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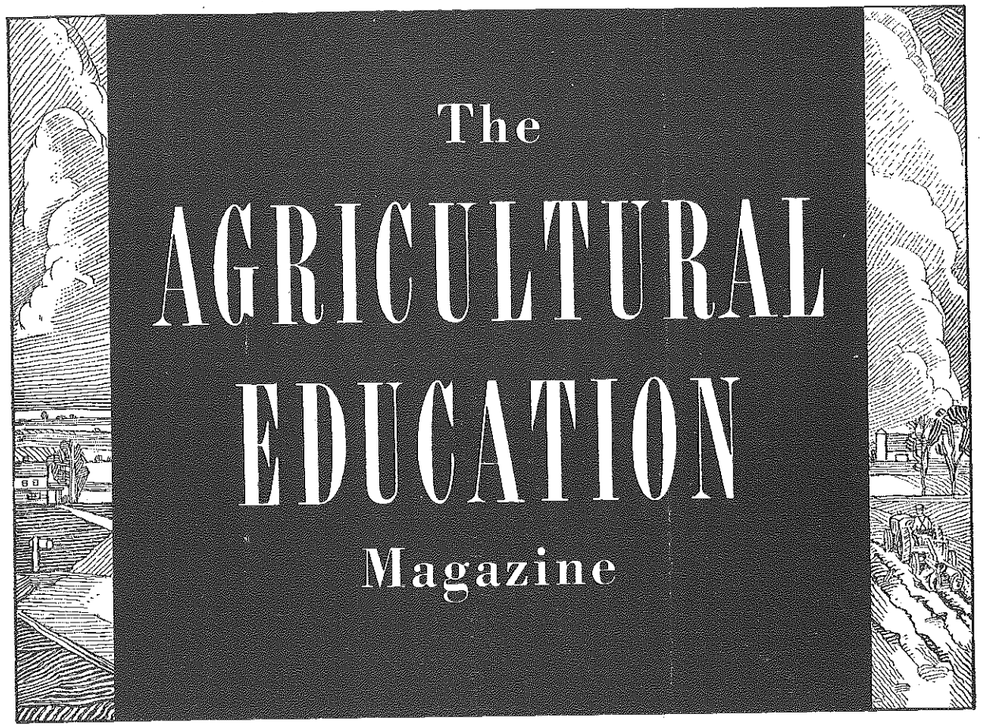

Let us never forget that the cultivation of the earth is the most important labor of man. Unstable is the future of that country which has lost its taste for agriculture. If there is one lesson in history which is unmistakable it is that national strength lies very near the soil.—Daniel Webster.

The Agricultural Education Magazine

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Editorial Comment

Bringing Good Tidings

SOMEWHERE in the Good Book it says, "Beautiful upon the mountain top are the feet of them that bring good tidings." A good teacher of vocational agriculture is one of these beautiful-footed messengers, because he has good tidings to bring to those who dwell in the country, whether upon the mountain tops, in the valleys, or upon the prairies.

Thousands of farm boys all over this country are living in unpromising circumstances, with little or no hope or encouragement for bettering their economic or living conditions. Seldom does a big brother come to live among them, as does the teacher of vocational agriculture. Some have called the out-of-school farm youth "the forgotten boy." Farm boys, in school or out of school, where there is no department of agriculture in the community, are often floundering about in their plans for a career. The school too often has nothing to promise but an uncertain, far off, professional or business career. They do not see much connection between the old college entrance required courses, and the life they are living, or any life plans for the future they may have.

Often, too, these farm boys have parents who are opposed to further schooling than that provided by the eighth grade of the common school. There are still people who believe that the education of the fathers is sufficient for the sons. Many such unfortunate sons never have a chance to go to high school, and are chained by hard circumstances to a hard life, in which they see no opportunity, and from which they escape as soon as they can find a job in town. Some of these sons, however, may marry neighboring farm girls and settle as tenants or hired men on farms of the community. In any case, such farmers without the advantages of a modern education are handicapped in their vocational and life security.

Now to these farm youth, as well as to their parents, teachers of vocational agriculture are "bringing good tidings." What are these good tidings? In the first place, the presence of an intelligent, trained, sympathetic teacher among the farmers of a community is good tidings, and when a principal or school board announces such a personality, it is bringing good tidings to the people of that community. And what of the teacher? What good tidings may he bring? He is saying to the farm boys, "Take a new grip on life—there is a better day ahead. You can make some money. You can live a happy, successful, satisfying life on the farm. You can have a secure future in agriculture. Science is revealing new possibilities for the development of new farm products for the industries. Your farm possessions and your farm life are among the most valued things in the world. I have come to help you live farm life at its best."

The average earnings of nearly 500 farm boys in Illinois last year, studying agriculture under the direction of these modern servants of rural life, the teachers of agriculture, were about $250.00. It has frequently happened that farm boys have earned $1,000.00 during their four-year high school course in agriculture, and saved enough to carry them well thru a college course, or to engage in farming enterprises on their own. This should be encouraging news to farm boys.

Teachers of agriculture bring "good tidings" about the Future Farmers of America to farm boys. Here is an organization in which the gates are open from the humblest farm home to distinguished success. Last fall, at Kansas City, more than 5,000 farm boys from 47 states assembled in convention, judged livestock, meat, and milk; held an oratorical contest, paraded and banqueted, and were awarded various degrees, prizes, and honors. Champion teams were chosen, outstanding chapters were honored, and the Star American Farmer was awarded a prize of $500.00.

The activities, opportunities, honors, and rewards that await worthy farm boys along the way, from the local chapters in farm communities to the National Convention at Kansas City, are "good tidings" to the American farm boy, and teachers of vocational agriculture are bringing these tidings.

There are good tidings I would bring you about the future of teaching vocational agriculture. The George Deen Act is bringing increased aid to vocational education. Our work is gaining in the confidence of statesmen, educators, and farmers. The compensations, I believe, will be increased when we prove our value to the communities, and teachers will be able to stake off a piece of Uncle Sam's domain and live as country gentlemen while they serve.—Aretas W. Nolan, Illinois.

A Compliment to Teachers of Vocational Agriculture

"THEY know where they are going, have a very definite aim and follow it. This, however, is a necessary inherent part of the job. A vocation is of necessity a definite aim in itself.

"Their guidance program has been effective in a large degree. This again is inherent; without it there could be no vocational education. The guidance begins with admission to the course and functions as often as new discoveries are made concerning the boy.

"They take what they get and deliver the goods. On this score the vocational schools are especially to be commended. Except in cases where the misfits are dumped by the school department into one school, we are all bound to receive all pupils who are not subnormal and to carry them forward from where they are. Most of our schools are not too willing or too successful in meeting this responsibility. Usually the vocational school has accepted this duty and is to be highly praised for the degree of success attained."

—From an address by William R. Barry, Superintendent of Schools, Northampton, Massachusetts, delivered at the annual banquet of Massachusetts Association of Agriculture Teachers, July 25, 1938.

Why Become a Farmer?

"1. The farmer has more and better food to eat than most city people, and in times of depression he is more certain of a livelihood—if he has not mortgaged the farm.

"2. The farmer has better health than city men and lives longer—about five years longer, according to a recent study of the Metropolitan Life Insurance Company.

"3. The farmer accumulates more property—becomes a wealthier man than the average city person. This may not be true in the South. It is true in the North because of the millions of city people who have almost no property at all—except an automobile. Wealth in the cities is probably four or five times more concentrated than in the rural territory.

"4. The farmer is more likely to enjoy his work than most city people. Most city work is monotonous—tending a machine in a factory, operating a typewriter, standing behind a counter in a retail store hour after hour.

"5. The farmer is more likely to rear a family and do his part to promote the welfare of the nation and the race. The family is becoming smaller and weaker in the cities. Only two thirds enough children are now being born in our large cities to maintain their population permanently.

"The condition of living and the philosophy of life in the cities tend toward extinction. The rural philosophy of life, with its recognition of the family as the fundamental economic as well as social institution, tends toward survival. The urban philosophy of life is ephemeral; the rural philosophy of life is eternal—derived from the experience of the race down thru the ages. A civilization to be permanent must be based primarily on agriculture, or on some other culture in which the family is the economic unit."—(From address of O. E. Baker, United States Department of Agriculture).

A History of Agricultural Education

Mr. Rufus W. Stimson, Supervisor Emeritus of Massachusetts, has been appointed Research Specialist in Agricultural Education in the U. S. Office of Education. The research problem upon which Mr. Stimson is to be employed is the writing of a History of Agricultural Education of Less Than College Grade in the United States.

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

Contributions of Leading Americans to Agriculture—Louis John Taber

LYMAN E. JACKSON, Junior Dean, College of Agriculture, Ohio State University

L. E. Jackson

LOUIS JOHN Taber, Master of the National Grange, and "Master" as well in the high councils of national welfare, finds life a challenge in serving his fellowmen. What it takes to inspire and lead is found in the genial smile and warm camaraderie of this man. Louis John Taber—a compelling personality in the realm of human interests.

Born at Mount Pleasant, Ohio, September 19, 1878, the young Taber soon faced responsibilities when at the age of 14 his father's death placed the management of the home farm in his hands. From this first command the record shows the development of a high-producing herd of Jersey cattle. The farm is still Taber's. This sturdy son of English ancestry also found time to attend Olney College in building the foundation of ability and character which serves him so well.

A Juvenile Grange organized 33 years ago, to say it in one way, or in the year 1905 to say it in another, is the bench mark of Taber's Grange career. From this lowly beginning he has scaled the heights. Ten years as an officer of the Subordinate and Pomona Granges; eight years as Lecturer of the Ohio State Grange; eight years Master of the Ohio State Grange; 15 years as Master of the National Grange; these are the giant strides which have made him the spokesman of the 800,000 Grangers and the leader of 8,000 active Subordinate Granges.

By his side has been Edna A. Bailey, whom he married in 1909. Joseph Paul and Francis B. are the Taber sons. Their happy home is to be found at 970 College Avenue, Columbus, Ohio.

Thruout the years there have been innumerable calls to other services in addition to the duties Mr. Taber has had with the Grange. A condensed statement of his contributions as printed in the London *Town and Country Review* will suffice to give some estimate of an unusual record:

"Mr. Taber served on the Hoover Wheat Price Committee in 1917; on the Food Administration and Ohio Council for Defense during the entire period of the War, and was a member of President Coolidge's Agricultural Commission in 1924. He was American delegate to the International Institute of Agriculture at Rome in 1926, and served as Director of Agriculture for Ohio in 1921-22. He was also a member of the Ohio State Library Board and trustee of the Ohio Experiment Station.

"His business activities have shown the same high qualities. He helped to organize one of the first Co-operative Marketing and Selling Dairy Associations in Ohio. He is Vice-President and director of the Farmers and Traders Life Insurance Co. of Syracuse, N. Y., which greatly developed Grange Insurance; Vice-President and director of the National Grange Automobile Liability Company of Keene, N. H.; director of the New York Joint Stock Land Bank; he is a member of the Board of Directors, Farmers National Grain Corporation, and National Live Stock Marketing Association, and was a member of President Hoover's Committee in Home Building and Home Ownership, Unemployed Relief, etc.

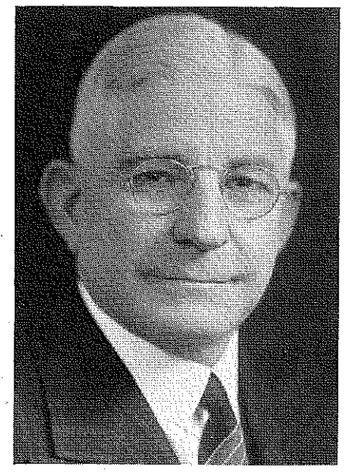
"He is a member of the committee on Wood Utilization, also the Committee on Land Use, the Committee on Recent Economic Changes, the Coarse Grains Advisory Committee, and other committees appointed by the President, Secretary of Agriculture, and others, and is a member of the National Boy Scout Committee, Rural Areas, and National 4-H Club Work Committee.

"Mr. Taber assisted in the organization of the National Agricultural Conference and was its first chairman. This group is composed of the presidents and committees of practically all the larger farm organizations in the United States. It represents over three million farmers.

"President Franklin D. Roosevelt has appointed Mr. Taber a member of a committee on economic security.

"On Febuary 6, 1929, the University of Wisconsin conferred public recognition upon Mr. Taber for "eminent services by utterance and achievement, giving farmers an example of constructive leadership thru group action," and thus called attention to the good work that Mr. Taber is doing and the manner in which he has devoted his entire life to the furtherance of the interests of his fellowmen."

TABERGRAMS



L. J. Taber

The hour has come when the American farmer and the American people must reiterate and restate that great truth that George Washington left with us almost a century and a half ago, that we in America have no interest in sharing or participating in the feuds, the hatreds, the racial, the religious, and political entanglements of the Old World.

Emperors and mad dictators can keep their troubles across the sea. Our boys are staying on American soil,

Rural organization is the cornerstone, the keystone, and the capstone of farm welfare.

Just as "we the people" must preserve America, so "we the farmers" must in the final analysis build the kind of rural life we hope to enjoy.

There will be no agricultural prosperity unless we have well-paid labor and well-employed business.

Future Farmer work lays the foundation for organization and usefulness.

Ignorance is the greatest tax load of modern life. If our institutions are to survive, we must have educated, well-equipped men and women. Vocational agriculture and Future Farmer work will make more intelligent citizens, more thoughtful voters, more patriotic Americans.

The boys and girls of today are not only the hope of America; they can, if equipped with a proper mental foundation and inbued with the ideals of patriotism and Christian character, redeem a troubled world.

Such a record is eloquent testimony of the man. Turning now to some of the recent utterances of Mr. Taber it is possible to gain insight into the nature of his thinking.

From "The Farm Boy at the Cross Roads"[1] come the following selections:

"A half century ago there were three courses open to the average farm boy. He could go west, go to the city, or stay at home and farm. Today our boys, facing the cross roads of life, find not three paths, but literally hundreds of opportunities, and frequently they stand confused and are uncertain as to what they want to do. Not only is there an unlimited number of vocations to choose from, but more serious, unemployment, the over-supply of skilled workers, the inability of many well-equipped, technical young men to secure positions, add further to the doubt and uncertainty of many of our ambitious youth.

"Two facts loom with clearness. There is no public domain or frontier awaiting newcomers; and more significant, the city is undergoing a change, the most startling in thousands of years. From the beginning of history, cities have grown, and it has seemed that there was no limit to the size or development of urban life. Today something new is happening. For the first time in the history of mankind, it is recognized that the great city is overgrown, that its population is over-expanded, and that it can never again absorb in gainful occupation all of its people. To cure this situation, the Maintenance Homestead Program is looming large to take care of possibly a million families now stranded in the great cities of the nation. Instead of a continuous stream of farm boys going to the city, there is the possibility of urban people coming back to rural life" . . .

"Literally thousands of Future Farmers, after their completion of high school work, are becoming a part of the Grange and other rural organizations for the good of themselves and their communities. To those rural youth, standing anxiously at life's crossroads, let me say that organized agriculture stands with you and rejoices that vocational education is coming to the rescue of many of our farm boys and many rural communities. It is supplying the opportunities for education and advancement that might otherwise be denied. It is training for usefulness in life. It is laying the foundation for happiness and for prosperity. It is increasing the thirst for knowledge. It is enabling the generation of farmers of tomorrow to render a greater service than those of us that are now in mid-life. Every farmer boy asks just one thing—and that is a chance to achieve success. If there be a rural community or high school where financial conditions, or lack of information, or the pinch of economy has prevented or curtailed vocational opportunities, I say to parents and to taxpayers, be careful that your economy is not extravagance. Ignorance is the greatest tax load of modern life. If our institutions are to survive, we must have educated, well-equipped men and women. Vocational Agriculture and Future Farmer work will make more intelligent citizens, more thoughtful voters, more patriotic Americans."

From "The Grange and Farm Prosperity,"[2] a recent radio address, we have some of Mr. Taber's views relating to national and international affairs.

The following quoted material is revealing:

On war and peace Mr. Taber says, "We are all sobered by the realization of the seriousness of this hour. We see before us the great paradox of a world that does not want war, yet rushing headlong apparently into conflict. We see young men who would like to respect the honor and the rights of their neighbors and friends who are turning shoulder to shoulder toward the fields of carnage. Half the world's population at this very moment lives in fear and terror. The hour has come when the American farmer and the American people must reiterate and restate that great truth that George Washington left with us almost a century and a half ago, that we in America have no interest in sharing or participating in the feuds, the hatreds, the racial, the religious and political entanglements of the Old World.

"We once became a part of a movement of this character and marched triumphantly under the slogan 'To make the world safe for democracy,' only to see that type of government for which our boys died vanish from most of the continent of Europe and much of the rest of the world.

"It is time to fight agressively, to preserve peace and our American liberties. We are in a great battle, as it were, to preserve our integrity, our welfare and our right to enjoy the blessings to which as Americans we are entitled. We congratulate our Secretary of State Cordell Hull on keeping a steady hand at the international helm and we congratulate our administration on every move that makes toward continued peace thruout the world, but at the same time, we challenge our own government and those of the world with the realization that the American people demand a practical, commonsense, yet firm and patriotic, forward movement for the welfare of our own nation.

"After speaking in every State in the Union, I know that American agriculture, and I think American business and labor as well, speaks in one voice, "Emperors and mad dictators can keep their troubles across the sea. Our boys are staying on American soil." To make this a reality, we must insist first upon an adequate defense for the preservation of our land and its institutions. Second, we must put our own house in order so that the average man and average woman in America will more fully share in the blessings of our natural resources and of our institutions. A nation's greatest defense is a prosperous and contented citizenship. Third, we must tend strictly to our own business and give neither cause nor opportunity for incidents that might lead to armed conflict. Fourth, we must utilize our natural strategic defense, namely, our geographic isolation from foreign turmoil. We must also utilize our limitless natural resources of soil, mineral, water, and forest with which the Almighty has blessed this nation, for the good of our own people. Fifth, and of final importance, the impregnable defense of any nation that has met the above requirements is the character, spirit, and honor of its own people. Let us use the forces of education and the power of organization, plus the cement of co-operation, to maintain here a land of true freedom."

As to farm welfare Mr. Taber points out as follows:

"Rural organization is the corner-

(Continued on page 238)

Exchange Professorships

AN EXCHANGE professorship in agricultural education has been announced. Dr. C. S. Anderson, Professor of Agricultural Education at Pennsylvania State College, will leave in June to exchange with Professor F. E. Armstrong, Head of the Department of Agricultural Education at the University of Hawaii. The exchange will extend over one year.

F. E. Armstrong

PROFESSOR ARMSTRONG has been at the University of Hawaii since 1926. Previous to this he was on the staff of the Universities of Idaho and Minnesota. He holds degrees from Minnesota and Clemson college. He began his teaching career in Louisiana. Professor Armstrong has been a member of the Editing-Managing Board of this magazine for the past 10 years.

Professor Anderson has been a member of the staff of the department of rural education at Pennsylvania State College since 1927. Previous to this time he served on the staffs of the University of Illinois and Colorado State College. He holds degrees from Cornell and Illinois. Dr. Anderson has written widely and has conducted numerous research studies. He is at present special editor for the section on studies and investigations for this magazine.

C. S. Anderson

Mr. Armstrong and Mr. Anderson are to be congratulated on this fine opportunity. Mr. Anderson will have a new and varied experience to enrich his work when he returns and will, in turn, be in a position to contribute greatly to the program on the islands. Mr. Armstrong will have an opportunity to renew friendships among professional coworkers in the states. He will not only have an opportunity to study developments in Pennsylvania and other states but will be in a position to make a distinct contribution thru his work.

Exchange professorships have been fairly common in other fields of higher education. As yet, we have had few in agricultural education. Because of differences among the various states in agriculture and in state programs it would seem that exchanges would have tremendous possibilities in agricultural education. May we have more of them!

—H. M. B.

A. M. FIELD

Methods

A Minnesota Plan of Individualized Learning

II. Directing Learning In An Integrated Course

THOMAS W. RAINE, Teacher Education,
University of Minnesota

Thomas W. Raine

THE Minnesota integrated course of study for agriculture is organized into teaching units and learning units. A teaching unit may be described as: *A major division of the enterprise on the basis of the relationship and the similarity of problems involved.* A learning unit may be described as: *A natural subdivision of the teaching unit on the basis of related approved practices.* In the important enterprises, the same teaching units are included in each of the four years of instruction. Learning units may occur in more than one year of instruction, but usually are so stated that they include the material to be studied during a particular year. The swine enterprise organization as it was used at Fairmont will serve as an illustration. Roman numerals denote teaching units. Capital letters denote learning units.

Swine Enterprise

Agriculture I

I. Development of the Swine Industry
II. Where are the Swine Raised?
III. The Characteristics of Swine Production
IV. Types of Swine Farms
V. Breeds of Hogs
VI. The By-products of the Swine Industry

Agriculture II

I. The Adaptability of Swine to Types of Farming
  A. How adaptable is our farm to swine production?
II. Selecting Animals for Production
  A. What breed should be raised on the home farm?
  B. Selecting individuals for production (Judging).
  C. Standards of production to expect from swine.
III. Housing Swine
  Housing and equipment:
  A. For the breeding herd in winter.
  B. For the breeding herd in summer.
  C. For the fattening herd.
IV. Feeding and Caring for Swine
  (The hog as a manufacturer of human food)
  Feeding and caring for swine:
  A. In the pre-breeding season.
  B. During the breeding season.
  C. During gestation.
  D. At farrowing time.
  Feeding and caring for:
  E. The nursing sow.
  F. The suckling pigs.
  G. The weaning pigs.
  H. The fattening sows.
  I. The fattening pigs.
  J. The breeding stock in the idle season.
V. Diseases and Parasites of Swine
  A. What diseases have we had during the last five years?
  B. What general things can we do to control them?
VI. Advertising and Improving
  A. Fitting and showing swine.
  B. An acquaintance with the swine publications.
VII. Marketing.

Agriculture III

II. Selecting Animals for Production
  A. Selecting animals on basis of past performance.
  B. Records to keep to facilitate selection for next year.
  C. What standards did our swine herd achieve last year?
    What should be done to improve them?
III. Housing Swine
  A. How should the housing plan be modified to increase our efficiency?
IV. Feeding and Caring for Swine
  A. What feeding practices can we improve to increase our efficiency?
V. Diseases and Parasites of Swine
  A. Recognizing and controlling infectious diseases.
  B. Recognizing and controlling non-infectious diseases.
  C. Recognizing and controlling swine parasites.
  D. How should our swine sanitation system be modified to increase the efficiency?
VI. Marketing Swine
  A. At what time of year should we sell our swine for most profit?
  B. What markets do we have available?
  C. Transporting market hogs.
  D. Caring for hogs in transit.
  E. What price should we pay or receive this year for breeding stock?
VII. Advertising and Improving the Herd
  A. Keeping accurate, complete records.
  B. Using the local farm and breed publications as advertising mediums.
  C. Show classes and groups.
  D. Carcass and live form comparisons at the large shows.

Agriculture IV

II. Selecting and Breeding Animals for Production
  A. Selecting the individual from a genetic standpoint (Form and function correlation).
  B. Crossbreeds *vs.* purebreds.
  C. Selecting breeding stock from records of performance kept last year.
  D. What standards of performance can we expect with our present equipment?
III. Housing Swine
  A. Only special problems which occur as the study is made.
IV. Feeding and Caring for Swine
  A. The economical use of supplements and home grown feeds.
  B. Satisfactory commercial feeds.
  C. Correlating swine and the remainder of the farm business.
V. Diseases and Parasites of Swine
  A. New State control practices which need to be brought to the attention of the student.
VI. Marketing Swine
  A. Tariffs and their effect on the swine business (World correlation).
  B. The organization and place of the meat packer in swine raising. (Includes market reporting and the mechanics of the market system.)
  C. Direct *vs.* centralized markets.
  D. Breed sales of breeding stock.
  E. What are swine prices apt to do in the future?
VII. Advertising and Improvement
  A. A long-time plan of swine production for the boy's own farm.

Students are expected to study intensively two of the three major livestock enterprises in the community: dairy, beef, and swine; the major field crop enterprises: corn, grains, forages, and as many elective enterprises as time will permit. These electives are selected by the pupil with the help of the instructor.

The integrated course of study, which includes all community enterprises, must be made for each school and is to be used by the teacher as a base from which to build the individual course of instruction to be followed by each pupil.

The individual course of study has a composite origin. The teacher and student jointly choose the appropriate teaching and learning units. These units are to supply the needed information as evidenced by the farm practice program. But the farm practice program at best is a judgment of interests and an approximation of needs. We should have some means of determining as accurately as possible just where the student is in his farming experience. We assume that a farming procedure used constantly by a family is a part of the boy's farming experience.

An approved practice survey is used to determine the level upon which a particular farm is operating. This survey allows for three types of answers, the student checking in the proper column whether the approved practice in question is a part of that home farm procedure, if it is used occasionally, or if it is never used at all. A portion of the Ag. II swine survey is shown as an example.

A Survey of the Approved Practices of Agriculture II Level Used on the Farms of the Boys in the Agriculture II Class—Fall, 1937

	Yes	Sometimes	No
1. Keep the breeding herd in winter in a well-ventilated house			
2. Provide a swinging door for pigs to use in cold weather			
3. Group portable houses together in winter, and bank with straw or other material			
4. Provide plenty of water, preferably warmed in winter			
5. Feed brood sows and gilts about three pounds of skim milk to each pound of grain fed, if available			
6. Feed mature sows alfalfa hay in a rack			
7. Feed mature sows .8 to 1 pound of concentrates daily per 100 pounds of liveweight during the first 10 to 12 weeks of the gestation period			
8. Feed brood sows and gilts without pasture a mineral mixture of 40 parts steamed bonemeal, 40 parts of air slaked lime, and 20 parts of salt			

The joint conclusion reached thru the approved practice survey and the trend of the farm practice outline will help to choose the correct teaching and learning units for the boy's individual course of study. This may be illustrated by the case of a boy who is studying the housing of swine and who finds that the hoghouse on his farm has an adequate ventilating system. Discussions with the boy indicate that he understands and appreciates its importance and significance. That boy would need to make but a brief study of ventilation as he studied the housing of swine. Suppose again that another boy was making the same study. On his home farm the hoghouse had no ventilating system. The teacher's discussion with the boy reveals that neither he nor his Dad understands the importance of good ventilation to hog health. Obviously this boy should make quite an extensive study of ventilation, even at the sacrifice of some other unit. Individual study has its greatest advantages in teaching vocational agriculture in that we can emphasize the salient necessary points.

This procedure is simply working the farm practice plan thru the individual study guide. In doing this we use an additional factor to enrich the farm practice experience. The literature approached thru the study guide will reveal many supplementary practices and improvement projects which can be done on the apprenticeship plan. These contribute to the farm practice activities. An important point, however, is that the student discovers them himself and makes his own application. A list of practices could be supplied from which the student could choose those he wishes to use in rounding out his farm practice plan. This is contrary to effective learning, as will be pointed out in connection with approved practices.

Approved Practices

Guided by his personal study outline, the student formulates approved practices to correct or adjust the home farming procedures. This suggests that an approved practice which is very essential to one farm may not be applicable to another. Such is exactly the case. As all farms are different, they must have individual applications of approved practices. It is seen from this that the student must have a definite farming set-up in mind. He should complete the learning unit thru the medium of his home farm. Each approved practice should emerge from a mental need picture mirrored from home farm needs and conditions. Let us picture again the student who is studying the housing of swine. All of the approved practices he formulates should be based directly upon the need conditions of the hoghouse at home. Approved practices with which he is familiar will have little value as a learning device. He, and also the teacher, should have a mental picture of that hoghouse and its surroundings. Undoubtedly measurements will be necessary to complete the unit, and perhaps a trip out to the farm to check up on some point. During the course of the visit, he undoubtedly will talk the plans over with Dad. He will have some definite ideas as to why a certain procedure should or should not be followed. These suggestions are used in drawing conclusions.

Each approved practice has four parts:
1. The approved practice statement
2. Related information
3. Statement and arrangement of jobs
4. A list of devices

The four parts will be discussed as units, but the reader should visualize them as parts of the complete approved practice.

The approved practice may be described as: *A procedure or activity considered essential to the successful operation of the enterprise and based upon experimental evidence or successful use by farmers.* This description allows much latitude in statement. In actual use in the classroom, there will be almost as many different ways of stating approved practices as there are students. As this statement must be formulated from the reading and thinking of the individual student, it is difficult, and perhaps not desirable, to achieve a common standard.

When formulating the approved practice the statement should be made broad enough to include all necessary related information, yet not so broad as to include other types of information which will cloud or obscure the meaning. There should be no discussion, simply a statement of what should be done with amounts or important figures included. To illustrate: "Wash the farrowing pen with hot water and lye," might be accepted as an important approved practice, but a person trying to use it who knew nothing whatever about the swine enterprise would be at a loss in trying to carry it out. What are the points that he will need to know?

1. What concentration of lye should be used?
2. How hot should the water be?
3. How might it be applied?

The reasons for using the approved practice will be stated in the related information. They have no place in the approved practice statement. Therefore, rewording might be done something like this: "Scrub the farrowing pen thoroly with a boiling lye solution, one pound of lye to 35 gallons of water." Now the approved practice tells us the essential things necessary for its completion. We see that the water must be boiling, that the pen must be scrubbed rather than just washed, and that the concentration of lye should be one pound to 35 gallons of water. If the novice did not read the related information and the jobs which are to follow he would still have a fair idea of what is expected.

The wording of the approved practice is important. Avoid such beginnings as "We should use," "It is good to use," or "The pens should be washed with a lye and water solution." Word the approved practice to make a simple definite recommendation, stating what is to be done.

Related Information

The type of material included under related information may be described as: *Statements which explain or help to make clear the meaning of the approved practice.* It may also include other ways of achieving the same results. Related information is the "why" of the completed approved practice.

The wording of the facts included in the related information is very important. Each separate thought should be itemized and numbered. Avoid all unnecessary discussion. Use as few words as will give the full meaning of the thought expressed. The statement should not be in the form of a command, but merely a quotation of fact. It should be arranged in the logical sequence necessary to round out the thought propounded in the approved practice. Students make a common mistake of going into a lengthy discussion in explaining the approved practice. This is an unnecessary waste of time as the more the writing that must be done, the more the student will be retarded in his achievement. Here again there are two extremes. One type of student will not include enough to clarify the thought of his statement, while the other will fill pages in over-amplification or overstatement of the related information.

Somewhere between the two is the desired goal. For example, in the approved practice for using lye, such points as these should be included in the related information and might be stated somewhat as follows:

1. All dirt must be removed to allow the lye water to penetrate and kill the eggs while the lye water is still hot.
2. The lye helps to soften the dirt and grease, but does not kill the eggs.
3. The lye water must be applied while it is very near to boiling so it will kill the worm eggs.
4. All parts must be soaked thoroly with boiling water, for if a few eggs are left, the roundworm cycle will start all over again.
5. Scrubbing is the only way one can be sure that the lye water reaches all crevices and cracks.

It will be noticed that some of these statements may be interpreted as jobs. There seems to be a point in organizing material in this way where it is difficult to differentiate between which material should go into jobs and which into related information. Students have difficulty in trying to determine this point. Perhaps some types of information can be classed under either heading. If it is put under the head of related information it should not be stated as a job, but as a statement of fact or recommendation. The point: "All dirt must be removed to allow the lye water to penetrate and kill the eggs while the lye water is still hot," is restated again as a job in: "Clean all litter from the pen by scraping with a hoe if necessary." Perhaps there is no harm in having a student enumerate material of this type under both heads. The two things to avoid are mixing of statements which are plainly *related information* with statements which are clearly *jobs*, and the long essay type of discussion which will not serve the purpose of drill as efficiently as clear, concise statements.

The Jobs

The job may be described as: *one of a series of steps necessary to the satisfactory completion of the approved practice.* A job should be a simple unit command covering one step only. Most approved practices have a number of jobs, ranging usually from six to ten in number. The arrangement and statement of jobs is a good criterion of the quality and accuracy of the approved practice. It is here that the student must analyze the

related information statements carefully in order to break them down into unit jobs. It is of the utmost importance that this be done, and the arrangement made in proper sequence so that anyone, by starting with job one and doing them in numerical order, will have completed the approved practice when he finishes the last job.

Jobs in the approved practice for using lye may be stated something like this:

1. Scrape all litter from the pen, with a hoe if necessary.
2. Mix in the proper amount of lye (one pound to 35 gallons of water).
3. Heat the lye water to boiling.
4. Scrub all surfaces with a stiff bristle brush.
5. Use plenty of boiling lye water.
6. Handle the boiling lye water carefully and avoid a severe burn.
7. Let the pen dry thoroly before adding bedding.

Students are most likely to slight the statement of jobs because it demands clear, concise thinking. It is this thinking and logical arrangement of steps which make unnecessary much group discussion. The main use of class discussion is to make clear obscure points and to fix important facts in the student's mind. When properly performed, the arrangement of jobs in sequence will help to clarify obscure points and will serve as an effective type of classroom drill.

This does not mean that discussion is not needed. Many problems need a group approach and discussion. It is during this arrangement of jobs that the student will come to his instructor for individual help in solving problems which are peculiar to him alone. He is asking the question at a time when his mind is seeking the answer. He is vitally interested in knowing the result because he is seeking solutions to past problem experiences. By settling the question asked at that time, the student's mind absorbs the answer completely because it is searching for that one thing only. If the questions asked by a group of students in a classroom discussion are analyzed carefully, it will be found that most of the questions are of immediate interest only to the person asking them. Other members of the class will be passively interested and, therefore, will not retain many of the facts involved. It is true that the teacher may have to answer the same question a number of times when teaching under a limited discussion method, but in most cases the answer will have an individual application to the farm of the boy asking the question. This proves to be very interesting to the pupil and to the teacher. Both are brought more closely together by this mutual understanding of the problems involved and their particular application to that boy's home. On the other hand, different students, during a class discussion, will ask the same question a number of times unless the teacher is very skillful in guiding their thought by drawing such a vivid word picture that all students will think in the same way.

Devices

A device may be described as: *any unusual appliance or contrivance which will aid in accomplishing the approved practice.* There are many approved practices gauged by this definition. There is little need to take the time to write in the names of the common tools needed to perform a certain practice. In the approved practice: "Provide stanchions when feeding skimmilk to calves," about the only tools needed are a hammer and a saw if the stanchions are to be made of wood. But in the approved practice: "Cull the pullet flock carefully before placing in winter quarters," a catching hook and a catching crate will aid the culling process greatly. Each of these is an unusual piece of equipment because many farmers do not possess them. They might well be designated as devices.

Doctor Field has often included three thoughts in his discussions.

1. "Individual study of approved practices is a process which stimulates each student to achieve up to his capacity."

Independent study has no place for the mental hitch-hiker, the fellow who thumbs his way on ideas gleaned from his classmates. It substitutes personal realistic situations for teacher-made problems. Creative thinking is the first step to mental achievement. Achievement in turn stimulates the student to greater effort. The effect is more cumulative with good than with poor students. When once students realize their creative capacity, their gratitude toward the one who helped them to develop that creativeness is eminent. Student personality growth is apparent. What remuneration would give the teacher greater satisfaction?

2. "The approved practice depends for fruition upon the activity of a reasoning and thinking mind."

A mathematics teacher depends upon the correct solution of the problem at hand to drive home the particular theorem he is teaching. Just as the mathematics student learns the principles of mathematics thru his individual effort, the agriculture student can learn the principles of agriculture thru the individual construction of approved practices. The first step is to formulate the approved practice statement to fill an apparent need in the farm practice, or probable farm practice activity. Next the approved practice is explained thru the related information and jobs, so that anyone, by reading the statements made, could perform the approved practice. Related information statements supply subsidiary material to aid in understanding the approved practice, giving data when they are needed. The student now has sufficient information to state unit jobs. These are to be arranged in sequential order. A person beginning with Job I and doing each succeeding job in order will have completed the approved practice itself when he completes the last job. The thought and reasoning activity of organizing these steps is the drill procedure which fixes the facts in the minds of the students. Again, just as the mathematical learning value lies in the student himself solving the problem, so does the learning value of the approved practice depend upon the student himself formulating the approved practices. Practices copied from another are just as valueless as a mathematics problem copied without thought.

3. "Individual study of approved farm practices sets a program of action as the stage for the learning drama."

is never really learned until it is used. This is recognized as the learning process of learning by doing. The motivating influence which must precede effective learning is present in the pointed study of personal life situations. Students consider their own problems, not those of someone else. The fixation of the thoughts organized in the approved practice statements, the related information, and the jobs are culminated in the action process of doing the approved practice. But in certain instances the action program must be delayed. To illustrate, suppose a student had resolved, from his study of the literature, that drinking cups should be added to the home dairy barn. Conditions, perhaps financial, are such that the actual installation of the cups is impossible. Has the student lost a learning tool? No, but the fruition of his research and thinking is delayed until such a time as he may participate in their installation. At such a time the approved practices and corresponding jobs can quickly be reviewed, and the thought finally absorbed.

The student is now working his farm practice outline thru the individual course of study. The course of study has emerged from the needs of the boy as he carries on his farm practice program and studies his home farm. Similarly, the conclusions of the course of study will contribute to the details of the farm practice program.

A Co-operative Program for Agriculture and Homemaking

G. S. DOWELL, Teacher,
Quail, Texas

IT SEEMS so obvious that co-operative programs of work for these vocational agriculture and homemaking departments should exist everywhere that we pass it over with little consideration. In fact, most educators would accept the fact that a co-operative program is essential, as one of the most common axioms of vocational education. Yet when we look about us, we find that not one single state co-operative program of work has been set up. In fact, when the Southern Regional Conference realized this fact a few years ago most vocational people expressed some surprise, but when Miss Josephine Pazdral, State Supervisor of Vocational Homemaking in Texas, stated to the conference in April, 1938, that only one school in the United States had ever attempted to set up, write out, put into operation, or adopt a long-time program of work for the vocational-agriculture and vocational-homemaking departments and that one was at Quail, Texas, the educational world was startled. She proceeded to present the program in detail and since that time it has been discussed thruout the United States.

It is believed that such co-operation would be incidental, but I say to you that when we depend on work of this kind being incidental, it becomes accidental, and is not done. When the experiences of teacher-trainers and supervisors from 22 states were questioned it exactly nine ways in which their departments co-operated, and these were such things as: combined evening-school classes, exchange of all-day classes, father and son banquets, combination social activities such as parties and picnics, community fairs or project shows, community canneries, and school exhibits. However, no school was reported as having all of these or even a major portion of them in any one year, or any definite plan of how, when, or where they would be used, any objective set up, or any results checked and evaluated. They were widely scattered in a more or less haphazard way in different schools and sections of the country.

FOR THE vocational people of this country to say that we have a co-operative program consisting of such things is to make a farce of the great work in which we are engaged and to acknowledge that we do not have the remotest idea of what co-operative programs should be and that we do not understand the curriculum movement. A co-operative program for two departments of a public school is not sufficient because educators have long since recognized that a public school should be a co-operative project thruout, with every part thoroly integrated with every other part. There are few, if any other, co-operative schools with every part geared to the crankshaft of the vocational-agriculture and vocational-homemaking departments and perfectly synchronized to work in and out between the blades of the vocational propeller. However, that has been done at Quail. Our long-time co-operative program for the vocational-agriculture and vocational-homemaking departments has been worked out with every jot and tittle on paper. It has been included in the regular long-time program and teaching plan, every unit has been checked and evaluated according to the best methods known to the educational world. If you care for a copy of this program, it will be sent on request. It is yet in the experimental stage and it is said that such a program would have to be totally different in order to apply to different sections of the country. However, this is usually an excuse to stall and keep from doing any real constructive thinking, for we find in Texas that the long-time program and teaching plan is made on the same fundamental principles for the citrus fruit district of the Rio Grande Valley, the Winter Garden Country, and the Llano Estacado, or State plains, which is the chief wheat belt of the state. Can you think of a section of the country where a Live at Home Program, Farm and Home Improvement, or Sharing the Family and Community Life would not be in keeping with vocational courses in agriculture and homemaking? If you happen to be one of those individualists who insist on everything being totally different in different places we still claim that our program furnishes an idea of how to proceed and is worthy of your consideration. Personally, I have no patience with those who claim that they have co-operation but cannot tell you what they do or when they do it, and cannot organize their thoughts sufficiently to prepare an outline.

Section one of the Quail Long-Time Co-operative Program provides for the vocational teachers to plan their work, later present it to the school board. In section two, certain things are set up for the administration to do and for which they are responsible. Section three contains all the things that pertain to the all-day classes of high-school students. It sets up certain objectives for each of the first-, second-, and third-year courses. It contains a rather detailed outline of what work will be done by each teacher in all-day classes that is related to the work of the other department. It provides for the exchange of classes for two units of one week each for each of the three years, together with the subjects to be taught to each class. It provides for combined classes for one week each of the three years, since we feel that certain subjects can be handled better with a combined group. It also contains what we conceive a co-operative project program to be. Of course there is nothing sacred about these particular projects. Any other kind of project more suitable to the community could be used provided it can be made to contribute to the co-operative program in mind. It lists ways and means for Future Farmer and Future Homemaking chapters to co-operate and also miscellaneous things that the departments can do for each other. Please remember that none of these are exhaustive, and any other chapter or department in another part of the country might have just as good a co-operative program with only part, or possibly none, of these particular things. However, they cannot have a co-operative program without some provision for the co-operation of the F. F. A. and F. H. T. chapters, the projects, and the regular classwork. Section four outlines rather carefully a co-operative program for part-time and evening-school classes. Section five provides for ways and means of co-operating with, and securing the co-operation of, other agriculture agencies. The particular agencies listed may not exist in every part of the country, but those that do exist may be used. Section six lists ways in which these departments co-operate with the other departments of the school and make themselves an integral part of the whole system.

May I insist that there is nothing ironclad or very important about the details of the program. In fact it is just as flexible as any long-time program and teaching plan or any individual student's long-time program which may be changed to fit the individual teachers, students, and communities. We do feel that there is some importance attached to the fact that we have a definite plan worked out, adopted, put into operation, checked, and evaluated.

EDUCATION, today, to be efficient, must be specific. Every industry constantly tests and re-tests its output to assure that it will function in the capacity for which it has been constructed. The public school, to survive, must constantly test and re-test its products in terms of actual life situations, and distribute its training program over a carefully-analyzed curriculum of subject matter based upon research which will determine the true immediate and future needs of the pupils being educated. —Calvin Coolidge.

Establishing an Exchange Film Library

FRANK T. VAUGHN, Teacher,
Cazenovia, N. Y.

THE teachers of agriculture of the Central Highland group in New York state last winter devoted one meeting to visual education, out of which has grown a program for providing the departments of the group with more visual material. Several of the schools were using film slides, and several possessed 16 mm. moving picture projectors. It was decided that a co-operative moving picture exchange library should be the first step in a united visual program, the schools to co-operate in the purchase of U. S. D. A. films, which would be exchanged between the co-operating schools. Increased demand has made it next to impossible for schools to obtain the loan of these films from the Department.

Request was made to the U. S. D. A. for special loan of about 20 pictures that appeared, from descriptions, to be usable for school purposes. These films were reviewed early in July by the interested teachers and a group of science teachers of the same schools, as some of the related science films appeared usable by both departments.

The review showed certain weaknesses in these films for school usage. Many were too general for instructional use, while others appealed more to the entertainment interests of the group. The technical agriculture films, for the most part, were not very applicable to local conditions. The related science films were excellent, and rated far above the others. The low cost of these films, as compared with prices of the commercial film laboratory, makes them an excellent buy.

A careful checking of criticisms resulted in a list of eight separate titles being chosen as worthy of purchase. These pictures, making a total of 15 reels covering both agriculture and related science, have been purchased by the respective schools, each school to retain possession of the films it buys, but agreeing to loan them freely to the other schools. Each school will thus have access to a fair library of film, and at a relatively small cost. It is expected that as other worth-while pictures are found the library will be added to by purchase.

The next step in the program is to provide what is not now available—films directly applicable to central New York agricultural situations. A committee of agriculture teachers has been appointed to plan and take a moving picture next summer on some phase of local agriculture. Several of the schools own moving picture cameras which will be used for this project. By undertaking it jointly the cost per school can be kept low.

It is agreed that in this direction lie the greatest opportunities for providing vital visual enrichment to our teaching program. It is hoped the experiment will lead to the production of a series of localized films.

Another keenly felt need that may be tackled by the group is to secure film strips with a more local application than those of the U. S. D. A.

Supervised Practice

H. H. GIBSON

Selecting Swine for Future Farmers on a Performance Basis

J. I. THOMPSON, Livestock Specialist,
Bureau of Agricultural Education, San Luis Obispo, California

Special Editor's Note: This article illustrates what can be done to make use of individual farm enterprise records on a regional and statewide basis in addition to their use by the local F. F. A. chapter. It also suggests that something might be done in various states to work out co-operative relationships between vocational agriculture departments and college specialists in farm management, livestock, or crops in the use of farm and project enterprise records.—H. H. Gibson.

WHILE swine production is not one of the leading enterprises in California, the fact remains that a large number of the boys enrolled in classes of vocational agriculture in this state carry swine as all or part of their supervised farm program. Therefore, anything that the State Bureau of Agricultural Education can do to increase the efficiency of this industry is fully justified.

Sometime ago the animal industry staff of the U. S. D. A. stated that the four factors which must receive attention in the breeding of meat animals, in addition to fertility and disease resistance, are: weight for age, proportion of body parts, quality of carcass, and efficiency of feed utilization.

Since F. F. A. boys in California feed 3,000 or more barrows for market each year, and hundreds of lambs and steers, we believe that we can do something about the first and especially the last. Perhaps later, with the help of several other people, something can be done about the other two.

All of the boys conducting livestock projects are expected to keep an accurate record of feed consumed, rate of gain, and other items. Now we are not forgetting that these boys are only of high-school age, and that many errors and omissions will occur. However, we are sure that the agriculture teachers know rather definitely which records are quite accurate and complete. We feel that these records constitute a vast fund of material that might be very useful in helping to find the answers, or at least in pointing the way toward a solution of the first and last factors listed.

Here is a part of the picture as we see it. Barley, which is the basic hog feed in California, seems to vary considerably in feed value in different years, even tho the variety is the same and even if it is grown on the same ground. There is some evidence to indicate that barley grown in some areas on particular types of soils seems to give more satisfactory feeding results almost every year than that grown in other areas, sometimes not many miles distant.

People who buy alfalfa hay from various rather distant areas have often noted that some of it had a much higher feeding value than hay that looked as good from a different region. Bluegrass in central Kentucky has a national reputation.

Not a great amount of attention has been given to finding out whether or not this variation in feeding value is big or little, nor the reasons for such variation as exists. We expect to give considerable attention to this phase of the problem as soon as we get the work with the hog summaries thoroly established.

Producers have long known that some animals were much better feeders than others, yet little has been done to measure these differences under farm conditions, and then select breeding animals accordingly.

It is true that some central western experiment station men went to Denmark a few years ago and found out that the Danes had a very efficient plan, government controlled, whereby all pigs were tested for the efficiency of their gains. They found as much as 40 percent between the better and poorer feeders and then proceeded to eliminate the less efficient ones. The result is that today no one in Denmark is permitted to keep gilts for breeding purposes unless their litter mates reach market weight on four pounds or less of grain for each pound of gain.

The Iowa and Minnesota Experiment Stations have set up projects whereby they feed identical rations to four pigs from one litter that are shipped by various breeders to the station for this test. Even tho these pigs are from the better herds of the state, they have found as much as 20 percent difference in the amount of feed required to take them from a weaning weight of about 40 lbs. to a market weight of 200 lbs. or 225 lbs. If there is this much variation among the better pigs, what must be the spread between the poorest and the best?

Such a system might be valuable in California or any other state, but it has one disadvantage. It would indicate the difference in the efficiency of the pigs under excellent conditions, but would not give any indication of the difference in the value of the feeds grown in different areas.

It seemed to us that there were some valuable facts to be measured here, if we could find a workable system, so we arranged a summary sheet for Future Farmer projects for steers, lambs, and pigs. In order to save space, we will discuss here only the one for pigs, but the others are very similar.

This sheet shows the beginning weight and age of the pigs, the final age and weight, the average daily gain, and the pounds of feed consumed. If pasture is used, the kind and number of days that it is grazed are indicated. In another column is placed the cost of the feeds, or their local market value at the time they were fed, and below that the name of the breeder of the pigs. These summary sheets are mailed to us at the California Polytechnic and we reduce the feeds to their total digestible nutrients, in order to make the totals comparable.

Now if these vary considerably—and let me repeat again, only those are used which the teacher of agriculture is quite sure are reasonably accurate—there can be three chief reasons for this variation: the boy, the feed, and the pig. I have purposely omitted the "balance" of the ration, for in most cases this is well done. Remember, we do not get just the good ones. Each teacher that sends any sends all that he has, provided they are accurate.

Oftentimes the feeds are not a factor in a given area, for in many cases the rations are mixed at the school plant so that every boy feeds the same one. That leaves the boy and the animals. Where the animals are bred alike or where the pigs are from the same litters, and the total feed, secured from the school warehouse, varies, say 10 percent, most of that must be charged to the ability of the boy as a feeder.

When all of the pigs from one breeding establishment, in the hands of several different boys, show 20 percent less feed required for 100 pounds' gain than is needed by a similar number from other herds, in the hands of various other boys, then the difference is in large part due to the pigs.

This very thing has already been recorded. In the summaries which I received in 1937 there was one group of sixty pigs, all fed the same mixture from the same warehouse, but handled by 16 different boys. There was 40 percent difference in the amount of feed required by the highest and lowest group. Some of this must be due to the difference in the ability of boys. But when they logs against that used by the lower thirty, equalizing somewhat the ability of the boys, we found a difference of 22 percent which must be credited mostly to the difference in the ability of the hogs to utilize their feed. This 22 percent represents almost 1½ pounds less feed required per pound of gain by the more efficient hogs, compared to the less efficient. And worthy of note in passing is the fact that nearly all of the thirty best feeders were from one establishment and none of the poorer ones were secured there.

If the pigs of the same breeding as these "best feeders" continue to show this same relative efficiency for the next two years, it is a safe guess that all of the pigs used in projects in that area will be secured from this same source.

We started collecting summary sheets on pigs in 1936. At first the number received was small and inaccuracies or omissions reduced the total used very considerably. Sometimes different lots are not comparable—for example, those that have received any pasture cannot be averaged with those fed in the dry lot. Of the comparable ones, the results to date of those fed in a dry lot are shown in the table.

Most of these pigs weighed about 40 pounds at the beginning and 200 pounds at the finish. They were divided into two groups, the more efficient and the less efficient. The increase each year in the pounds of feed necessary for one pound of gain is due to factors having no bearing on the items being considered in these summaries.

These three years, averaged together as three separate trials, not considering the number of pigs, show that it took 4.21 pounds of feed for each pound of gain to get 1,193 pigs from about 40 pounds to about 200 pounds. But the less efficient group, 379 head, used 5.22 pounds of feed for each pound of gain, while the more efficient 744 head required only 3.69 pounds, a difference of 29 percent.

The actual results, in terms of total digestible nutrients, have been reconverted into feed by increasing the total digestible nutrients by 20 percent in this table, because most persons are accustomed to making comparisions of this kind in terms of feed. If breeders can find out, thru a boy's project, that some of their sows are producing pigs that are 29 percent more efficient than some others, it is worth while.

Breeders are now beginning to sell litter mates to one boy and to demand that they be furnished a summary sheet similar to the one I receive. Then the breeder keeps an accurate record of the litters sold to various boys. A sow perhaps should not be discarded simply because one litter in the hands of one boy did not make a good record, but a breeder is surely on safe ground if he keeps for breeding purpose the gilts that are just as good in all other respects as any he has, and in addition to that has litter mates, that, fed by a boy, made their gains on from 22 percent to 29 percent less feed than the others.

If such summaries are employed by breeders over a period of years—as they are beginning to be used now in California—to eliminate some of the less efficient animals, they will be quite valuable. Breeders would seldom have the time or the equipment to feed litters by a Future Farmer. Boys desiring to buy breeding stock will be selecting gilts whose litter mates gave an efficient performance for them or for some other Future Farmer.

It will take considerable time to accumulate data to determine where the best feeds grow and where they are definitely below par. Once the poorer areas are defined, a whole new field will be opened up as to whether, by using different varieties of seed, or cultural methods or fertilizers, the feeding value of the crops can be improved.

Three-Year Summary of Results of Dry-Lot Feeding of Pigs

Year	Number of Pigs	Average Feed Per Lb. Gain	More Efficient	Less Efficient	Percent Difference
1936	122	3.97 lbs.	3.42 lbs.	4.67 lbs.	27
1937	221	4.31 lbs.	3.74 lbs.	4.90 lbs.	24
1938	710	4.37 lbs.	3.91 lbs.	6.10 lbs.	36

Establish a Unity of Purpose

H. PAUL SWEANY, Teacher Education,
Lafayette, Indiana

IN CONFERRING with parents of vocational agriculture pupils while in the process of securing data for a master's thesis, I have become impressed by the small amount of information relative to vocational agriculture and supervised practice that parents have. It is hard to conceive of a program carried to a satisfactory completion without the parents, who are vitally concerned, appreciating the purposes and objectives of the boys' activities.

It seems that we have failed to appreciate the desirability of securing the co-operation of every parent in the development of the training of the farm boy in vocational agriculture. The parent and instructor hold a position in the vocational agriculture program that the master craftsman held in the apprentice system. Surely it is desirable to have a unity of purpose.

Every parent is a teacher of his child. If his methods of farming are different from those taught in the classroom the instructor will find it difficult to assure that the boy will follow these methods later without an opportunity to practice them at home. Every practice taught in the classroom should be carried out on the home farm if at all possible.

If we cannot subscribe to this idea then one would conclude that practices taught in the classroom are not practical for the farmers to adopt on the farm.

In order to carry out such a program, an efficient type of parent education must be organized and parent co-operation must be secured. The goal would be the joint action of parent and teacher to give the boy the best training for farming that it is possible to give. It is training alone.

In several states instructors are finding it desirable to hold meetings for parents to discuss supervised practice. The usual number of meetings held per year is one. Such a practice might be compared to a farmer who plowed his ground and then immediately planted the seed. *One* meeting is not sufficient to lay the plans for training the boy for a *lifetime* occupation. One meeting is sufficient for the teacher to tell what he is trying to do, but it is not enough to plan what both teacher and parent can do to further the training of the boy. Such can only be thought out thru a series of well-planned discussions. The instructor may have thought what is necessary for the parent to do, but he will be twice as effective if he leaves the parent to decide the same thing for himself in group discussions with the parents.

This series of meetings is not suggested to take away the desirability of visiting in the home. Supervision of the farming programs will be facilitated if the promotional work has been done in the meetings. The following list of questions is suggested for guiding the thoughts of parents at a series of meetings:

1. In what ways can the public schools help to train boys in agriculture that will supplement their home training?
2. To what extent can the home farm and the parents contribute to the vocational training of the boy in vocational agriculture?
3. What are the correct relationships of the parents and instructor to the boy in the management of his productive projects?
4. What should be the policies adopted by the parents in regard to the boy's financial management of the productive project?
5. What responsibility has the parent to the boy in helping him to become ready to make a start in farming?
6. How can this responsibility best be met to be most beneficial to the boy?

Purpose and Independence

From time to time I meet with a youth in whom I can wish for no alteration or improvement, only I am sorry to see how often his nature makes him quite ready to swim with the stream of time; and it is on this I would always insist that man in his fragile boat has the rudder placed in his hand, just that he may not be at the mercy of the waves, but follow the direction of his own insight.—Goethe.

Carman Gibbs, Paris, Missouri, and his Chester White litter of 15 pigs, weighing 3,650 pounds at 180 days, which won first prize last year in the Litter Production Contest in Missouri. Carman is a student in the department of vocational agriculture in the Paris High School.

V. G. MARTIN

Farmer Classes

J. B. McCLELLAND

Special Instructors for Adult Farmer Classes in Ohio

L. B. FIDLER*, Teacher Education, Columbus, Ohio

L. B. Fidler

FORTY-TWO special instructors worked under the direction of the regular teachers of vocational agriculture in teaching young farmer and adult farmer courses in 175 communities in Ohio this year. This is an increase of 13 men and 48 classes over the program last year in which over 3,000 adults were enrolled.

Sixty-six of the 88 counties in the state have one or more of these courses taught by special instructors. All advance arrangements for the courses, including securing enrollment, are made by the regular teacher of vocational agriculture. The special instructor teaches the class and supervises the farm practice of students during the time the course meetings are being held. Following the completion of the series of class sessions the regular teacher of vocational agriculture follows up the work of the students on their home farms thruout the year.

Subjects offered this year include 21 courses in rural electrification, 19 in farmstead beautification, 36 in dairying, 28 in farm management, 24 in tractors, 31 in farm machinery, eight in poultry, four in fruits, and six in animal feeding.

Ohio has 302 regular teachers of vocational agriculture in 350 departments. Ninety-six of these departments are "twins," i. e., one teacher serves two schools. The average enrollment per teacher in all classes during 1937–38 was 66.53 students. In 1936–37, 239 teachers, in addition to their all-day program, taught 223 part-time and evening courses. It was because of the exceedingly heavy schedule of many of our teachers, and the feeling of inability on the part of some of them to teach some types of adult courses, that the Special Instructor program was set up in 1937–38. With the addition of this special help, the regular teachers increased rather than decreased the number of part-time and evening courses which they taught themselves.

Organization of the Courses

While the actual instruction in these special courses is done by the special instructors, in all other ways the courses are organized and conducted much as the regular farmer courses. The regular teacher in a community, together with his group of students, determines the course to be taught and makes other general arrangements necessary to the conduct of the course. This done, the teacher requests the assistance of a special instructor. It is on the basis of these requests that the personnel of the staff of special instructors is selected.

Arrangements are usually made so that one special instructor can serve three or four schools which are located near each other. This group of schools is designated as "a circuit" and the special instructor gives one service period each week in each school of the circuit over a period of at least 10 weeks. A service period involves both farm visitation and service during the day, as well as regular teaching in the evening. Mechanical courses, including general farm machinery, and tractors and power, are conducted either over a period of two weeks of five consecutive meetings each week, or with two schools alternating over a period of four weeks. In the mechanical courses, much of the service is given in the actual shop periods, rather than in farm visitation, altho many farm visits are made in these courses.

The matter of motivating and assisting members of the course to elect suitable improved practices is a joint responsibility of both the regular and special instructors. The follow-up and supervision of these practices is definitely the job of the regular instructor.

Qualifications of Teachers

Men of excellent qualifications have been secured as special instructors for these classes. The following composite description of this year's group will give a fairly accurate picture of the group: the average age of the 42 men is 34 years; 30 are married; 32 hold Bachelors' degrees; two have Masters' degrees; most of them have majored in the field in which they are teaching. The rest of the group have had varying amounts of college and technical school training in their field. Twenty-four are actual farm owners or operators who find it possible to arrange to teach during the winter when farm work is not so pressing. Sixteen actually own or operate other responsible business concerns. Thirty-eight have had extensive farm experience. Practically all of the men have had rich experience in various forms of adult leadership. Ten hold official positions in the Grange, 13 in the Farm Bureau, 16 in religious organizations and 20 in other leadership activities including leaders of 4-H Clubs, Boy Scouts, and Farmers' Institutes. Four are members of local boards of education and two are past presidents of the Ohio State University Chapter of American Society of Agricultural Engineers.

In addition to past training and practical experience, the men spend from one to two weeks at the Ohio State University in an intensive training period designed to fit them for adult teaching and leadership. Part of this time is also spent in reviewing recent technical developments in the field in which they are to teach.

Altho the program has not been established long enough to demonstrate fully its points of strength and weakness, it appears to be serving a real need in the field of adult education for farmers. Many encouraging comments come from the persons enrolled in the courses. They seem especially to appreciate and respond to the rich background of experience which the special men have had. All in all, it seems increasingly evident that the program is sound and may take its place as a permanent part of our program of adult education among the farm people of Ohio.

*Professor Fidler is in charge of training special instructors of adult farmer classes for Ohio.

Our Responsibility in Teaching Agricultural Economics

REX E. RUCH, Instructor, Denison, Iowa

"FARMERS would be better off today if the government had not taken the tariff from pork imports," said a Crawford County farmer to the writer, as we sat on a wagon tongue in the barnyard discussing the agricultural situation.

Here was a farmer who misunderstood the present tariff policy. He refused to co-operate with the farm program, because he could see no need for a farm program based on controlled production. Obviously, this was his privilege, but the disheartening feature of the decision was that his conclusions were not based on a correct understanding of the facts of the situation.

Could it be that there are many farmers who do not realize the significance of the present state of affairs because of lack of economic background? Will a farm program ever be successful until the majority of farmers understand clearly the need for the same? Could it be that we have the horse ahead of the cart in the case of the farm program?

Do the rank and file of farmers understand the significance of the reciprocal trade agreement program? Are they fully aware of the disparity that exists between farm prices and prices of those manufactured goods that they must purchase? Do they understand what has been done in an attempt to correct this disparity, and what other possible solutions are being offered? Do they foresee the ultimate effects of technology in industry and agriculture? These and many other vital economic questions need to be discussed with farmers. The farmer must see and understand the economic situation as a whole, as well as its integral parts.

In this age when propaganda influences public opinion in such a forceful manner, some agencies must make available the facts of the situation. Naturally, those in search of the truth turn to the schools as one source of unprejudiced information. For this reason an enormous responsibility has been cast upon educators in the field of agricultural education. With this responsibility, agricultural educators are given the very finest opportunity to render an appreciated type of service to farmers.

The vocational agriculture program has been criticized for not placing sufficient emphasis on farm management and agricultural economics. In a report of President Roosevelt's advisory committee on education, the following criticism of vocational agriculture work was made. "The teaching in vocational education for agriculture is in general of good quality. Emphasis in the past has been too much on production techniques and too little on economic and managerial phases of the subject, but a new enriched course of study is slowly emerging."

Isn't this a challenge for teachers of vocational agriculture? Are we spending too much time on production phases of the work, when more emphasis should be placed on economic aspects of the program? The writer is inclined to believe that we have been justly criticized.

But some vocational agriculture instructors say, "In my case, I am better prepared to teach the production phases of the work. My schooling dealt largely with the management of crops and livestock. I am not qualified to teach agricultural economics to adults. Due to conflicting opinions, it is difficult to keep politics out of the discussions. It would take too much time to make preparations. After all, is the teaching of such material important?"

Who is better qualified than the vocational agriculture instructor to teach agricultural economics in the schools? Agricultural economic study materials are readily attainable. Aid is available from the Bureau of Agricultural Economics at Washington, from economics departments of colleges, from the agricultural extension services, and other sources. Other obstacles can be overcome by the capable instructor which will lead to the successful teaching of the subject.

Some may wonder what subject matter might be taught under the title of agricultural economics. Some emphasis should be placed on foreign trade policies, monetary policies, price structure and outlook, public finance, interdependence of industry and agriculture, effects of the machine age, co-operation, marketing, farm credit policies, farm tenure, and farm programs.

The writer at present is making a study of evening-school topics of an agricultural economic nature, which were offered in the adult program during the 1935–38 period in Iowa. Some Iowa instructors have very capably organized and presented agricultural economics evening schools to adult farmers.

One does not wish to imply that the teaching of agricultural economics should substitute for all of the other phases of the vocational agriculture subject matter program, but that more emphasis should be placed on it in many cases. By so doing, the vocational agriculture instructor will be rendering a greater service to his local community and to society as a whole.

Suggestions on Organizing Adult Classes

E. J. JOHNSON*, State Supervision, Denver, Colorado

EVER-CHANGING conditions, which have been extremely pronounced in recent years, make a program of adult education all the more necessary. This is especially true in the field of agriculture since it is receiving so much governmental attention and regulation. This puts most of our farm adults in a position where they WANT—NEED—CAN USE specific information to meet their many new problems. Can you imagine a better setup in which to get the interest and attention of the learner? Despite this apparent need, it takes real organized effort on the part of a teacher of vocational agriculture to secure and hold the interest of adult farmers.

Experience in Colorado indicates that the part-time group, which includes those from approximately 16 to 26 years of age, are mostly interested in studying the following things pertaining to the farm: Organization, management, financing, equipment needed, records, rentals, and land purchase.

This group is facing the serious problem of trying to locate a landing field in a rather murky atmosphere. Their problems are continuous—therefore, we should endeavor to hold them together for occasional meetings thruout the year.

The evening-school group generally includes the more mature adults above the 26-year age level. They frequently seem to be very much interested in the specific problems of an enterprise—as dairying or swine production.

To hold the above groups and serve their needs, instruction must be well organized:

(a) The instructor must know the problems and jobs of the community.

(b) The instructor must be fully informed on the subject taught.

(c) The instructor must go out among the adults and get their problems, as they will not bring them to him—except in rare instances.

(d) The instructor must know his group and work on their level.

In organizing and conducting the class, a few of the more important phases are as follows:

1. Securing administrative support and approval of the school authorities. Making arrangements for heat, light, room, and equipment.
2. Securing a class thru the following means:
   (a) Newspaper articles
   (b) All-day class
   (c) Personal letters rather than form letters
   (d) Personal calls (Best of all)
   (e) Posters
   (f) Announcements at local and nearby meetings
   (g) Civic organizations
   (h) Local displays and demonstrations
   (i) Advisory council of vocational agriculture department
3. Enrolling and organization at time of first meeting:
   (a) Elect officers or advisory council as desired.
   (b) Determine courses needed and from this decide upon jobs to be taught. (Do not cover too many enterprises as another year is coming.)
   (c) Decide upon meeting place, how often to meet, date to start, and hour of meeting.
4. Have president open meeting, who, in turn, gives it over to the leader. The leader in most cases is the teacher of vocational agriculture.
5. Instructing or teaching the group:
   (a) Work out all possible questions for the job being taught ahead of time, with sound and accurate answers to each.
   (b) Put all of the group on a common knowing level.
   (c) Stimulate discussion by having all feel at ease.
   (d) Drop in questions of a pertinent nature that may have been overlooked by the group. Do this in a guarded way so as to get group participation rather than just teacher talk.
   (e) Be technically informed where group needs aid on any question.
   (f) Secure instructors for specialized topics.
6. Summarizing, interpreting, making decisions and reaching conclusions.
   (a) Use ideas given by group to answer questions where possible.
   (b) Where ideas of group conflict too much, be sure to have results from experiment stations. Farmers usually will accept this more readily than that given from one of their fellow members in the class. It is fine to hand this out in mimeograph form to the class at the next meeting.
7. Turn the meeting back to the chairman, who will announce topic for next meeting. He will either dismiss the group or turn it over to the entertainment or the eats committee.
8. Following up and making the reports:
   (a) The instructor should carefully follow up his group by giving aid at the home farm as needed.
   (b) Keep record of all meetings in personal file.
   (c) Make necessary reports to state office.

Very often it is wise to have some member of the group contribute to the program as leader. Individuals may be assigned special topics or debates may be had. Usually there are talented persons in the group who will gladly provide entertainment. This all seems to help create interest and satisfies the desire for personal recognition.

The idea of using an advisory council may not be necessary, but it usually serves as a good advertising medium as well as a democratic means of deciding upon the program. The officers feel part of the responsibility and will give you material aid in many ways, including the recruiting of class membership. The same council, in entirety, should not be used from year to year as Americans like to hold offices. A few new members should be elected each year. Jealousy may appear in your group if the offices are not passed around. The officers should be drawn from the entire supporting area, not from one small section.

It is important to consider carefully

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Studies and Investigations

C. S. ANDERSON

Directed Practice in the School Farms of Puerto Rico

ERNESTO VAZQUEZ-TORRES, Teacher Education,
San Juan, Puerto Rico

E. Vazquez-Torres

IT WILL sound strange to most workers in the field of vocational agriculture in the mainland that every department of vocational agriculture in the Island of Puerto Rico possesses a school farm, five acres in size or larger, on which to develop the program of directed practice in agriculture.

A logical question may come immediately to the mind of many. What is the need of such a large farm in every center?

The answer is that one of the greatest handicaps encountered by most of the teachers of vocational agriculture of the island is the lack of proper land facilities for the students enrolled in vocational agriculture. This is due to the fact that, unfortunately, Puerto Rico is an agricultural country without land, inasmuch as the land is very poorly distributed.

Most of the good land, agriculturally speaking, is in the hands of a few, generally absentees, who own very large plantations of sugar cane, tobacco, and fruits. According to the 1935 census there were 52,780 farms with a total of 1,913,047 *cuerdas** of improved land. Of this total, only 827,350 *cuerdas* are classified as crop land.

Table 1 may give a fair idea as to the tenure and ownership of the Puerto Rican land.

Analyzing the agricultural situation of the island as to ownership, we will notice that 72.6 percent (38,274) of the total number of farms (52,790) are from 0 to 19 *cuerdas* and represent only 14.8 percent (282,895 *cuerdas*) of the total number of *cuerdas* (1,913,047), while six percent (335 farms) of the total number of farms possess 34.7 percent (663,458 *cuerdas*) of the total number of *cuerdas*. This shows remarkably well the very poor distribution of land. Considering the total number of farms or farm owners, 52,790, and the total population, 1,723,534, we see clearly that there are about three farm owners out of every 100 inhabitants.

Due to these facts it is not uncommon to find as many as 25 percent of the boys enrolled in vocational agriculture in a school lacking land facilities at home where they may develop their home project programs in supervised practice. Nevertheless, many of these boys do like agriculture as a vocation and possess the ability and natural inclination to get training for the work of the farm. Of the remaining 75 percent, composed of those whose fathers possess farms, many cannot afford to have more than one or two acres available for planting because of some of the following reasons:

1. The father's farm may be too small to allow a large tract to be used by the boy.
2. The farm may be all planted to lifetime crops, such as coffee, which cannot be destroyed to devote the soil to the planting of other crops.
3. The boy may lack money and other facilities with which to finance his project program.

When the program of vocational agriculture was extended to Puerto Rico on December 8, 1931, land tenure was one of the most important points considered in planning and organizing the work. Under such conditions it was practically impossible to attempt to teach vocational agriculture using the same system as in the continental schools. Theoretical teaching for boys who do not possess land on which to carry on their supervised practice would have very little or no value.

Puerto Rico students growing eggplant

Thus, it was decided to establish the vocational agriculture in the second unit rural schools, already started in an experimental way, and in every one of which a school farm was being used as a laboratory for the agricultural classes. But as soon as the program of vocational agriculture was started, the use of the school farm assumed a multiple character. It was no longer used only as a laboratory or as a test plot, but to fulfill the following purposes:

1. Raising crops adapted to the community.
2. Planting all crops and raising some kinds of animals on a purely business basis.
3. Providing vegetables, fruits, and root crops for the school lunch-rooms.
4. Using it as a profit-making enterprise for the students. (One third of the gross income from the school projects is distributed among the students for their participation in school project work.)
5. Raising funds for the local F. F. A. chapter thrift banks from the F. F. A. projects planted on the school farm and in which all Future Farmers participate.
6. Helping in the production of first class crops and animals for local exhibits and for the annual exhibit held by the Insular F. F. A. Chapter.
7. Teaching farm accounting and farm management in a more objective and practical way.
8. Serving as model farms in the community.
9. Raising hogs, poultry, and rabbits to be distributed thru conditional sale among students.

PLANTING and caring for the school farm in Puerto Rico absorbs about 50 percent of the amount of time the teacher of agriculture is supposed to devote to his all-day teaching program. But this phase of his work may be considered of very great importance inasmuch as it is on the school farm where the boys practice to the fullest our motto: "Learn to do by doing."

Because of the fact that the teacher and boys must plant the crops which are adapted to soil and climatic conditions and, because, in order to be successful, these crops must be planted in the most convenient season, they must have a thoro understanding of the agricultural situation of the community. All teachings, too, must necessarily be made on a purely seasonal and actual farm-problems basis. The known laws of learning—*exercise* and *effect*—are put into operation very objectively on these school farms in the teaching of a very large number of farm jobs.

Most of the school farms in Puerto Rico are the property of the Insular (State) or municipal (local) governments. Many of them are rented by either of these governments and some of them are even being loaned, free of charge, by some wealthy farmers.

The plantings are made following the known laws of crop rotation and in accordance with a planting plan prepared by the instructor at the beginning of the year. The most up-to-date practices are used, including the improvement of the soils thru adequate rotation and soil conservation practices.

An exact record of accounts is also very carefully kept by the instructor in an adequate farm record book prepared for this purpose. Records of the following accounts are neatly kept:

1. Money spent and money received thru the sale of agricultural products.
2. Deposits made thru monthly remittances; money withdrawn for expenses from the second unit trust fund.
3. Value of products donated to the school lunch-rooms.
4. Money distributed among students for their participation in project work.
5. Breeding services made to the school farm animals.
6. Breeding services made to animals belonging to farmers of the community.
7. Animal production, including every kind, type, and breed of animal on hand.
8. Daily record of egg production.
9. Daily record of milk production.
10. Number of seedlings raised and distributed among students and farmers.

The work on the school farms has been conducted on a purely business basis, offering a magnificent opportunity to the instructors and to the boys to show that agriculture pays when it is conducted upon a scientific basis and with farm managerial ability.

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Table 1—NUMBER AND ACREAGE OF FARMS, BY SIZE

Size of Farm in *Cuerdas*	Number of Farms	All Land in Farms (*Cuerdas*)	Percentage Distribution: No. of Farms	Percentage Distribution: All Land in Farms
All Farms	52,790	1,913,074	100	100
Under 3	1,782	3,305	3.4	0.2
3– 9	25,326	131,820	48.0	6.9
10– 19	11,166	147,770	21.2	7.7
20– 49	8,389	250,339	15.9	13.1
50– 99	3,137	211,324	5.9	11.0
100–174	1,488	189,193	2.8	9.9
175–259	656	137,662	1.2	7.2
260–499	511	178,176	1.0	9.3
500 & Over	335	663,458	0.6	34.7

SELECTED DEPARTMENTS*

Status of former all-day students who have taken one or more years of vocational agriculture and are not now in school.	Department and Year Established: Toa Alta 1931–32	Corozal-Padilla 1931–32	San Sebastian-Juncal 1931–32
1. Number who own farms or are buying farms	3	5	11
2. Number who are renting farms	3	4	6
3. Number who are farming with parents:			
a. As *partners* under a definite agreement	16	9	12
b. On a definite or indefinite allowance	13	18	6
c. Developing one or more farm enterprises from which they receive the income	14	8	16
d. Working for wages	6	0	2
4. Number who are *partners* in a farm business (not on home farm)	3	3	4
5. Number who are farm managers	1	2	2
6. Number who are working on farm for wages (not on home farm)	3	3	4
7. Number in *occupations related to farming*	1	5	2
8. Number in agricultural colleges	0	0	1
9. Number continuing their education in non-agricultural colleges and other institutions	1	2	2
10. Number in non-agricultural occupations	2	10	19
11. Number deceased	0	1	1
TOTAL	61	92	99

*From the annual report of the Insular Board for Vocational Education to the Office of Education, Department of the Interior, Washington, D. C. Island of Puerto Rico. Year ending June 30, 1938.

Determining the Need for Vocational Agriculture in a Suburban Community

JOSEPH S. McCLELLAND, Teacher,
Englewood, Colorado

IN MAKING a study of the need and advisability of establishing a department of vocational agriculture in the high school of Englewood, Colorado, a procedure was worked out which might be used in similar studies of communities of this type.

The town of Englewood adjoins the city of Denver, being to all appearances a continuation of Denver to the south. Altho Englewood is essentially urban in character, it is surrounded on three sides by agricultural territory in which no schools exist that offer vocational agriculture. The inference drawn was that the students of this area might be expected to be attracted to the urban school by a program of vocational agriculture. It was, of course, recognized that this might not be true.

The specific objectives of the study were to determine the possibilities of a training program in agriculture for this urban community surrounded by agricultural territory without schools offering vocational agriculture, and to determine the courses and equipment necessary for carrying out a program.

The following types of data were secured:

1. Occupations of boys graduated from Englewood High School.
2. Occupations of boys dropping out before graduation.
3. Number of graduates or "drop outs" employed in agriculture or closely related occupations.
4. Reactions of farm boys, businessmen, county and school officials, successful farmers, and farm boys out of school.
5. Predominating types of farming.
6. Additional cost of vocational agriculture to the school district of Englewood.

Data were obtained on these factors thru interview in as many cases as possible. Short questionnaires were used in obtaining most kinds of data and were filled out by the writer immediately following each interview.

It was found that 5.2 percent of the graduates reported on were engaged in agriculture or closely related occupations and that two percent of the "drop outs" were similarly employed. The reactions received from other types of interviews are shown in the accompanying table.

A large number of farm boys both in and out of school were found to be unfavorable toward vocational agriculture because they did not wish to become farmers themselves but wanted to get jobs in the city. A need for one all-day class in vocational agriculture was shown by the fact that there were 22 farm boys in school desiring to take this training and able to meet requirements.

As 46 percent of the adult farmers interviewed had no more than eighth-grade education, a need for adult evening classes was indicated. An insufficient need for part-time classes was shown by the small number of out-of-school boys interested in this type of training.

The feasibility of establishing a department of agriculture in the Englewood High School was shown by the following facts: the businessmen, farmers, school and county officials, and agricultural experts were all favorable and would give their support to the plan; there was room available in the school building for such a department; and its installation and maintenance would not present any additional expense to the school district.

As a result of this study, specific recommendations were made regarding the equipment needed and a course of study was set up to meet the specific needs of the community.

Reactions Regarding Agricultural Education in Englewood High School

Type of Interview	Number Interviewed	Reactions: Favorable	Reactions: Unfavorable	Reactions: Doubtful
Businessmen	17	17		
Farm boys in school	72	22	31	19
Farmers	15	11	2	2
Farm boys out of school	20	4	12	4
County and school officials	6	5	0	1

Future Farmers of America

L. R. HUMPHERYS

Future Farmers in Other Lands*

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

I BRING you greetings and best wishes from the Future Farmers of Greece, the Future Farmers of Bulgaria, and the Progressive Farmers of Albania. I have been especially appointed as ambassador of peace and good will to carry out this pleasant assignment.

In connection with my official duties as Director of Education for the Near East Foundation, I am concerned with a movement which is patterned directly after your own. It was only a few weeks ago that I came from those Near Eastern countries where this work is now well under way.

In developing your fine organization during the past 11 years, you, and others before you, have built much better than you knew; the influence of your high ideals and sound principles is much wider than you realize. A former teacher of vocational agriculture from the State of Michigan carried those ideals and principles to Albania. A New York State student of vocational agriculture who later became an agricultural instructor has climbed onward and upward in this field to become adviser in rural education to the Royal Government of Bulgaria. As a teacher in New York State, this young man organized one of the first "Future Farmer" groups in this country. As adviser in Bulgaria, he has drawn upon this early experience in developing a youth movement after your own principles. A vocational teacher from the State of New Mexico went to far-off Greece as Supervisor of Agricultural Education for Near East Foundation. After studying the farm youth problems of that country for several years, he decided that the only solution lay in an adaptation of the Future Farmers of America. He called his organization "Future Farmers of Greece." This experimental project in a restricted area of Greece has proved to be highly successful and has received nationwide approval.

SEVERAL years ago, the picturesque little country of Albania requested an agricultural school for its peasant youth. Such a school we organized—not a department of agriculture in a rural high school (for rural high schools do not exist), but a special secondary agricultural institution where the students are boarders. In a country where the rural conditions are primitive, it is especially difficult to operate an agricultural school that does not soon become too far removed from the conditions which it is supposed to represent. A school farm which will provide sufficient activity for an enrollment of 100 students is altogether out of proportion with the average 8- or 10-acre farm of the region. Machines may be more efficient, but in countries where labor is cheap and machinery expensive, such implements are quite out of place. As one means of safeguarding the aims of the school in this respect, the student body was organized into a modified form of "Future Farmers." In fact, we endeavored to call the organization by its correct name, but in a country that is primitive and backward, the word "progressive" takes on special significance. And so the boys adopted the term, "Progressive Farmers of Albania." The students were divided into "families," each family representing in number the average size of the typical Albanian home. Each family adopted a name. One called itself *Bindja* (Obedience), another assumed the name of *Pastertija* (Cleanliness), another, *Puna* (Work).

Following the patriarchal system of the country, each family has its chief who is a senior. All of the families together form a village. The name of this rural settlement is Katunde Perparimi (The Village of Progress). The family chiefs constitute a council and the council elects its village headman. The members of this community work and play and eat and sleep by families. Each family has its own small farm where the skills learned in the farms and the fields of the larger production units may be applied under more representative conditions. The Progressive Farmers of Albania assist in all activities of their school—the discipline, the cleanliness, the athletics, social activities, and even a small program of extension, organized by the members for the benefit of the farmers of that region.

From this agricultural school of 75 or 80 students, organized just eight years ago, 145 graduates have gone out. Ninty-four of them are fulfilling their ideal of becoming progressive farmers of Albania. Eleven are still studying, including one fine young man who is making an excellent record in agriculture at the University of Missouri.

The question of agricultural education in the Near East presents a difficult problem. There is nothing comparable to the rural high school where practical agricultural departments might be organized. In the country sections no educational facilities exist beyond the elementary school, and here the students are too young for vocational training. If an occasional boy has the ambition and the means to secure more education, it must be by leaving home and going to one of the larger centers. Here his training is altogether academic. Special agricultural schools, such as the one we have in Albania, are quite common outside of that country, but in most cases they are entirely ineffective. To attend, peasant boys must be completely uprooted from their rural environment and must become boarding pupils. The teaching is, with few exceptions, highly theoretical and most impractical. Those of us who have been studying this problem for several years have discovered that the best solution seems to be an adaptation of your vocational agriculture part-time and evening work carried directly to the rural centers and using a boy's own farm as his practical laboratory.

BULGARIA, for instance, has developed a system which is a compromise between a four-year vocational course and your part-time work. Vocational training in agriculture and also in homemaking is offered in what is known as the continuation school. This school can be housed in almost any building, or, if a special structure is required, it can be of the simplest type. No land is necessary and not many tools, except possibly a few for demonstration purposes. In those places where such training centers are established, farm boys are required to attend during six winter months for each of two years following the completion of the six elementary grades. Practical application of their classroom instruction is carried out by means of the home project and directed practice. There are now about 200 of such continuation school units, and a total of 10,000 pupils and graduates. These students and alumni have organized themselves into the Future Farmers of Bulgaria. They have recently taken on a paid secretary who promotes the various programs of this movement, and who keeps the members informed regarding all activities.

The Future Farmers of Greece was organized five years ago and is patterned directly after the model developed in this country. Near East Foundation maintains in 48 villages in Greek Macedonia a demonstration program dealing with all of the major factors in rural betterment—agricultural education, home welfare, sanitation, and recreation. Even in backward countries—sometimes more so in such localities—there is considerable leisure time. This becomes a particularly serious question for the boy between elementary school age and his departure four or five years later for military service. The Future Farmers of Greece was organized to meet the leisure time needs of this age-group, while providing vocational training in agriculture thru unit courses. The members have taken as their ideal the serving of their country by contributing to the upbuilding of their own community. There are 13 chapters in our demonstration area with a membership of around 400.

My time is too short to describe adequately the primitive conditions under which these boys live and work and play, or the contributions they have made to their homes, their communities, and their own lives. Old stables and tumbled down store-rooms have been converted into neat little club rooms. They have organized reading rooms in places that have never known of good books or periodicals; have developed traveling libraries using the traditional of a donkey; they have established simple playgrounds for children of the rural schools; they have repaired roads, drained swamps, and helped to beautify drab surroundings. Last year, six chapters planted over 10,000 trees in Future Farmer reforestation projects. Of course they engage in athletic contests and they promote local dramatics. These 13 chapters, with some financial assistance from our Recreational Supervisor, employ an itinerant music teacher. By this means, they have learned to play simple musical instruments and have developed local orchestras. They learn of your activities, as well as their own, thru a mimeographed monthly magazine called the Messenger. Such activities mean much more to these under-privileged peasant boys, living under primitive conditions, than you can possibly realize.

All of this work is made possible by the generosity of individuals and organizations here in America. It is one method, a very practical method, of expressing our belief in peace and international brotherhood. Now, more than ever, such expressions must be maintained. I would like to commend to you the thought of extending your hands across the sea and co-operating in a project of this kind.

*Delivered at the Eleventh Annual Convention of the Future Farmers of America held in Kansas City, Mo., October 18, 1938.

F.F.A. Exhibit at Golden Gate Exposition

THE Inter-State Junior Livestock Show was held this year April 2–8, on Treasure Island, as one of the special features of the Golden Gate Exposition at San Francisco, California. The special livestock coliseum at the exposition grounds was not too elaborate for the junior fat show. One of the finest arrays of fat livestock that was ever collected was exhibited at San Francisco by the Future Farmers from Western and Mid-Western states. Competition was keen, prices at the auction sale were good, and the boys not only had a chance to see fine beef but they received courteous treatment at the hands of the officials of the exposition. It was a really liberal education for the Future Farmers to see the marvelous exhibits on the World's Fair Grounds, observe the towering steel bridge span the Golden Gate, and witness on exhibit the thousands of inventions wrought by man.

The Future Farmer exhibitors were provided free sleeping quarters on cots in tents pitched for the occasion. They were among the few to have the privilege of sleeping each night on Treasure Island.

E. W. Stephens, manager of Union Stock Yards at South San Francisco, made a real contribution to the convenience and education of the boys during their stay.—L. R. Humpherys.

IF I can supply you with a thought you may remember it and you may not. But if I can make you think a thought for yourself, I have indeed added to your stature.—Elbert Hubbard.

A Co-operative Project with Chapter Organization

O. J. SEYMOUR, District Supervisor,
Camden, Arkansas

THE F. F. A. Chapter of Bright Star High School in Miller County, Arkansas, under the direction of W. D. Rose, Vocational Agriculture teacher of the school, has, for several years, sponsored the improvement of livestock by the use of purebred sires and scientific feeding and management. These Future Farmers can now point with pride to a definite achievement toward this goal.

The Bright Star Breeders and Feed Mill Association was recently organized and incorporated as a non-profit co-operative association. The association purchased, with funds borrowed from the Farm Security Association at a cost of approximately $1,200, a large knife-type feed mill with a power unit mounted upon a four wheel trailer, a registered Jersey bull, a registered Hereford bull, and a registered Poland China boar. The organization of this association was sponsored by the F. F. A. chapter and the men who attended an evening school conducted by Mr. Rose.

Constructing the barn

The breeding services of these purebred sires are available for the livestock owned by F. F. A. boys and approximately 100 men who belong to the association. The feed mill is being widely used by the members in making coarse home-grown feeds palatable for livestock.

The project is housed on school land adjacent to the school campus. The F. F. A. chapter, under the direction of Mr. Rose, had the entire responsibility of constructing a 32 foot by 36 foot barn for the housing of the mill and the animals. The boys cut poles for the framing, hewed the sills, and built the barn from the ground up, and did a good job of it. The $400 barn was erected at an actual cost of less than $135.

The F. F. A. boys built fences, cut bushes, and sowed tame grasses and clovers to provide suitable pastures for the animals.

The chapter will operate the project during the school year and a caretaker will look after it during the summer months.

When the government loan is paid the project will be turned over to the vocational agriculture department of the school and the F. F. A. chapter. It will be operated by the chapter as a part of a permanent livestock improvement program.

18,000 Acre Game Preserve

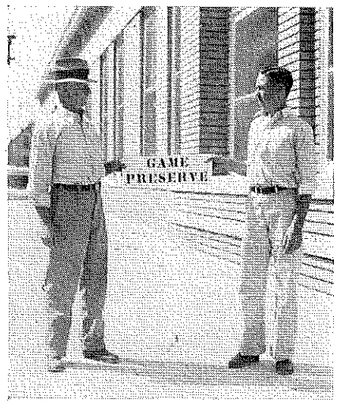
J. H. TAYLOR, Adviser,
Dublin, Texas

THE Dublin Chapter F. F. A. has under co-operative agreement 18,000 acres in the Dublin F. F. A. Game Preserve, including 158 farms that are posted and protected with 440 Game Preserve signs.

The sportsman wants more game to shoot—the farmers and Future Farmer land owners and operators want protection and regulation in the wildlife harvest. It is from this viewpoint that the Dublin F. F. A. Game Conservation Association of Future Farmers, farmers, and sportsmen has been organized in this 18,000-acre area.

Game preserve signs have been made and delivered to the co-operators by F. F. A. members at actual cost of construction. Co-operative agreements have been signed by each of the co-operators and show that they will, and are, making efforts to carry out a systematic plan of wildlife conservation.

Some of these items agreed upon are: to refrain from burning the fence rows and cover areas useful to wildlife; to put up and protect the game preserve signs; to control predatory animals and birds; to leave small cover areas and fence them off wherever practical; to make an effort to see that a sufficient seed stock is left each year; to allow no hunting without the owner's permission; and to co-operate with neighbors in the complete program.



W. L. Trice, Chapter president, presents one of the first game preserve signs issued to Mr. E. W. Harris, who has 1,450 acres in the preserve

Each F. F. A. member secured from two to ten co-operators of adjoining farms, one of which was his home farm, which help to make up the blocks in the game preserve. The F. F. A. boy delivers the signs to his co-operators, secures the co-operative agreement, and assists them in any manner he can in game conservation work. Each community represented by F. F. A. members has approximately eight such blocks in the preserve. It is the plan of the chapter to eventually have all the farms

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Louis J. Taber

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stone, the keystone, and the capstone of farm welfare. Legislation is essential. Great educational and experimental institutions bless the individual farmer and are of powerful assistance to agriculture, but just as we the people must preserve America, so we the farmers must, in the final analysis, build the kind of rural life we hope to enjoy.

"Our first great challenge is to increase the farmer's share of the nation's income. This means prosperity to agriculture, prosperity to the worker and the business man as well. The steps to bring this about, plus organization and education and teamwork with other groups, are in part as follows:

"Develop a sound production program in control of the farmers themselves.

"Engage in co-operative marketing that shortens the route between the producer and the consumer.

"Reduce production costs and increase efficiency wherever possible.

"Hold to the lowest sound level interest, freight, and taxation charges.

"This program will fail unless we add to it guaranteeing a larger share of the wealth that the farmer creates, and giving to agriculture the American market to his ability to efficiently supply the same."

Mr. Taber sees agricultural welfare as part of national welfare, for he says:

"There will be no agricultural prosperity unless we have well-paid labor and well-employed business. It is time to turn from hate and conflict. It is time to blot out doubt and uncertainty. The hour has come with confidence and hope to remember that 130 million Americans who are informed and awake can never be defeated in the fields of economics nor in the conflicts of war. We can have better times; prosperity will return; stability and security and opportunity will come. Let us unloose the capacity of America to work. Let us give more emphasis to the ability of America to consume.

"Let us challenge the business and labor leaders of America to sit down around the table with agriculture and help our own Government work out a program, adding to our own prosperity, protecting the consumer, and blessing America. When this is done, agriculture will be receiving nearer its share. There will be no prosperity just for the welfare of one group or one class. We are going forward together."

A "Master" in what he says and in what he does is Louis John Taber, and Master, as well, of that great organization, the National Grange.

1. Radio address by L. J. Taber, Columbus, Ohio, Master, The National Grange, on American Vocational Association Broadcast from Washington, D. C., January 24, 1935.
2. Radio address by L. J. Taber, Columbus, Ohio, Master of the National Grange, over stations of the National Broadcasting Co., on National Grange Hour from Washington, D. C., March 19, 1938.

OUR schools may not turn out skilled bricklayers, printers, and carpenters, but the rudiments may be well presented, and without losing sight of the fact that making a living may be one thing, and building a life another thing. —Nathan Howard Gist.

Directed Practice in Puerto Rico

(Continued from page 235)

A second question may also arise from many workers in this field. What is the use of teaching agriculture to boys not possessing farms?

The answer is that many boys expect to know how to grow crops and raise animals before attempting to rent or buy land in order to enter into the farming business. Others look forward to work as farm managers, partners, or skilled laborers with specific wages.

Still others study in order to be prepared to qualify for certain jobs or positions where some knowledge of agriculture is required. When the Puerto Rico Emergency Relief Administration was started around the year 1933, more than 25 boys who had graduated from our agricultural vocational centers were employed by the Agricultural Division of that organization. Also, when the Puerto Rico Reconstruction Administration was organized in the island, the Division of Rural Rehabilitation bought, and is still buying, many large farms to be divided into plots of 5 to 10 acres each to be sold, on a long-time basis, to many skilled laborers not possessing land. Many graduates from the agricultural vocational schools have bought farms from this division and are working as independent farmers. The above information (Table 2) shows the occupational status of the boys of three selected departments, having the following size farms:

Toa Alta-Quebrada Arenas	5 acres
Corozal-Padilla	10 acres
San Sebastián-Juncal	6 acres

*The *cuerda* is the unit of land measure in Puerto Rico. It is equivalent to .9712 acre.

F.F.A. Game Preserve

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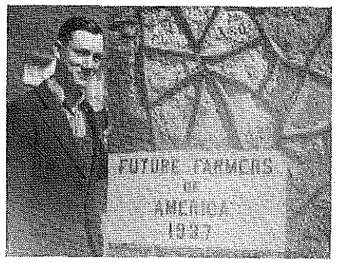
in the communities signed up and members of the association.

Wildlife counts and studies are being carried out by the Dublin F. F. A. Chapter in order that members may be better informed as to what practices and conditions help wildlife conservation.

Agencies including the Wildlife Department of A. & M. College, Texas Game Commission, and the State Game Warden, John R. Wood, are co-operating with the association in its activities.



Clifford Spivey, President, Willard, Missouri, F. F. A. Chapter, standing beside the cornerstone in the new classroom recently constructed adjoining the farm shop

Organizing Adult Classes

(Continued from page 233)

the place of holding meetings. In those schools located in rather large towns, it is often advisable to hold the classes in outlying rural schools, farm homes, Grange halls, Farmers Union halls, and the like. The same thing may also be true in smaller centers.

Where possible co-operate with the homemaking instructor and hold your adult classes at the same time. In this manner provision is made to care for the needs of both sides of the family, resulting in stimulated attendance and interest.

The need of teacher-trainee participation in the conducting of adult schools is very apparent. Teacher-trainers are realizing the importance of this and many provide opportunities for their trainees to teach adults in communities near the training center. Teachers, however, need not let the lack of such training prevent their conducting adult classes, but should look over the field carefully and then jump into the work. There is no better way to get community support back of your department than thru a suitable adult program. These contacts will also aid the teacher materially in gaining a better knowledge and perspective of his community. They will also prove to be a real stimulus to the all-day school program in the vocational department. Finally, it is an excellent method to prove your need in the community.

Lastly, remember in teaching adults that they want sound, true facts, and not just discussion that leads nowhere. Before quitting the job being studied, be sure to clinch it by summarizing all facts gleaned, permitting members of the group to arrive at sound conclusions.

*Mr. Johnson is in charge of part-time and evening school work in Colorado.

Certificate Awards

KENNETH ERICKSON, Trainee,
Fargo, North Dakota

NORTH DAKOTA inaugurated a new practice last year by replacing ribbons with certificates for individuals doing superior and excellent work in the agricultural judging contests held in May of each year at the North Dakota Agricultural College. These certificates are signed by the Dean of the Division of Agriculture and the State Supervisor of Vocational Agriculture in North Dakota. They carry the boy's name, his rating, the date, and the state seal.

Certificates also replaced ribbons in the second and third annual F. F. A. Marketing Days and show, held at the Union Stock Yards at West Fargo, in October of 1937 and 1938. These certificates were awarded to vocational agriculture students showing and marketing prime animals, and they were signed by the manager of the Union Stock Yards, manager of the Marketing Days, State F. F. A. president, and State F. F. A. adviser. These certificates bear the F. F. A. emblem. Canes were awarded to the individuals demonstrating superior proficiency in swine grading. Before awarding canes, the outstanding individual was awarded a gold watch for this event.

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