.
- b. Supervised practice
 - Percentage feeding balanced rations.
 - Percentage feeding legume hay.
 - Percentage with legume pastures.
 - Percentage of herds free from tuberculosis.
 - Percentage of herds free from contagious abortion.
 - Percentage of purebred dairy bulls.
 - Percentage of farmers keeping sales records.
 - Pounds butter-fat sold per cow.
- c. Cooperation
 - Percentage of herds in cow testing associations.
 - Percentage of farmers patrons or members of dairy cooperatives.
 - Percentage of farmers making educational contacts other than through dairy evening schools.

IV.

MISCELLANEOUS MEASUREMENT STUDIES

1. Ratings of Departments and Teachers

Greear set up and applied standards for all-day work in ten Colorado schools.⁶⁴

Colmer did a similar study in the county agricultural high schools of Mississippi.⁶⁵

DeWolf measured the general efficiency of certain Missouri departments and determined the factors making for and against efficiency.⁶⁶ The conclusions as stated in the thesis are:

1. The teacher influences the effectiveness of vocational agriculture in direct proportion to his attitude toward the work, his ability as a teacher, the amount of service he renders to the community, the spirit he has toward cooperating with related agencies, and to some degree, his experience.
2. The pupil influences the effective-

ness of vocational agriculture in close relationship to the attitude he has toward the instruction, the willingness with which he does the required work, and the types that are enrolled in the classes.

3. The community influences the success of vocational agriculture in direct proportion to its attitude toward and cooperation in the work.

4. The project work influences the effectiveness of vocational agriculture in direct proportion to the proper selection of projects, the thoroughness of project supervision, and the use made of the projects in conducting demonstrations.

5. Publicity influences the effectiveness of vocational agriculture in direct proportion to the use made of the local press and the kind and number of community meetings.

6. The most effective work, from the standpoint of the community as a whole, is best obtained where the instruction is given in a high school located in towns of not over 1,500 population.

2. Measurement of Results of Supervision

Groseclose is responsible for the leading study of the results of district supervision, based on the Virginia situation.⁶⁷

3. Comparative Accomplishments of Farm and Village Boys in High School

Working at Cornell University, White completed in 1933 an extensive study of the relative achievements of farm and village boys in high school.⁶⁸ He found close similarity in ability between the two groups but found a considerable discrepancy between percentages of each group receiving additional schooling beyond the high school. Only 39 per cent of the farm boys attended college, compared with 64.2 per cent of the village boys.

4. Studies Involving the Use of Intelligence Tests

Hinds, in an early study, compared the average intelligence quotients of students in various high school classes, including high school classes in agriculture. (Continued on page 96)

60. Carl Colvin. A score card for judging the success or failure of home projects in agriculture. Master's thesis, University of Illinois. 1920. 67 pp.

61. Elmer J. Johnson. Measuring the efficiency of project work in vocational agriculture in ten Colorado high schools. Master's thesis, Colorado Agricultural College. 1930. 62 pp.

62. C. L. Angerer. Bank account survey of 3,364 vocational agriculture boys in Missouri. Department of Vocational Education, Jefferson City, Missouri. 4 pp.

63. Claude L. Bunyard. A technique for measuring the effectiveness of agricultural evening schools. Master's thesis, Iowa State College. 1930. 99 pp.

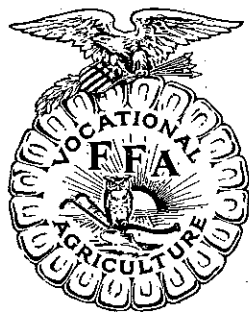
64. Harold L. Greear. Measuring the efficiency of all-day programs in vocational education in ten Colorado schools. Master's thesis, Colorado Agricultural College. 1929. 41 pp.

65. Ernest B. Colmer. The efficiency of programs in agriculture of the county agricultural high schools of Mississippi. Master's thesis, Colorado Agricultural College. 1928. 86 pp.

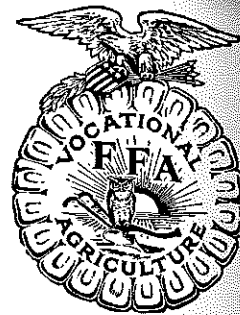
66. Oscar Hall DeWolf. Factors influencing the results of instruction in vocational agriculture in Missouri. Master's thesis, University of Missouri. 1923. 69 pp.

67. Henry C. Groseclose. Some results of district supervision in Virginia. Dept. Mimeo. No. 10, Department of Agricultural Education, Virginia Polytechnic Institute. 1928. 17 pp.

68. Thomas Arlington White. A comparison of farm and village boys as to accomplishments in high school. Doctor's thesis, Cornell University, 1933. 179 pp.



Future Farmers of America



Presentation of the California State Farmer Keys for 1933

WHEN 18 of California's outstanding vocational agriculture students filed out to a platform in front of the grandstand at the state fair to receive State Farmer degree keys, their cups of joy were already about to overflow. But when Herbert Hoover, former president, also stepped to the platform and presented the gold emblems, congratulating each boy individually on his accomplishments—well, that was beyond words.

For several years it has been the custom to award the California Farmer degree keys before the grandstand, on Governor's Day at the state fair. The awards are made as part of the state convention, held on the fair grounds in connection with this annual agricultural event. Some 40,000 persons are always in the grandstand, and enjoy the event.

The governor of the state usually makes the presentation. This year, Governor James Rolph, Jr., was in a hospital fighting pneumonia on Governor's Day. The president of the state fair board of directors, Mr. A. B. Miller, was to do the honors.

Less than an hour before the ceremony was to take place, Mr. and Mrs. Hoover quietly arrived from their Palo Alto home to enjoy the fair. Their presence on the fair grounds was made known, and they were invited to occupy the box of the president of the fair board, Mr. Miller.

The result was that when Mr. Miller came forward to present the keys, he brought his guest with him. The ceremony was quickly rearranged. The state Future Farmer president, Frank Watron, introduced Mr. Miller, who spoke briefly of the accomplishments of the 18 successful candidates. As the State Farmer initiates came forward, President Watron handed each key to Mr. Hoover, who rewarded each boy with a smile and a few commendatory words.

The 18 State Farmer candidates were selected from a membership of more than 4,000 Future Farmers of America in the state, and these 4,000 in turn from more than 6,200 vocational agriculture students. This meant that the successful applicants represented a high degree of proficiency in farming ability, with high records in scholarship, activities, capital investment, project profits, and other factors.

The 18 boys had investments of more than \$16,000—almost a thousand dollars per boy. They had capital of about \$12,500 to carry on their enterprises, and had earned, in project operation, \$8,600.

Their activities showed that a number were high school student-body presidents, athletic team captains, and leaders of judging teams. One boy had more than 70 awards in livestock and poultry shows.

The method of selection in California means a very careful scrutiny of each application. Each candidate must be certified by a regional supervisor who has visited his project and talked with the boy. Applications, including all project record books, are examined by members of the staff of the state bureau of agricultural education. As a final elimination, the executive committee of the state Future Farmer association reconsiders each application, and fixes the number to be awarded. Under the constitution, California is entitled to 80 State Farmers according to its total membership. Those actually selected, therefore, were of high rank.

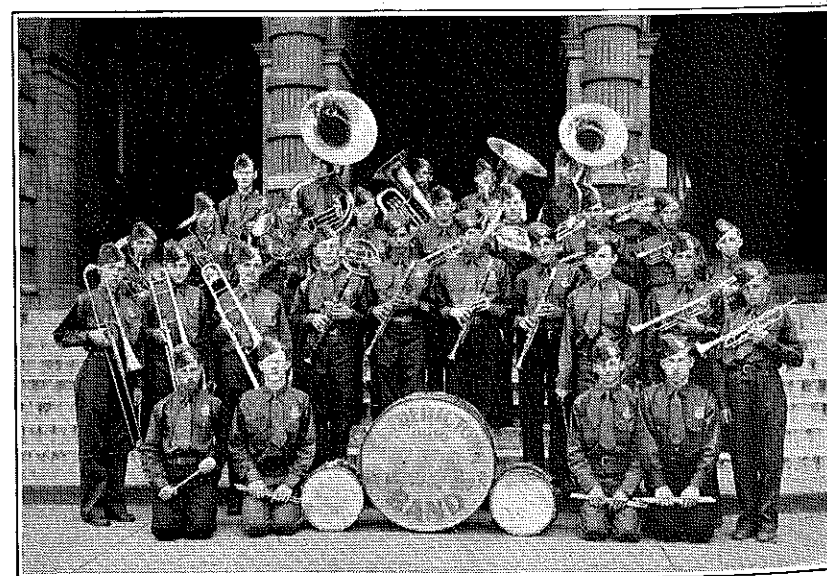
Fredericktown, Ohio, Chapter Develops Band

THE largest complete band from a single F. F. A. chapter, as far as we know, is found in Fredericktown, Ohio, where a 31-piece band is playing standard music and giving concerts at statewide F. F. A. meetings. In addition to the finished players, this chapter has 14 members who are beginners this year and who will become band members after a year of training.

Soon after the Marion County F. F. A. band made the trip to Kansas City in 1930, plans were laid to work out a complete band from the Fredericktown Chapter alone. Lack of an in-

structor and leader prevented anything being done until the following year when Mr. Homer B. Wood came to Fredericktown as Superintendent of Schools. Mr. Wood had had experience in the United States Army band during the world war and had organized and trained several high school bands. He was impressed with the possibilities of a band at Fredericktown and began work at once. He found that only two members of the chapter had had previous experience in playing band instruments. Also, that the work of securing instruments, music, arranging schedules so that all of the players could have one daily practice period was a real job. In addition, Mr. Wood was organizing a high school band at the same time. This added to the work at first, but later made it easier, since all of the chapter members could play in both bands. By 1933 the 31 boys were playing so well that a first public appearance was given at the local Farmers Institute in January. In June a complete concert was given at the State F. F. A. Convention, and a 20-minute program was broadcast over station WOSU. Another concert was given as a feature of the Ohio State Junior Fair in August.

Each year, beginners who are interested are started with one of the older boys as an individual tutor, but under the supervision of Mr. Wood. Instruments of standard make are borrowed where boys do not have the money to buy them. The American Legion post has loaned four snare drums, and local business men who have instruments they no longer use turn these over to



Fredericktown Future Farmer Band

the band. Every boy who wishes to become a member of the band has been supplied with an instrument.

The entire band is outfitted in the official F. F. A. uniform. The drum major is also the drum major of the high school band and has a suitable uniform of gold and white. He is thoroughly competent and is capable of twirling the baton with the best of high school drum majors.

The band has a very good balance of instruments with plenty of basses which are usually lacking in bands of this kind, due to the high cost of the instruments. Local business men put up the money to buy the large instruments in return for free concerts. F. F. A. boys are assigned to these instruments, and thus they are used in both bands.

Daily practice sessions are held during the noon hour, and one evening a week is used during the summer with extra sessions held previous to State Fair Week. In this way, interest is kept up during the summer, and the boys are kept in practice.

In addition to the ability to play complete concerts, the band has two specialties performed by two groups of its members. One of these is a "Cow Boy Quartet" composed of four of the boys who double with guitars and mouth organs and sing old-time and western songs. The other specialty is an instrumental quartet which plays the accompaniment while the rest of the band sings "Hail The F. F. A." and other Future Farmer songs.

Toyack Chapter, Roosevelt, Utah, Crossed the Rocky Mountains to See Century of Progress

RAYMOND N. MALOUF, State Reporter
PERHAPS the most remarkable and worth while chapter activity sponsored this year in Utah was the trip made by the Toyack Chapter of Roosevelt, to the World's Fair. With a personnel including 75 chapter members, (Continued on next page)

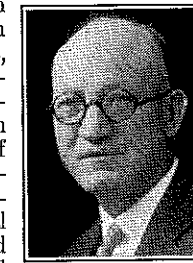


Toyack Chapter at The Century of Progress

Negro Vocational Agriculture Students Hold Sectional Meeting

H. O. SARGENT, Federal Agent

NEGRO boys from North Carolina, South Carolina, Virginia, Maryland, Delaware, and New Jersey, affiliated with the New Farmers of America, an organization of Negro students in vocational agriculture, held their fourth annual sectional meeting in Petersburg recently.



H. O. Sargent

The program of activities for the ensuing year was the principal topic for discussion at the meeting, which was presided over by Dewitt Day, first vice president of this sectional group of New Farmers of America. Emphasis was placed on the idea of getting local chapters to put over a practical program of work in the home communities. In a resolution passed at the meeting the organization agreed to support in full the Government's agricultural adjustment program.

Addresses were made at the meeting by Dr. H. O. Sargent, Agent, Federal Board for Vocational Education; Dr. W. S. Newman, State Supervisor of Agricultural Education in Virginia; and Dean James H. Johnston of the Virginia State College for Negroes. For the first time in the history of the organization awards were given in the Superior Farmer Degree. Members honored with this degree, awarded only to those who have demonstrated outstanding ability in carrying out the program of the N. F. A., were Bernard Jones and H. Smith of Virginia; Sylvester Byrd and Lucus Bacote of South Carolina; and Haywood Malloy and W. T. Johnson of North Carolina.

Other features of the program of the sectional meeting were the annual judging contest and the public speaking contest. The North Carolina team won first

place, South Carolina second place, and New Jersey third place in the judging contest. William Starks from Elloree, South Carolina, captured first place in the public speaking contest.

Officers elected for next year are: President, Lucus Bacote, Heartsville, South Carolina; first vice president, Bernard B. Jones, Waverly, Virginia; second vice president, Elbert Pittford, Spring Hope, North Carolina; third vice president, William Walton, Bordentown, New Jersey; fourth vice president, Edward Frozell, Upper Marlboro, Maryland; secretary, E. Dickson, Bordentown, New Jersey; executive secretary and treasurer, S. B. Simmons, Supervisor of Vocational Education for Negroes in North Carolina; sectional adviser, J. R. Thomas, Teacher Trainer, Virginia State College for Negroes.

The 1934 contest and meeting will convene in Upper Marlboro, Maryland.

The New Farmers of America organization is similar in its aims and activities to the organization of white students of vocational agriculture, the Future Farmers of America.

The New Farmers of America organization, which began in Virginia, was first known as the New Farmers of Virginia. Gradually, however, the organization spread to other states which have separate schools for negroes. Three years ago representatives of the New Farmers from North Carolina, South Carolina, Virginia, and Maryland met in Washington, D. C., and formed a sectional organization. New Farmers in Texas, Arkansas, Louisiana, Mississippi, and Oklahoma have joined in a sectional organization also, and plans are already under way to organize the New Farmers of America on a national basis.

Among the purposes of the New Farmers of America, as outlined in its constitution and by-laws, are: To create more interest in the intelligent choice of farming; to encourage cooperative effort among students of vocational agriculture; to develop rural leadership; to promote thrift; and to advance vocational education in colored public schools in the states providing for such instruction.

The organization is divided into local chapters set up in schools providing organized instruction in agriculture, and state associations. Active memberships are of four grades, based on achievement: Farm Hand, Improved Farmer, Modern Farmer, and Superior Farmer. And any one not familiar with the achievements necessary to attain these various grades will find them interesting reading. For example, to attain to the status of a Superior Farmer, a New Farmer must hold the degree of Modern Farmer, with all that it implies of scholastic, leadership, cooperative, and similar achievement; must be engaged in a farming occupation or have definite plans for becoming a farmer or a teacher of vocational agriculture; must possess ability to farm, as demonstrated by ability to conduct an outstanding program

of supervised practice work throughout his vocational training period; must have earned and deposited in a bank or productively invested at least \$300; must possess demonstrated ability to work with others, through participation in some agricultural cooperative enterprise or movement; and must be recommended by the Regional Board of Trustees and receive the majority vote of the delegates present at a sectional convention of New Farmers of America. A sizeable contract!

But the very fact that its specifications have been fulfilled by a number of New Farmers is proof that they are made of stern and sturdy material, and that through their membership in the New Farmer organization they are receiving a training which will be invaluable to them in the future.

Toyack Chater Sees Century of Progress

(Continued from page 95)

2 advisers, 1 full-blooded Ute Indian Honorary Chief, 3 truck drivers and their partners, 3 members of the local board of education, 1 trained nurse, and 1 cook of thirty years experience, this caravan, 89 strong, moved across the continent to see the World's Fair at Chicago. In 21 days the chapter members travelled over four thousand miles, visiting places of interest.

Under the supervision of Mr. Atwood, the chief adviser, an orderly system prevailed throughout the entire trip. Each member of the party wore a sombrero hat (five gallon) and had a definite place in one of the five sections. Each section, with its captain, was on duty one day out of four. Transportation for the group was provided in two school busses, one truck, and one touring car. Banners, extending the full length of the vehicles on both sides, displayed the identification of the Chapter TOYACK.

Detailed arrangements were all completed beforehand through the American Legion and local chapters of F. F. A., to care for the boys as they passed through the various cities. They received entertainment by local chapters and local posts at Columbus, Nebraska; Marion, Iowa; Craig, Colorado; Rawlins, Wyoming; Fremont, Nebraska; Dennison, Iowa; DeKalb, Illinois; Chicago, Illinois; Springfield, Illinois; Joliet, Illinois; Goodland, Kansas; Denver, Colorado; and Steamboat Springs, Colorado.

While in Chicago the boys were guests of Swift & Company, Armour Company, U. S. Union Stock Yards, and the Chicago American Legion. These organizations provided entertainment and sight-seeing trips in different parts of Chicago. A special mounted policeman was assigned to the Chapter in its tour of the Fair and the City.

The entire trip was made without sickness or accidents, and cost each boy \$12.50 plus \$3.00 for spending money. The arrangements incident to this trip and the events of the trip itself provided an outstanding example of chapter organization and leadership. It is truly deserving of recognition and sets a good example for other F. F. A. chapters.

Summary of Measurement Studies

(Continued from page 93)

culture.⁶⁹ He found median intelligence quotients as follows in studying 469 pupils in white and negro schools in Texas:

Agriculture	93.33
Home economics	97.00
Latin	104.06
Spanish	97.05
Mathematics	95.11

Shannon correlated the scores on intelligence tests with achievements in the various agricultural subjects.⁷⁰ He found little relationship between intelligence test scores and grades given in farm shop and in supervised practice. Correlations of intelligence scores with scores on the National Agricultural Tests yielded correlations of no significance, usually negative.

Dr. A. M. Field of the University of Minnesota has conducted extensive investigations, using intelligence tests, in the agricultural departments of Minnesota.

V.

DISCUSSIONS OF MEASUREMENT TECHNIQUE

Attention should be called to some of the theoretical discussions of measurement technique in the field of agricultural education. These will merely be listed.

Arthur E. Alton. A study of vocational education in agriculture in ten negro schools of Texas to discover the factors contributing to educational progress. Master's thesis, Cornell University. 1932. 66 pp.

W. S. Baldwin. Measuring results by changed practices. *Agricultural Education* 2:72. May, 1930.

W. N. Elam. Effectiveness of evening schools measured by financial returns. *Agricultural Education*, 4:71. November, 1931.

Ray Fife. Measuring results in evening class instruction. *Agricultural Education*, 2:90. June, 1930.

A. H. Hausrath. How shall we measure? *Agricultural Education*, 3:54. October, 1930.

George H. King. Evaluating evening class instruction. *Agricultural Education*, 2:91. June, 1930.

Reports of Committee on Measurement, North Central Regional Conference. Federal Board for Vocational Education.

Thirteenth Conference, March, 1930, pp. 9-22.

Fourteenth Conference, December, 1930, pp. 12-19.

Fifteenth Conference, April, 1932, pp. 62-81.

VI

PRESENT STATUS OF MEASUREMENT IN AGRICULTURAL EDUCATION

Progress as a result of a generation of attempts at measurement can be summarized briefly as follows:

1. No satisfactory achievement tests for classroom use have yet been developed. The only tests available measure only the temporary possession of detailed, unrelated information. They do not measure the broader and more important outcomes of instruction.

2. Rather satisfactory methods and devices for surveying community situations have been developed, and important techniques for summarizing and interpreting survey data have been devised.

3. Certain issues have been settled rather conclusively through measurement studies and need little further work, notably the extent to which town boys with training in vocational agriculture engage in farming, the success of vocational graduates in college, the occupational distribution of vocational graduates. It may be, however, that with changing conditions studies like these will have to be resumed.

4. A promising technique has been developed for studying the accomplishments in farming of vocational graduates in comparison with other persons. This should be applied on a large scale in the near future.

5. Outcomes of adult education have as yet been measured almost exclusively in terms of changed farm practices. This is a very inadequate criterion, and it may not correlate with the really important possible results from such instruction.

6. The means thus far available for rating teachers and departments are little, if any, better than none at all. In some cases, their use has clearly resulted in harm through over-emphasis of unimportant or undesirable criteria.

It is clear that an extensive job still awaits the research worker in agricultural education. It is an important one, too, for the measures of a program commonly determine the program itself.

The most promising lead which the writer can suggest to be followed is that of Dr. Ralph W. Tyler of the College of Education of Ohio State University. His two-step process seems to be the one we should follow:

1. State all of the objectives of the particular educational task whose outcomes are to be measured.

2. Devise means of measuring each of them.

This leads us into the measurement of abilities, skills, attitudes, appreciations, and other types of outcomes which we have not yet learned how to measure very well, but there seems to be no choice but to attempt measurement in all of the regions into which agricultural education should enter.

69. James H. Hinds. Does mentality influence the choice of high school subjects? *Vocational Education Magazine*, 2:178-83. November, 1923.

70. Arthur E. Shannon. Possible use of intelligence tests in the program for agricultural education in secondary schools of Virginia. Master's thesis, Virginia Polytechnic Institute. 1927. 42 pp.

Classes Carry Out Improved Farm Practices. Each class selects a number of the more important farm practices in the community and carries them out together. For example, the class in animal husbandry will take over a number of flocks of sheep. They will dock and castrate the lambs, and treat the mature sheep for round worms. The class in soils and crops germinate seed corn, prune an orchard, and mix up spray material for a summer's spraying of a particular orchard. Carol Cunningham, Elmwood.—The Fan-Mill, Illinois.